VOLUME TWO

Appendix to the Journal of the Assembly

LEGISLATURE OF THE STATE OF CALIFORNIA
1957 REGULAR SESSION

REPORTS

First Part of Session—January 7th to 25th, inclusive
Second Part of Session—March 4th to June 12th, inclusive



HON L. H LINCOLN
Speaker

HON. CHARLES J. CONRAD
Speaker pro Tempore

HON RICHARD H. McCOLLISTER
Majority Floor Leader

HON. WILLIAM A MUNNELL
Minority Floor Leader

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Chief Clerk of the Assembly

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ASSEMBLY INTERIM COMMITTEE REPORTS
1955-1957

VOLUME 9 NUMBER 7

Report of the

ASSEMBLY INTERIM COMMITTEE ON PUBLIC HEALTH

SUBCOMMITTEE ON

LICENSING OF NATUROPATHS

House Resolution No. 186

1955 Regular Session

MEMBERS OF COMMITTEE

CHARLES H. WILSON, *Chairman*

W. S. GRANT
SETH JOHNSON
H. ALLEN SMITH
W. BYRON RUMFORD
THOMAS M. REES
DIANA CLARKSON, *Executive Secretary*

January, 1957

Published by the

ASSEMBLY

OF THE STATE OF CALIFORNIA

HON. L. H. LINCOLN
Speaker

HON. CHARLES J. CONRAD
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LETTER OF TRANSMITTAL

(COMMITTEE)

ASSEMBLY INTERIM COMMITTEE ON PUBLIC HEALTH
January 23, 1957

HONORABLE L. H. LINCOLN,
Speaker of the Assembly

MEMBERS OF THE ASSEMBLY
Assembly Chamber
Sacramento, California

GENTLEMEN: In accordance with House Resolution No 186, 1955 Regular Session of the California Legislature, the attached Report of the Subcommittee on Licensing of Naturopaths, Assembly Interim Committee on Public Health, is herewith presented.

The report contains a description of the committee's work, resumes of hearing statements together with its findings and recommendations.

Respectfully submitted.

W. BYRON RUMFORD, Chairman

LETTER OF TRANSMITTAL

(SUBCOMMITTEE)

January 11, 1957

HONORABLE W. B. RUMFORD, *Chairman*
Assembly Interim Committee on Public Health

DEAR MR. RUMFORD: Attached is the report of the Subcommittee on Licensing of Naturopaths. This report is the result of the testimony given at three public hearings and other information gathered by the subcommittee during the 1955-57 interim.

Respectfully submitted,

CHARLES H. WILSON
W. S. GRANT
SETH J. JOHNSON
THOMAS M. REES
W. BYRON RUMFORD
H. ALLEN SMITH

SCOPE OF REPORT

This report: (1) reviews the proposal made at the 1955 Session of the California Legislature that naturopathy be recognized by the State as a separate branch of the healing arts and that a naturopathic licensing board be established; (2) summarizes the extensive testimony before the committee at three public hearings, the legislative history of naturopathy in California, and the laws in those states which now license naturopaths; and (3) presents the committee's finding and recommendations.

SUBCOMMITTEE ON LICENSING NATUROPATHS

FINDINGS

As a result of hearings held in Los Angeles and Sacramento and evidence presented to this subcommittee, the members submit the following findings and recommendation for consideration by the State Legislature:

1. Proponents for licensing claim that there are 2,500 persons in California who wish to become licensed as naturopaths and that, of these, 1,500 are presently licensed as chiropractors.

2. Proponents for licensing claim that licensure would regulate and control the practice of 1,000 naturopaths now practicing without license or regulation and prevent unqualified persons from treating the public.

3. Proponents for licensing claim that naturopathic treatment involves the use of such measures as light, air, water, heat, food, herbs, massage, manipulation, and a philosophy adhered to by no other healing group.

4. The California Medical Association, chief opponents, claim that licensure would give state sanction to practice by a group of persons with inadequate experience and training and would therefore be injurious to the public health and safety.

5. The opponents claimed that naturopathy is not a separate branch of the healing arts and that naturopaths could offer the public nothing that presently licensed practitioners cannot now offer.

6. Testimony before the committee failed to define the scope of the profession and instead revealed conflicting views as to scope of practice and methods of treatment. This was strikingly evident in the testimony of naturopaths regarding the use of drugs and narcotics and the use of minor surgery.

7. Licensure for the practice of naturopathy is granted in Arizona, Connecticut, Florida, Hawaii, Oregon, Texas, Utah, Virginia, and Washington, D.C. Licensure acts were passed but subsequently repealed in Tennessee, Georgia, and South Carolina.

8. Until 1949 it was possible for naturopaths to become licensed in California under the Drugless Practioners' Act. That act was repealed in 1949 and no licensing provisions for naturopaths exist today. Only those persons licensed by one of the existing boards in the Department of Professional and Vocational Standards including M.D.'s, chiropractors and physical therapists or by the Board of Osteopathic Examiners may practice in the healing arts field. Many so-called naturopaths are presently licensed as chiropractors.

9. The curricula proposed by naturopaths for naturopathic schools is similar to the curriculum now required of schools approved under the Chiropractic Act.

10. The scope of practice permitted the chiropractors appears from testimony to be quite similar to that requested by naturopaths. Chiropractors may and do perform almost every act contained within the

general definition of naturopathy. Should the courts revise the definition of chiropractic in any subsequent decision, the problem of the scope of chiropractic will arise. That is a different problem and one which is not here considered in anticipation of possible court action.

The committe recognizes that naturopaths desire a new and separate licensing board because of their belief that naturopathy is a distinct and separate profession. However, that naturopathy is a distinct and separate profession was not proven to the satisfaction of the committee, particularly since chiropractic as defined in California today permits chiropractors to utilize naturopathic methods of treatment. It was not found that the present law in California creates any undue hardship on or lacks adequate provision for the licensing and regulation of qualified healing arts practitioners. That the public interest would be served by creation of a new licensing board was not established to the satisfaction of the committee.

RECOMMENDED:

That the Legislature not grant licensure to naturopaths.

INTRODUCTION

The Assembly Interim Committee on Public Health was directed by House Resolution No. 186, 1955 Regular Session, to appoint a subcommittee to study the practice of naturopathy in California, to determine whether the public interest would be served by regulating or licensing naturopaths, and, if so, decide what should be the nature and extent of such regulation or licensure.

Public hearings were held as follows:

August 19, 1955----------State Building, Los Angeles
October 7, 1955----------State Capitol, Sacramento
December 7, 1955----------State Building, Los Angeles

The following persons, representing organizations as indicated, testified before the committee at these hearings:

Witnesses for the American Naturopathic Association of California:

Norman Macbeth, attorney for the association.
Carl E. Hotchkiss, D.C., Hollywood.
John W. Gregory, licensed physical therapist, Los Angeles.
Ralph M. Failor, naturopathic physician, Oregon, and President, Western States College, Portland, Oregon.
Carl O. Larson, D.C., member, Naturopathic Examining Board, Utah.
Lorna M. Murray, licensed naturopath, Florida.
Arthur Schramm, President, California Association of Licensed Naturopathic Physicians.
George Floden, President, Sierra State University, Los Angeles
Wolf Adler, D.C., Hollywood.
Carl H. Enstam, M.D., homeopath, Los Angeles.

Witnesses for the California Chiropractic Association:

Lee H. Norcros, D.C., Executive Secretary.
J. C. Green.

Witnesses for the California Medical Association:

Howard Hassard, attorney.

Dan Kilroy, M.D., Chairman, Legislative Committee, California Medical Association.

W. E. MacPherson, M.D., Dean, School of Medicine, College of Medical Evangelists, Los Angeles.

Rt. Rev. Monsignor Thomas J. O'Dwyer, Director, Department of Health and Hospitals, Archdiocese of Los Angeles, and Legislative Committee of the California Hospital Association.

M. L. Meadors, Executive Secretary, South Carolina Medical Association.

Frank Dickinson, Ph.D., Director of Medical Economic Research of the American Medical Association.

Robert L. Thomas, Assistant Executive Secretary, California Medical Association.

O. Leonard Huddleston, M.D., Santa Monica.

THE PROBLEM

California state law contains no provision for the licensure of naturopaths. On several occasions, various naturopathic organizations have requested that such licensure be granted. It was at the request of the American Naturopathic Association of California that Assembly Bill No. 7 was introduced at the 1955 Session of the Legislature (Appendix A). This bill, had it passed, would have provided for naturopathic licensure and a separate board of examiners in the the Department of Professional and Vocational Standards.

Because the State is responsible for protecting the public health, safety, morals and welfare, it may prohibit the practice of any vocation or profession which would create a threat to the public, may regulate vocations and professions to maintain standards commensurate with the public welfare, and may determine the nature and extent of the qualifications required for the practice of a vocation or profession. Under these provisions, the healing arts field is directly subject to state control. The following boards have been established in California under the Department of Professional and Vocational Standards to regulate and license the healing arts:

Board of Medical Examiners.
Board of Dental Examiners.
Board of Pharmacy.
Board of Optometry.
Board of Chiropractic Examiners (established by initiative measure).
Board of Nurse Examiners
Board of Vocational Nurse Examiners
Physical therapists may now become registered by the Board of Medical Examiners, and a physical therapy examining committee, under the jurisdiction of the Medical Board, may issue physical therapy licenses.
An independent Board of Osteopathic Examiners was established by initiative measure to regulate and license osteopaths.

The question before the Assembly subcommittee, then, is whether there is need for a new and separate board for naturopaths, whether naturopaths should be licensed under an existing board, or whether the present provisions for licensure of healing arts practitioners are adequate.

NATUROPATHY DEFINED

Testimony before the committee indicated that the desired scope of naturopathic practice is broad, and the naturopaths indicated that their belief is that all illness is properly and adequately treated by natural methods.

The following two definitions of naturopathy were presented:

> "DOCTOR, NATUROPATHIC (medical ser.) 0-52.21. naturopathic physician. Diagnoses, treats and cares for patients using a system of practice that bases its treatment of all physiological functions and abnormal conditions on natural laws governing the body: Utilizes physiological, psychological and mechanical methods, such as air, water, light, heat, earth, phytotherapy, food and herb therapy, psychotherapy, electrotherapy, physiotherapy, minor and orificial surgery, mechanotherapy, naturopathic corrections and manipulation, and all natural methods of modalities, together with natural medicines, natural processed foods, and herbs and nature's remedies. Naturopathy excludes use of major surgery, X-ray, and radium for therapeutic purposes." [1]
>
> NATUROPATHY. "A therapeutic system embracing a complete physianthropy employing nature's agencies, forces, processes, and products, except major surgery." [2]

Several court cases and judicial opinions have attempted to define naturopathy. Some [3] have used the definition found in Webster's New International Dictionary, 2d edition, that naturopathy applies to "a system of physical culture and drugless treatment of disease by methods supposed to simulate or assist nature."

In *Millsap* v. *Alderson*, 63 Cal. App. 518 (1923), the California District Court of Appeal, Second District, concluded that:

> "* * * the substances employed by one practicing naturopathy in the treatment of the sick and afflicted would be light, air, water, etc., and a naturopath or a doctor of naturopathy would be a person who * * * (treats) * * * the sick and afflicted by the use of the substances above enumerated."

NATUROPATHS IN CALIFORNIA

The naturopaths state that there are about 2,500 in California who would be entitled to consideration for a license. Of these, they state that 1,500 presently hold chiropractic licenses. The others are prac-

[1] U. S Department of Labor, Bureau of Employment Security, Washington 25, D C, U S Employment Service, August 26, 1954 Prepared for current definition, *Dictionary of Occupational Titles*, as result of correspondence with Dr Paul Wendel, President of the American Naturopathic Association, and Mr. Dwight S. James, Secretary-Treasurer of the American Naturopathic Physicians and Surgeons Association

[2] Blakiston's New Gould Medical Dictionary

[3] *State Board of Medical Registration* v. *Scherer*, 46 N. E 2d 602, 221 Ind 92, Ex parte Gerber, 206 P 1004, 57 Cal App 141, *Borland* v *Johnson*, C. C A. Col. 88F. 2d 376, *Millsap* v *Alderson*, 219 P. 269, 63 Cal App. 518.

ticing under a physiotherapist or drugless practitioners license (which law has now been repealed) or under no license at all. About eight persons practicing naturopathy were licensed as naturopaths under the Medical Practices Act of 1907. In 1952, in the case of *Oosterveen* v. *Board of Medical Examiners* (112 Cal. App. 2d 201, at pp. 203-4), the court found that "naturopathy is practiced in California by more than 1,000 persons almost all of whom are licensed chiropractors who practice chiropractic and who have displayed somewhere in their offices a certificate or degree of doctor of naturopathy."

The appeal to this committee for licensure has been sponsored by the American Naturopathic Association of California with a membership of between 350 and 400, many of whom are licensed as chiropractors, and by the California Association of Licensed Naturopathic Physicians with a membership of 100. The membership of this latter association is composed of those who have been licensed as naturopaths in other states and who now reside in California.

LEGISLATIVE HISTORY OF NATUROPATHY

California

The question of licensure for naturopaths is not a new one. A review of legislation which has affected the practice of naturopathy must begin with the 1907 Medical Practices Act, which then for the first time provided for more than one type of certificate (Calif. Statutes 1907, Ch. 212). This act made provision for

(1) Certificate to practice medicine and surgery;
(2) Certificate to practice osteopathy; and
(3) Certificate to practice any other mode of treating the sick and afflicted.

One board was created to administer all three types of certificate.

The first direct reference to naturopaths in California Statutes appears in the 1909 Amendment to the Medical Practices Act (Calif. Statutes 1909, Ch. 276, pp. 418-9). It required the Board of Medical Examiners to validate certificates issued by the "Board of Examiners of the Association of Naturopaths of California, incorporated under the laws of the State of California, August 8, 1904 * * * " without requirement that the holder of such certificate present any educational qualifications to the board. The Association of Naturopaths of California was a private corporation and the Board of Examiners was created by the corporation.

The amendment made no provision for future licensing or regulation, but only provided for renewal by payment of a fee to the Medical Board. Under this amendment the board endorsed 103 certificates which had previously been issued by the Naturopathic Association of California. About eight people licensed under this provision are still practicing in California.

In the 1913 Medical Practice Act (Calif. Statutes 1913, Ch. 354, p 737) three forms of certificates were again authorized, including a physicians and surgeons certificate, a drugless practitioners certificate and reciprocity certificates. This new act repealed all prior acts and contained no reference to naturopathy. Although naturopaths could

in theory have become licensed as drugless practitioners while this act was in effect, none did so.

Between 1913 and 1921, the Medical Practices Act was amended to add chiropractors and midwives.

In 1922 initiative acts were passed creating separate Boards of Chiropractic Examiners and Osteopathic Examiners and empowering each to issue licenses. The Chiropractic Board could issue only limited licenses while the Osteopathic Board was authorized to issue physicians' and surgeons' certificates to applicants who had the same course of training as doctors of medicine and who passed an examination in the same subjects.

In 1949 the Legislature repealed those sections of the Medical Practices Act dealing with drugless practitioners and drugless practitioners' certificates. This left no provision under which naturopaths could become licensed.

The only other sections of the California codes which refer to naturopaths are found in the Business and Professions Code, Sections 581 and 582. The sections prohibit the bartering or purchase of false diplomas or the use of such a diploma as evidence of authority to practice.

Other States

Testimony before the committee brought out that the practice of naturopathy is legally recognized in Arizona, Connecticut, Florida, Hawaii, Oregon, Texas, Utah, Virginia, and Washington, D. C.[1] Ohio, Washington, and Pennsylvania permit naturopaths to practice but term the practice "sani-practice" or "mechanotherapy" rather than naturopathy. Naturopathy is permitted in Canada in the provinces of British Columbia, Alberta, Saskatchewan, and Manitoba.

Tennessee enacted a law in 1943 which recognized naturopathy and established a State Board of Naturopathic Examiners In 1945 the Legislature authorized a special committee investigation of the healing arts including naturopathy. The committee reported finding that many abuses existed under the law, that the Board of Naturopathic Examiners was not enforcing the law, that licenses were being issued to unqualified individuals in other states and countries as well as in Tennessee, that many naturopaths in Tennessee had practiced medicine including obstetrics and surgery, that chiropractors with naturopathic licenses were freely dispensing drugs and that the practices were injurious to the public health.[2] As a result of these findings the Legislature has repealed the naturopathic statute.

South Carolina enacted a naturopathic law in 1937 but this was repealed by the State Legislature in 1956

Florida, as noted above, has a naturopathic licensing law which was enacted in 1927. The committee heard testimony that certain groups were dissatisfied with the operations of the law and the following information was brought to its attention:

The Florida State Board of Health, on April 10, 1949, adopted a resolution which stated in part:

[1] See Appendix B for licensing regulations

[2] Report to the 75th General Assembly of Tennessee re Unauthorized Practice of the Healing Arts in the State of Tennessee.

"WHEREAS, The board has information which indicates that the practice of naturopathy, including the licensing of naturopathic physicians, is being conducted in such a manner as to be detrimental to the public health of Florida; now therefore let it be

"*Resolved*, That the board recommends to the Legislature of the State of Florida that the licensing and practicing of the naturopathic physicians be investigated and if found to be detrimental to the public health of Florida, that proper legislation be enacted to terminate the evils found."

The grand jury conducted an investigation of naturopathy in 1949 and condemned the extension of practice by naturopaths beyond their then legalized limits. A bill was later introduced in the Florida Legislature to limit the scope of practice of naturopaths No testimony was presented to this subcommittee to reveal whether or not the investigation proposed by the State Board of Health ever occurred or whether any legislative changes have been made in the Florida naturopathic act

The California Medical Association presented information to the committee regarding the practice of naturopathy in Utah. Utah recognizes naturopathy but the scope of practice permitted there has been interpreted by the Attorney General of the State of Utah who stated in an opinion dated November 2, 1955, that naturopaths are "prohibited from using drugs, medicine, or engaging in any surgery of any kind."

RELATIONSHIP OF NATUROPATHY TO OTHER HEALING ARTS

One question of primary importance is whether naturopathy is or can be classified as a separate and distinct branch of the healing arts. Testimony was conflicting on this issue. George Floden, representing the naturopathic profession, testified before the committee that:

"* * * Naturopathic philosophy differs very much from allopathic [1] philosophy in this respect, basically that we deal with the triune man * * * the whole man * * * not only treating the body of the whole man but our mind as well, and for that matter, the spiritual aspect. The directed force which we refer to as life force has very much to do with whether we are well or sick and with our behavior. As a matter of fact it governs our entire glandular system and to the extent we recognize that * * * and can teach our patients * * * I believe that we are successful

"Furthermore, we do not treat a disease, we do not speak of curing a disease, we think of the man, the patient with the disease

"We believe basically in a perfect and harmonious structural and functional relationship with the body of man, but also in a perfect and harmonious relationship with the environment."

Mr. Floden submitted information to the committee which included the following statement:

[1] Allopathy. The theory or system of medical practice which combats disease by the use of remedies producing effects different from those produced by the disease treated *Webster's New International Dictionary*, 2d edition

"One may speak of three opposite philosophies in the field of healing arts, the allopathic, the homeopathic [1] and the naturopathic, but since homeopathy in the United States of America is practiced mostly by the allopathic profession, we shall deal only with the allopathic as being diametrically opposite to the naturopathic.

"One may ask what about osteopathy, naprapathy, chiropractic, etc., and our answer would be that *they are all therapeutic systems* —basically mechanotherapy—as is surgery, obstetrics, massage, and so forth * * *. Naturopathy has always remained naturopathy, because it has a demonstrable philosophy, a proven science foundation, and in its art it has stayed with biotic, life-sustaining agencies, forces and substances of nature." [2]

The California Medical Association, in direct opposition to the naturopaths, testified that naturopathy was not a separate branch of the healing arts, that naturopaths could offer the public nothing that presenly licensed practitioners cannot and do not now offer.

Dan Kilroy, M.D., stated at the committee hearing on October 7, 1955:

"It is the contention of the California Medical Association that naturopathy is not a distinctive school of medicine. All, or almost all, of the so-called naturopaths are chiropractors and under their license as chiropractors are allowed to practice their so-called natural healing methods. Likewise they have no method of treatment which is not available to the regularly established practitioners. Some of their methods are not utilized simply because they are useless or antiquated. Many of the methods they use under these alleged headings are used in such a manner as to be considered useless or dangerous. Nonetheless there is no branch of the healing arts now licensed which does not use natural methods of healing and therefore their claim that they have a distinctive school of medicine is erroneous."

Naturopathy and Chiropractic

The authority for chiropractic practice in California stems from the Chiropractic Initiative Act of 1922. Section 7 reads:

"One form of certificate shall be issued by the Board of Chiropractic Examiners, which said certificate shall be designated 'License to Practice Chiropractic,' which license shall authorize the holder thereof to practice chiropractic in the State of California as taught in chiropractic schools or colleges; and, also, to use all necessary mechanical and hygienic and sanitary measures incident to the care of the body, but shall not authorize the practice of medicine, surgery, osteopathy, dentistry or optometry, nor the use of any drug or medicine now or hereafter included in materia medica."

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[1] Homeopathy The theory or system of medical practice holding that disease is cured by remedies which produce on a healthy person effects similar to the symptoms of the complaint of the patient *Webster's New International Dictionary*, 2d edition

[2] Naturopathic Magazette, "Naturopathic Philosophy, Science and Art," by George Floden, N C., Ph D , pp 170-172 Feb -March, 1955

Since 1922 the scope of chiropractic has been subject to a number of court interpretations. The definition from Webster's New Standard Dictionary that chiropractic is "a system of (or) the practice of adjusting the joints, especially of the spine, by hand for the curing of disease," was accepted by the court in *People* v *Fowler* (32 Cal. App. 2d Suppl 737) and *People* v. *Manqiogli* (97 Cal. App 2d Supp. 935)

In 1952 the court in the case of *Oosterveen* v. *Board of Medical Examiners* (112 Cal. App. 2d 201) ruled that naturopathic methods could be employed by licensed chiropractors, as well as by other licensed healing arts practitioners.

The court said on pp 205 and 206:

> "The use of natural methods of healing is not forbidden by law. Physicians and surgeons, osteopaths, chiropractors and all those who hold licenses as drugless practitioners may use them. It is of common knowledge that nature is the indispensable healing agency and that practitioners of medicine and surgery, osteopathy and chiropractic made use of the curative qualities of light, air, water, rest, diet, and physical and mental culture, in connection with the agencies peculiar to their several systems of healing."

The court also said that·

> "Plaintiffs, being unlicensed, may not, under the present law, practice at all Even if they should become licensed as physicians and surgeons or chiropractors, they could not practice naturopathy in its true sense, inasmuch as they could not use the little 'Naturopath' or 'N D ' nor hold themselves out as such. But they must become licensed either as physicians and surgeons (which now includes osteopaths) or as chiropractors in order to employ their methods." (Page 206)

The naturopaths agree that the scope of chiropractic practice defined in the *Oosterveen* case encompasses the major parts of naturopathic practice. They drew a distinction during the hearings between those chiropractors who use naturopathic methods who are known as "mixers" and those who treat only by spinal adjustment who are known as "straights " In this regard Dr Adler indicated that:

> "The chiropractors are broadly divided into two main classes, the so-called straight chiropractor and the so-called mixer * * *. The straight chiropractor bases his entire philosophy on the adjusting of the spine and [they] do nothing else but adjust * * * The so-called mixed chiropractor will do a lot of drugless therapy * * *. I agree with you that the mixed chiropractor is a great deal like the naturopath "

The similarity between naturopathic and chiropractic was further seen in the course of education proposed for naturopaths in Assembly Bill 7 during the 1955 legislative session and the education presently required of licensed chiropractors. The educational requirements for the two groups follow:

Proposed Naturopathic Act

Group No.	*Subject*	*Hours*
I	Anatomy, including embryology and histology	720 to 800
II	Physiology	240 to 320
III	Biochemistry and dietetics	240 to 320
IV	Pathology, bacteriology and toxicology	420 to 490
V	Diagnosis, pediatrics, psychiatry	600 to 720
VI	Public health, hygiene and sanitation	120 to 160
VII	Gynecology and obstetrics	160 to 200
VIII	Naturopathic philosophy, principles, therapeutics (including physical therapy and phytotherapy), and practice	900 to 1,040
IX	Electives	650 to 0
	Total number of hours required	4,050

Chiropractic Initiative Act

Group No.	*Subject*	*Hours*
I	Same	720 to 800
II	Same	240 to 320
III	Biochemistry, inorganic and organic chemistry	240 to 320
IV	Pathology and bacteriology	400 to 480
V	Diagnosis, pediatrics, dermatoolgy, syphilology, and psychiatry	480 to 720
VI	Same	120 to 160
VII	Same	120 to 160
VIII	Principles and practice of chiropractic, physiotherapy and office procedure	1,000 to 1,120
IX	Electives	0 to 680
	Total number of hours required	4,000

The principal difference appears to be in the inclusion of a course in "Naturopathic philosophy, principles, therapeutics (including physical therapy and phytotherapy), and practice," in the former. Because of the apparent similarity between chiropractic and naturopathy, the committee inquired about the possibility of legislative action to place naturopathic licensure under the jurisdiction of the Board of Chiropractic Examiners. The Legislative Counsel in an opinion dated May 15, 1956, stated. "It is our opinion that legislation placing the administration of a licensing act for naturopaths under the jurisdiction of the Board of Chiropractic Examiners cannot be enacted without approval of the electors." [1]

The naturopaths maintained throughout the hearings that they wished authority to practice under the name of naturopaths; that they were not satisfied with the present law wherein they can become licensed as chiropractors and practice naturopathy, only under the "guise" of the chiropractic license. They stated that chiropractic is only one part of naturopathy as was indicated by Dr. Adler when he said that naturopaths "use all forms of drugless therapeutics, all forms of physical method, anything from light to water to massage or even chiropractic, as a part of naturopathic treatment."

[1] For complete opinion and analysis, see Appendix C.

Naturopathy and Physical Therapy

A comparison was also drawn during the hearings between naturopathy and physical therapy.

The definition of physical therapy as found in Ch. 5.6 of the Business and Professions Code (Stats. 1953, Ch. 1823) is quoted:

> "Section 2601. 'Physical therapy' means the treatment of any bodily or mental condition of any person by the use of the physical, chemical, and other properties of heat, light, water, or electricity, and by massage and active or passive exercise. The use of roentgen rays and radium, for diagnostic and therapeutic purposes, and the use of electricity for surgical purposes, including cauterization, are not authorized under the term 'physical therapy' as used herein."

The California Medical Association maintained that the methods of treatment utilized by the physical therapists and those of the naturopaths are identical and in this regard stated: [1]

> "With respect to various types of treatment that may be indicated for an illness or injury, the only type that approaches or comes close to naturopathy is physical therapy, and California now has two physiotherapy regulatory statutes. first, the registered physiotherapy law (Business and Professions Code Secs. 2600-2631), and second, the licensed physiotherapy law (Business and Professions Code Secs. 2650-2694). There are over 1,000 registered physiotherapists and approximately 1,300 licensed physiotherapists now practicing in California. There is no need for further regulation in the field of physiotherapy, and those naturopaths who desire to practice physiotherapy should qualify for and obtain either registration or licensure under the physiotherapy laws."

Witnesses for the naturopaths differentiated between the two fields, and Dr. Wolf Adler, a licensed chiropractor, testifying for the naturopaths, stated:

> "The physiotherapist is directly under the Medical Board. He has to do what the Medical Board tells him. A physical therapist is a technician, not a doctor. He cannot diagnose or choose his form of therapeutics * * *. Physiotherapy is only one part of naturopathy * * *. Naturopathy is all embracing of all physical means and a physiotherapist is not trained in the use of hydrotherapy and air and things * * *. The physiotherapist is a technician for the M.D., not a full-fledged trained drugless practitioner "

PROPOSED STANDARDS OF PRACTICE

As seen above, naturopaths stated that their practice encompasses both chiropractic methods of treatment and those methods of treatment employed by physical therapists. During the hearing the witnesses were asked to define naturopathic practice and the healing methods used. The witnesses who practiced naturopathy in other states offered conflicting testimony especially concerning the use of drugs and the use of minor surgery.

[1] Statement presented to committee by California Medical Association, October 7, 1955.

The naturopaths have stated that "the license should not include the right to write prescriptions for toxic drugs or narcotics, although herbs in a natural form could be dispensed." Testimony showed that the use of herbs constitutes a significant part of naturopathic treatment. Yet the line dividing an herb or plant in its natural state and a drug or preparation from it is a difficult one to draw. An acceptable definition of an herb was not presented to the committee

The naturopaths indicated that "the license should not include minor surgery." Minor surgery has been defined by *Stedman's Medical Dictionary* as "surgery which has to do with slight and not hazardous operations, the application of splints, bandages, etc.," and by *Blakiston's New Gould Medical Dictionary* as "* * * that part of surgery including procedures not involving serious hazard to life and usually not requiring general anesthesia; examples are bandaging, application of splints and casts * * *" The committee agreed that minor surgery should not be permitted. It was noted, however, that the schools approved by the American Naturopathic Association teach courses in minor surgery, and testimony by naturopaths in other states was to the effect that certain surgical operations constitute a portion of their practice.

Other questions were raised concerning the limits of naturopathic practice. The naturopaths agreed that a licensing act should embody the following provisions:

> "(a) All applicants should take an examination instead of being licensed under a grandfather clause. The naturopaths themselves have urged that licensure is needed to enable them to 'separate the sheep from the goats,' but a grandfather clause would defeat this end.
>
> "(b) The licensed naturopaths should be required to use the initials 'D.N.' rather than 'N.D.' in order to avoid any confusion with the medical profession.
>
> "(c) The term 'physician' should not be used to describe the naturopath."[1]

EDUCATION AND TRAINING

Any person licensed in the State as a healing arts practitioner has had to meet the educational requirements specified in the code for his particular profession.

The course of education proposed for naturopaths closely approximates that presently required for chiropractors (see page 14).

The naturopath bill proposed at the 1955 Session (A B. No. 7), also stated that "each applicant for a naturopathic physician's certificate shall * * * have attended a resident course of professional instruction of not less than four years of nine months each in a legally chartered school or schools approved by the board * * *." (Chap. 12, Sec. 4950.22 (b)).

The American Naturopathic Association approves two naturopathic schools: Western States College in Portland and Central States College in Eaton, Ohio. There are several other schools that issue naturopathic

[1] Statement presented to the committee on May 7, 1956, by American Naturopathic Association.

degrees the educational standards of which do not meet the requirements of the association. Sierra States College in Los Angeles is one of these schools which, although recognized by Utah and some Canadian Provinces, is not recognized by the national association.

Testimony before the committee showed that naturopathic degrees are frequently issued along with chiropractic degrees or after a few additional hours of schooling. Western States College, one of the two schools recognized by the American Naturopathic Association, for example, issues both chiropractic and naturopathic degrees to those graduates who wish them After completion of additional courses, it also issues naturopathy degrees to many persons who have received chiropractic training at another school The number of additional courses required and the amount of additional schooling vary with circumstances.

The California Medical Association has stated in this regard that "naturopathic education is inextricably interwoven with chiropractic education, and that persons calling themselves naturopaths or claiming the degree of doctor of naturopathy are actually chiropractors, and nothing more or less." [1]

The course of training for both naturopaths and chiropractors is less than that for osteopathic physicians and surgeons or physicians and surgeons licensed by the Board of Medical Examiners The educational requirements for these two latter groups consist of:

1. A three-year resident college course including courses in physics, chemistry and biology;
2. A four-year curriculum in a medical school consisting of 4,000 hours; and
3. One year's internship in a recognized hospital.

Witnesses testifying before the committee presented widely varying views as to the adequacy of naturopathic training.

Naturopaths claim that they have as many hours and years of study as M.D.'s, osteopaths, and chiropractors, that they study the basic sciences and that much of their education is similar to that of other types of practitioners They further state that:

> "It is extremely significant that inadequacy of education is stressed rather than inadequacy of performance. If the naturopaths were dangerous to the public, they would not attract patients and they would have many malpractice suits. These conditions do not prevail, hence we may assume that they are not dangerous." [2]

Representatives of the California Medical Association assert that naturopathic education is inadequate. In the outline presented to the committee by the California Medical Association on October 7, 1955, it is stated that:

> "Facilities for naturopathic education are practically nonexistent—the naturopathy schools that can be identified are woefully inadequate.

[1] Written statement of California Medical Association filed with committee on January 4, 1956

[2] Exhibit presented to committee, December 7, 1955

"The naturopaths themselves testify that only two naturopath schools—one in Oregon and one in Ohio—are 'approved' by the American Naturopathic Association. The facilities and faculties of these schools are inadequate to train competent persons in the healing arts. There is no school in California that meets with American Naturopathic Association approval.

"Most so-called naturopathic schools are mere adjuncts to chiropractic colleges; and the naturopathic degree appears to be awarded as a 'bonus' to the graduate in chiropractic. For this reason, practically all persons calling themselves naturopaths are in fact chiropractors.

"Adequate medical education requires expensive facilities, competent teachers, research, and lengthy didactic and clinical training.

"Stanford University School of Medicine spends one and one-half million dollars per year to train 250 students, or about $6,000 per year per student. The cost includes operating a teaching hospital, and out-patient clinic, laboratories, etc. It estimates the cost of physical plant and equipment for its school is approximately 16 million dollars. The costs in other medical schools are comparable. Adequate medical teaching requires not only a faculty, classrooms, and laboratories, but also out-patient clinics and hospitals and a research program.

"Inadequate training necessarily means inability to diagnose, and frequent errors in treatment.

"Properly to treat a person physically or mentally ill, it is essential first to arrive at a correct diagnosis. Diagnostic problems are frequently complex; causes are often obscure. Inadequate basic knowledge and inadequate clinical experience make it impossible to diagnose accurately in anything but the simplest of illnesses. Naturopaths, with inferior facilities and faculty, and practically no schools, are not sufficiently trained to cope with a vast number of serious illnesses or injuries. Primarily, they are chiropractic-trained, and ought to remain within the scope of their training and licenses."

IS LICENSURE NEEDED?

American Naturopathic Association

The basic reason advanced for naturopathic licensure was that naturopathy is a distinct branch of the healing arts and as such should be recognized and legitimized by the State. The naturopaths advanced the following additional arguments to indicate that the public would benefit by licensure:

First, the naturopaths stated that certain segments of the population wish to be treated by naturopaths and that people should be able to go to the practitioner of their choice. They continued by stating that the minority of people wishing to go to naturopaths are entitled to the protection which would be afforded by state regulation.

Secondly, they presented the view that competition is necessary in the field of ideas and therapies as well as in business to insure progress, that the challenge of competition speeds advances in medical knowledge, and that monopoly in the form of the American Medical Association is dangerous to the public They stated that:

"All dispassionate writers recognize that the allopaths do not have a monopoly on wisdom. They may be the aristocrats in the healing arts, but they are not perfect, infallible, or omniscient * * * The allopaths have been fostering medical practice statutes for almost 200 years in this country, yet new groups such as the homeopaths, osteopaths, and chiropractors spring up and flourish from time to time. The reason for this is that the allopaths neglect certain therapies which the new group espouses with great success."

The following excerpts from presentations to the committee indicate further benefits which naturopaths believe would accrue from licensure: [1]

"Value of regulation * * *. Under the present circumstances a certain number of unqualified persons are practicing as naturopaths and * * * without a licensing statute, these persons cannot be examined or disciplined * * *. Passage of a licensing act * * * would remove the scandal of having approximately 1,000 naturopaths practicing without a license in defiance of Section 2141 of the Business and Professions Code * * *. It would confer legal status on naturopaths able to pass examinations, thus increasing the dignity and responsibility of their work. It would enable the licensing board to identify and eliminate those naturopaths who could not pass examinations, thus separating the sheep from the goats It would aid in putting naturopathic schools on a regular and permanent basis.

"Since it is clear that naturopathy is not injurious to the public, and since a number of people seem to patronize the naturopaths and to approve of their work, the passage of a licensing act is obviously desirable * * *. It seems wise to establish licenses for the naturopaths in order to regularize the position of the 'mixer' chiropractors and to give some status and regulation to the unlicensed naturopaths."

California Medical Association

The California Medical Association has stated that the existence of the groups now licensed by the Board of Medical Examiners, the Board of Osteopathic Examiners, and the Board of Chiropractors indicate that there is already sufficient competition. Howard Hassard, Attorney for the California Medical Association summed up the position of the Association this way:

"The opposition of the California Medical Association to the licensing of naturopaths is not based on any fear of competition. First of all there are approximately eighteen thousand licensed Doctors of Medicine in California competing with each other right now; secondly, there are several thousand osteopathic physicians and surgeons; thirdly, there are the chiropractors; fourthly, there are such limited fields as optometry and chiropody. There is no lack of competition at present.

[1] Public hearing, August 19, 1955, and formal statement filed with committee on May 7, 1956.

"The opposition of the California medical Association is * * * predicated on the sincere conviction that the licensing of naturopaths would be of no benefit to the public and could in the long run (as has occurred elsewhere) result in public injury. The proof of the pudding is in the eating thereof, and in other states in which naturopaths have been licensed they have not been satisfied with restrictive licenses * * * they stretch into the field of narcotics, into minor surgery, and the tendency is constant to expand and expand into fields in which they have absolutely no training whatever."

Dr. Dan Kilroy summarized the position of the California Medical Association at the October 7, 1955, hearing of the subcommittee when he stated:

"* * * it is our contention that naturopathy is not a distinct school of medicine, but rather alleges to practice by the use of certain methods, which methods are at the disposal and within the knowledge of all regularly licensed practitioners of the healing arts at the present time. They present nothing new in the field of medicine, and have nothing to add to the armamentarium of the practicing doctor. In fact, it appears well established that naturopaths are in actuality chiropractors and that practically all naturopaths are already licensed in this State as chiropractors and are allowed as chiropractors to practice the so-called natural healing methods. Under present law, however, chiropractors may not go beyond these so-called natural healing methods. It is obvious from the testimony that the true desire of some chiropractors is to go well beyond their legal scope of practice.

"It is our feeling that their lack of adequate training coupled with their willingness to treat any disease regardless of their lack of ability does make naturopathy injurious to the public health and safety.

"Their educational requirements as set forth on paper are meaningless for they do not possess qualified instructors to impart medical knowledge regardless of how many hours of training they show on paper. In addition their schools are inadequate in size and endowment and they lack research facilities and have no connection whatsoever with teaching hospitals or teaching material. Without these connections it is impossible to train anyone in the healing arts.

"For the reasons stated it is the position of the California Medical Association that the public interests would not be served by regulating or licensing naturopaths."

California Chiropractic Association

At the August 19th hearing of this subcommittee Dr. Lee H. Norcross, Executive Secretary of the California Chiropractic Association, presented the views of his association:

"The California Chiropractic Association has no objection to the licensing of naturopathic practitioners in California, if the Legislature finds the public interest is served by extending licensure to naturopaths.

"The position of the association is, that if the public interest is found to be served by such licensing, that the licenses should not be issued under the aegis or supervision of either the Medical Board or the Osteopathic Board or the Chiropractic Board. Present difficulties encountered in such boards or subcommittees would seem to be sufficient to avoid additional conflicts and trouble.

"The association calls the committee's attention to the fact that naturopathic degrees have been issued practically automatically by some of the chiropractic colleges, and if a grandfather clause is contemplated, some careful screening might be entailed. It would seem under these circumstances that certain prerequisite scholastic attainment or certification by an accepted college should be required.

"If it be determined that the public interest is served by licensure the association respectfully requests that overlapping or coextensive rights and privileges be either entirely eliminated, if at all possible, or, if not advisable, that the rights, privileges and duties of the chiropractic practitioner and the naturopathic practitioner be made completely identical, and said rights, privileges and duties be clearly and adequately defined.

APPENDIX

APPENDIX A

AMENDED IN ASSEMBLY APRIL 7, 1955

AMENDED IN ASSEMBLY MARCH 24, 1955

AMENDED IN ASSEMBLY MARCH 10, 1955

CALIFORNIA LEGISLATURE—1955 REGULAR SESSION

ASSEMBLY BILL No. 7

Introduced by Messrs. Elliott, Ernest R. Geddes, and Morris

January 4, 1955

REFERRED TO COMMITTEE ON PUBLIC HEALTH

An act to add Chapter 12, comprising Sections 4950.01 to 4950.48, inclusive, to Division 2 of the Business and Professions Code, relating to the practice of naturopathy.

The people of the State of California do enact as follows:

SECTION 1. Chapter 12 is added to Division 2 of the Business and Professions Code, to read:

CHAPTER 12. NATUROPATHY

Article 1. Administration

4950.01. There is hereby created in the department a Board of Naturopathy Examiners of the State of California, in which the enforcement of this chapter is vested. The board shall consist of five members.

4950.02. Within 30 days after this chapter takes effect, the Governor shall appoint the members of the first board. One shall be appointed for a term ending January 15, 1957, two for a term ending January 15, 1958, and two for a term ending January 15, 1959. Thereafter each appointment shall be for three years, except that an appointment to fill a vacancy shall be for the unexpired term only. Each member shall

serve until his successor has been appointed and qualified. Each member shall have been a citizen of the United States of America for at least five years and of the State of California for at least three years immediately preceding his appointment. No person owning an interest in any college, school, or institution engaged in therapeutic instruction for profit shall be appointed to the board. Each member of the first board must be a graduate of a legally chartered school, college, or institution teaching a resident course in naturopathy; must have a valid certificate from a registered and qualified naturopathic association, incorporated under the laws of the State of California, and must have resided for at least two years in the State, continuously next preceding his appointment to the board.

4950.03. Within 30 days after the first board has been appointed, the first member appointed shall call a meeting by giving written notice to each member of the board. At this meeting the board shall elect a president, vice president, and a full-time secretary-treasurer from its membership. The officers elected shall hold their respective positions during the pleasure of the board.

4950.04. The office of the board shall be in the City of Sacramento. Suboffices may be established in Los Angeles and San Francisco and such records as may be necessary may be transferred temporarily to such suboffices. Legal proceedings against the board may be instituted in any one of said three cities.

4950.05. The board shall hold one meeting annually on the third Monday in January in Sacramento and at least two additional meetings annually, one of which shall be in the City of San Francisco and the other in the City of Los Angeles, with power of adjournment from time to time until its business is concluded. The president of the board shall act as chairman and preside over all meetings. In his absence or refusal to act the vice president shall act in his stead. The board may adopt such rules as may be necessary to enable it to carry into effect the provisions of this chapter. A majority of the board shall constitute a quorum at any meeting. It shall require the affirmative vote of three members of the board to carry any motion or resolution, to adopt any rule, to pass any measure, or to authorize the issuance, refusal to issue, revocation, or suspension of any certificate provided for in this chapter. Special meetings of the board may be held at such time and place as the board may designate. Meetings of duly appointed committees may be called at specified times and places by the secretary-treasurer, upon authorization from the president of the board or the chairman of any committee.

4950.06. The board shall have the power to:

(a) Summon witnesses and take evidence and testimony as to matters pertaining to its duties. Each member of the board shall have power to administer oaths and take affidavits in the performance of his duties.

(b) Examine applicants, issue, refuse to issue, revoke, or suspend certificates to practice as provided in this chapter. The board may in its discretion appoint or designate any qualified and competent persons or persons to give the whole or any portion of any examination as provided in this chapter; such person or persons need not be members

of the board, but shall be residents of the State of California, and shall be designated as a commissioner or commissioners on examination and shall be subject to the same rules and regulations and entitled to the same fee and remuneration as if a member of the board for that examination.

(c) Subject to the provisions of Section 154 of this code, employ, discharge, fix, and pay compensation and expenses of, and prescribe the duties of such deputies, assistants, inspectors, stenographers, clerks, and such other help and special agents as it shall deem necessary for the adequate enforcement of the provisions of this chapter and the proper functioning of the board. The Attorney General of the State of California shall act as the legal counsel for the board and his services shall be a charge against it.

(d) Collect, and receive moneys, fees, penalties, fines, and to disburse its funds as set forth in this chapter.

(e) Adopt a seal. Purchase and pay for all necessary equipment and supplies

(f) Prosecute all persons guilty of violation of any of the provisions of this chapter.

(g) Investigate and inspect schools, colleges, or institutions teaching or purporting to teach naturopathy, and issue or refuse to issue a letter of approval to such school, college, or institution.

(h) Do any and all things necessary or incidental to the exercise of the powers and duties herein granted or imposed.

(i) The board shall issue a certificate to practice naturopathy as defined in this chapter to all persons who satisfactorily comply with its provisions.

4950.07. The board shall fix the salary of the secretary-treasurer, with the approval of the Director of Finance; and the sum to be paid the members of the board, which shall not exceed fifteen dollars ($15) per diem each, for each and every day of actual service in the discharge of official duties. This service includes the attendance at special meetings and committee meetings, and service while actually engaged in the review of examination papers, based upon one per diem for each 30 papers or fraction thereof. Each member of the board shall make a certification before some duly authorized person that the service has been actually performed. The board may add necessary traveling expenses. The secretary-treasurer shall be entitled to traveling and other expenses necessary in the performance of his duties.

4950 08. The secretary-treasurer shall give bond payable to the State in such sum and form, and containing such conditions as the Controller of the State may deem proper. The board may require a similar bond from any other employee. All bonds shall be filed with the Secretary of State.

4950 09. The secretary-treasurer shall keep a record of all meetings and proceedings of the board; and of all applications made and certificates issued; of such other matters as the board may direct Such records, docket and the seal of the board shall at all times be in his custody and control and open to public inspection during regular business hours at his office He shall affix the seal to all certificates

issued and to all orders made by the board, and to such other papers, documents and official acts as the board directs.

4950.10. In each year the board shall compile and may thereafter publish and sell a complete directory of all persons licensed under this chapter together with their addresses, and such other information as the board may deem necessary.

4950.11. The board shall approve each school which complies with the educational requirements, and such other regulations pertaining to schools, as contained in this chapter for courses of professional instruction and shall admit every applicant to the examination who complies with the requirements provided for the certificate for which his application is filed. Nothing in this chapter prohibits the board from considering the quality of the courses of professional instruction required

4950.12. If any school is disapproved by the board or any applicant for examination is rejected by it, then the school or the applicant may commence an action in the superior court against the board to compel it to approve the school or to admit the applicant to examination or for any other appropriate relief. In such an action the court has full power to investigate and decide all facts anew without regard to any previous determination of the board The action shall be speedily determined by the court and shall take precedence over all matters pending therein except criminal cases, application for injunction, or other matters to which special precedence may be given by law.

4950.13 All naturopathic colleges approved by the board must keep a record of all students who matriculate therein; the entrance credentials of each student enrolled; the number of hours attended by each student in each subject; and the grade attained by each student in each subject. Any naturopathic college approved by the board which fails to keep such records or refuses to allow the board to inspect such records upon request, shall have its approval suspended or revoked upon sufficient proof after proper hearing as provided herein.

4950.14. Approved naturopathic colleges shall have the right to receive bodies of the unclaimed dead for the purpose of instruction and study and to obtain at the time of necropsy or inquest such material in the recent state as may be needed for scientific pruposes, in like manner and under the same provisions of law as such dead bodies and materials are received, secured, and obtained by other institutions and persons for such purposes and the State Board of Health shall assign and allot the same to naturopathic colleges lawfully entitled thereto in the order of request therefor received by it.

4950.15 Naturopathic colleges approved under this chapter shall have the right to maintain and operate public clinics in connection with said colleges for the purpose of instruction of students and for purposes of research Said clinics shall be subject to the regulation and inspection of the board of naturopathic examiners.

4950.16 On or before the first day of January of each year, the board shall transmit to the Governor a full and true report of all its proceedings, together with a report of all its receipts and disbursements.

Article 2. Certificates Issued

4950.17. Under this chapter the board shall issue a certificate under its seal and signed by the president and secretary-treasurer. This certificate shall be designated naturopathic physician's certificate.

4950.18. All certificates issued shall state the extent and character of the practice which is permitted and shall be in the form prescribed by the board.

4950 19. The naturopathic physician's certificate authorizes the holder to diagnose and treat all human ailments and abnormalities by the use of such forces and substances as light, air, water, clay, heat, diet, herbs, electricity, massage, Swedish movements, suggestive therapeutics, magnetism, and physical and mental culture. *This definition shall not be so construed as to permit the holder of a naturopathic physician's certificate to engage in the practice of optometry as defined in Section 3041 of the Business and Professions Code.*

4950 20. The naturopathic physician's certificate authorizes the holder to use any or all of the following terms: doctor of naturopathy or its abbreviation "N.D." or naturopath or naturopathic physician. None of these terms, or any combination of them, shall be so used as to convey the idea that the physician who used it or them practices anything other than naturopathy.

4950.21. Naturopathic physicians holding certificates under this chapter shall have, within the scope of their certificates, the same rights under laws relating to public health as are accorded to all practicing physicians, and shall have the right to sign all reports, papers, and certificates relating to their practice, including birth and death certificates, and such reports, papers, and certificates shall be accepted by the proper authorities, officers, or departments. A naturopathic physician shall be deemed to be a "physician" within the meaning of all the laws of this State subject only to the limitations of this chapter.

Article 3. Admission to Practice

4950.22. (a) Each applicant for a naturopathic physician's certificate shall be not less than 21 years of age, and, unless otherwise provided herein, shall present a high school diploma, or its equivalent, approved by the board, and evidence satisfactory to the board that he has completed a one-year resident course of college grade in the subjects of physics, chemistry, and biology.

(b) In addition to the foregoing each applicant for a naturopathic physician's certificate shall, unless otherwise provided herein, possess the doctor of naturopathy degree, and shall have attended a resident course of professional instruction of not less than four years of nine months each in a legally chartered school or schools approved by the board, which course shall include the following schedule:

	Hours		Hours
Group I			
Anatomy, including embryology and histology	720	to	800
Group II			
Physiology	240	to	320
Group III			
Biochemistry and dietetics	240	to	320
Group IV			
Pathology, bacteriology and toxicology	420	to	490
Group V			
Diagnosis, pediatrics, psychiatry	600	to	720
Group VI			
Public health, hygiene and sanitation	120	to	160
Group VII			
Gynecology and obstetrics	160	to	200
Group VIII			
Naturopathic philosophy, principles, therapeutics (including physical therapy and phytotherapy), and practice	900	to	1,040
Total	3,400	to	4,050
Electives	650	to	0
Total number of hours required			4,050

A college hour shall be 50 minutes of actual work in the classroom, laboratory, clinic, or hospital. Ninety percent of actual attendance shall be required in all subjects.

4950.23. The following persons shall be eligible for a naturopathic physician's certificate, subject to the provisions of this chapter:

(a) Each member of the first board without examination.

(b) Each applicant who complies with Section 4950.22 of Article 3, and with Article 5.

(c) Each applicant who holds an unrevoked certificate of qualification issued to him since July 10, 1945, and prior to the enactment of this chapter by the board of examiners of the American Naturopathic Association of California, Incorporated, after having presented evidence of professional instruction and practice satisfactory to said board, and who makes application to the board appointed under this chapter within 90 days after the effective date of this chapter, shall be issued a naturopathic physician's certificate under Section 4950.17, within, but not later than six months after the effective date of this chapter.

(d) Each applicant who holds an unrevoked license to practice naturopathy in another state or territory of the United States after having presented evidence of legal residence in this State satisfactory to the board, and who makes application to the board created under this chapter within 90 days after the effective date of this chapter, shall be issued a naturopathic physician's certificate under Section 4950.17 not later than six months after the effective date of this chapter.

(e) Each person who holds the doctor of naturopathy degree granted prior to the enactment of this chapter by a legally chartered school

approved by the board, but who does not possess a certificate of qualification from the board of examiners of the American Naturopathic Association of California, Incorporated, may apply to the board under this chapter and upon passage of an examination such as the board may require, shall be issued a naturopathic physician's certificate; such certificate shall be issued not later than six months after the effective date of this chapter.

(f) Each person who holds a valid license to practice naturopathy in another state or territory of the United States of America having substantially the same minimum requirements necessary for a naturopathic physician's certificate under this chapter, may be issued a reciprocity certificate provided the licensing board in his state has established reciprocity with the board under this chapter.

Article 4. Applications

4950.24. Each application under this chapter must be made on forms furnished by the board. It shall show that the applicant has complied with the provisions of this chapter. It must be verified by the oath of the applicant and contain three testimonials of good moral character satisfactory to the board and such other information as the board may require.

4950.25. Each application shall be accompanied by the fee required by this chapter. It shall be filed with the board at least 30 days prior to its regular meeting unless otherwise provided herein.

4950.26 Each application shall contain or have attached thereto:

(a) A 3- x 5-inch photograph of the applicant taken within the preceding 30 days.

(b) A high school diploma, or its equivalent, approved by the board. Such other diplomas, transcripts, certificates, affidavits, or documents as are required by the board to complete the requirements under Article 3.

4950.27. The board may make an investigation of the statements contained in each application and of the genuineness of any document presented and may require additional proof. If it appears to the board that the applicant has not met the requirements the board may deny the application Every applicant for a naturopathic physician's certificate under this chapter shall appear in person before the board before said certificate may be granted.

Article 5. Examinations

4950.28. Each applicant shall take the examination required in this article for the naturopathic physician's certificate, unless the provisions of this chapter otherwise provide.

4950.29. All examinations shall be practical in character and designed to ascertain the applicant's fitness to practice his profession. At least a portion of the examination in each subject shall be in writing.

4950.30. There shall be at least 10 questions on each subject included in the examination. The answers to the questions shall be marked on a scale of zero to 100. Each applicant for a naturopathic physician's certificate shall obtain not less than a general average of 75 percent and not less than 60 percent in any subject.

4950.31. Any applicant for a naturopathic physician's certificate obtaining 75 percent each in seven subjects shall be re-examined once in those subjects only in which he failed and without additional fee; failing to pass the re-examination he shall be required to retake the full examination for the regular fee. The examinations may be conducted in any part of the State designated by the board. The notice of each meeting of the board at which an examination is to be held shall specify the time and place of holding the examination.

4950 32. The examination papers shall form a part of the records of the board, and shall be kept on file by the secretary-treasurer for a period of one year. In the examination the applicant shall be known and designated by number only, and the name attached to the number shall be kept secret until after the board has finally voted upon the application.

4950.33. Unless otherwise provided herein, each applicant for a naturopathic physician's certificate under Article 2 shall pass an examination in the following subjects:

(a) Anatomy including embryology and histology.
(b) Physiology and biochemistry.
(c) Pathology and bacteriology.
(d) Phytotherapy and dietetics.
(e) Diagnosis.
(f) Toxicology and hygiene.
(g) Gynecology and obstetrics.
(h) Skin and venereal diseases.
(i) Diseases of the eye, ear, nose and throat.
(j) Naturopathic philosophy, principles and therapeutics (including physical therapy).

Article 6. Revocation and Suspension

4950 37. The board may revoke or suspend certificates issued under the provisions of this chapter upon the grounds provided in this article. The proceedings under this article shall be conducted in accordance with Chapter 5 of Part 1 of Division 3 of Title 2 of the Government Code and the board shall have all the powers granted therein.

4950.38. The board may revoke or suspend certificates issued under this chapter for any of the following causes:

(a) Conviction of a felony, moral turpitude, or criminal abortion.
(b) Habitual drunkenness, or habitual addiction to the use of morphine, cocaine, or other habit-forming narcotics.
(c) Any violation of Section 17500 of this code
(d) Practicing while having an infectious, contagious, or communicable disease of which he has knowledge
(e) Legal adjudication of insanity, or mental incompetency to manage his property.
(f) Practicing, attempting to practice, conspiring to practice, aiding or abetting another's practicing, or endeavoring to procure practice by advertising, soliciting or other means, without using his true name in connection therewith.
(g) Advertising, being associated with any person or institution, or being in the employ of any person or institution advertising a way

or method of the treatment or cure of any venereal disease, lost manhood, or any means or method whereby the menses or monthly period of women can be regulated or disorders thereof treated or cured or reestablished if suppressed.

(h) The board may suspend the certificate of any naturopathic physician who removes his place of practice without registering with the secretary-treasurer of the board each change made by him within 30 days after making such change.

4950.39. In all cases where a certificate has been suspended, the holder shall not be entitled to practice during the term of suspension. Upon the expiration of the term of suspension, he shall be reinstated by the board and shall be entitled to resume his practice, unless it is established to the satisfaction of the board that he has practiced in this State during the term of suspension; in which event the board shall revoke his certificate.

Article 7. Crimes and Penalties

4950.40. Each of the following shall constitute a misdemeanor punishable upon conviction by a fine of not less than twenty-five dollars ($25) or more than five hundred dollars ($500), or imprisonment of not less than 30 days or more than one year in the county jail or both such fine and imprisonment:

(a) Practicing, attempting to practice, conspiring to practice, aiding or abetting in another's practice or endeavoring to practice naturopathy as herein defined, without a valid certificate issued under the provisions of this chapter.

(b) Purchasing, selling, bartering, offering for sale, attempting to buy, wilfully or fraudulently altering, attempting to alter, conspiring to fraudulently procure or alter, or aiding or abetting in another's fraudulently procuring or altering any degree, diploma, or credentials from any naturopathic college, of any certificate issued hereunder, or any document, paper, transcript, or testimony of any person to be used or used at any hearing held by the board, or in making any application to the board.

(c) Impersonation of any person holding a valid certificate hereunder, or of any person with intent to fraudulently solicit or procure practice.

(d) Knowingly allowing, permitting or conspiring to allow or permit any other person to use or practice or attempt to practice under his certificate or name.

(e) Impersonating any member or officer of the board or any agent, inspector, investigator, or other person employed by it.

(f) It shall be the duty of the district attorneys of the various counties in conjunction with the board to prosecute violations of this chapter. Several violations of this chapter whether the same consists of the doing of a single or several unlawful acts, may be charged to separate counts of the same accusation, and may be prosecuted separately.

Article 8. Revenue

4950.41. All moneys received by the Board of Naturopathic Examiners of the State of California shall be reported at the beginning of each month for the month preceding to the State Controller, and at the same time the entire amount of such collections shall be paid into the State Treasury and shall be credited to a fund to be known as the State Board of Naturopathic Examiners' Fund, which fund is hereby created.

Such fund shall be for the uses of the board of naturopathic examiners and out of it shall be paid all salaries and other expenses necessarily incurred in carrying out the provisions of this chapter.

4950.42. On or before the first day of January of each year every person holding a certificate to practice under the provisions of this chapter shall apply to the board for a renewal of his certificate.

Such application shall be made on forms to be furnished by the board, and shall contain such information as may be required by the board, and shall be accompanied by the required fee; upon receipt of which the board shall issue a certificate of annual registration, which certificate shall at all times be displayed in the office of the person to whom it is issued and shall be evidence that the holder thereof is entitled to practice within the scope of his certificate for a period of one year from the first day of January.

4950.43. The failure of any person holding a certificate to practice under the provisions of this chapter to pay the annual renewal fee during the time his certificate remains in force shall, ipso facto, work a forfeiture of his certificate after a period of 60 days from the first day of January of each year.

It shall not be restored except upon written application and the payment of the fee required by this chapter, plus a delinquent fee of five dollars ($5). No examination shall be required for the reissuance of a certificate that was forfeited under the provisions of this section.

On or before the first day of December of each year the secretary-treasurer of the board shall notify by mail to his last known address, each holder of a certificate under this chapter that the annual application and fee for renewal are due on or before the first day of January following and shall furnish him with the necessary forms.

4950.44. The amount of fees prescribed by this chapter in connection with the certificates issued under its provisions is that fixed by the following schedule:

(a) The fee for each applicant for a naturopathic physician's certificate shall be twenty-five dollars ($25), unless otherwise provided. If the applicant's credentials are insufficient, or if for any reason his application is refused, or if he does not desire to take the examination, the sum of ten dollars ($10) shall be retained and the remainder of the fee is returnable on application.

(b) The annual renewal fee is fifteen dollars ($15) or such lesser sum as the board may determine.

(c) The fee for each applicant for a reciprocity certificate is one hundred dollars ($100). If the applicant does not receive the certificate the refund is ninety dollars ($90).

(d) The duplicate certificate fee is two dollars ($2).

(e) The endorsement fee for copies of credentials is five dollars ($5).
(f) The renewal delinquent fee is five dollars ($5).

4950.45. Unless otherwise expressly provided in this chapter, 75 percent of the fines imposed or forfeitures of bail collected shall be paid upon collection by the proper officer of the court to the board of naturopathic examiners.

The payment of the board shall be made without placing the fine or forfeiture of bail in any special, contingent, or general fund in any county, city or township.

The balance of 25 percent of the fines or forfeitures of bail shall be paid to the county where the case is pending.

Article 9. General Provisions

4950.46. Whenever the following terms, words, or phrases are used in this chapter, the same shall, unless a different meaning appears from the context have the following meaning:

A "valid" certificate shall refer to a certificate lawfully and regularly obtained under the provisions of this chapter which certificate is then unexpired, and which has not been suspended or revoked as herein provided.

A "naturopathic college" or "school" shall refer to a school, college, or institution, or other places of learning, training or purporting to train one for the practice of naturopathy as herein defined.

"Practice" shall refer to the practice of naturopathy as herein defined.

"Board" shall refer to the Board of Naturopathic Examiners of the State of California, unless otherwise specified.

"X-ray" shall be permitted for use in colleges for instruction, and by holders of certificates to practice hereunder for diagnostic purposes only.

The masculine pronoun shall include the feminine.

Section headings contained herein shall not be deemed to govern, limit, modify, or in any manner affect the scope, meaning, or intent of the provisions of the section.

4950.47. All acts, chapters, or parts of acts or chapters in conflict herewith are hereby repealed.

Nothing in this chapter shall be construed to allow, permit, or license those practicing naturopathy in the State of California to perform surgery or prescribe those narcotics or drugs whereby a prescription is required; however, nothing in this chapter shall prevent the use of a local analgesic when necessary to prevent suffering during any treatment authorized herein.

Nothing in this chapter shall be construed to interfere with the rights, powers, and duties of persons licensed under the Osteopathic Act, the Chiropractic Act, or Chapters 4, 5, and 7 of Division 2 of the Business and Professions Code, and said other acts and/or chapters shall not interfere with the rights, powers, duties, and scope of practice herein granted to holders of certificates under this chapter

This act shall not be construed to regulate, prohibit, or apply to any kind of treatment by prayer, or to any person or persons administering the same, nor to interfere in any way with the practice of religion.

4950.48. If any section, subsection, sentence, clause, phrase, or word of this chapter is for any reason held to be unconstitutional, such decision shall not affect the validity of any other portion of this chapter.

4950.49. This chapter shall not become operative until the American Naturopathic Association of California Incorporated deposits with the State Treasurer funds sufficient to cover all costs of adminstering the chapter for a period of one year beginning on the first day of July next succeeding the date of such deposit, as determined by the Director of Finance. If such deposit is made the chapter shall become operative on the first day of July next succeeding the date of such deposit.

The Director of Finance shall determine the amount of money which would be sufficient to so administer the chapter for a period of one year and shall certify such amount to the Director of the Department of Professional and Vocational Standards.

The Director of the Department of Professional and Vocational Standards, when advised by the State Treasurer that the amount specified by the Director of Finance has been deposited as provided in this section, shall notify the Governor that the chapter will become operative on the next succeeding first of July.

It is the intention of the Legislature in enacting this chapter that, after the first year of operation, all expenses of the board incurred in administering this part shall be paid from the fees collected under this chapter.

APPENDIX B

The following is a summary of licensing regulations in states which recognize naturopathy.

ARIZONA

(Year enacted—1935)

BOARD MEMBERSHIP Three members appointed by the Governor. Three-year term.

DEFINED NATUROPATHY, which includes all forms of physiotherapy, is hereby defined to be: A system of treating the abnormalities of the human mind and body by the use of drugless and nonsurgical methods, and includes the use of physical, electrical, hygienic, and sanitary measures incident thereto.

EDUCATIONAL REQUIREMENT Four thousand five hundred hour course. Resident naturopathic school or college teaching course.

COURSE OF STUDY Anatomy, including dissection, 650 hours; histology and embryology, 150 hours; physiology, 250 hours; chemistry, 200 hours; bacteriology, 100 hours; pathology, 350 hours; diagnosis, including physical, clinical, X-ray, symptomatology, dermatology, and mental diseases, 500 hours; orthopedics, 100 hours; manipulative and adjustive technic, 200 hours, dietetics, 200 hours; drugless gynecology, 150 hours; nonsurgical obstetrics, 150 hours; toxicology, 50 hours; first aid, 50 hours; ear, nose, and throat, 50 hours; hygiene and sanitation, 100 hours; jurisprudence, 45 hours; drugless therapeutics, including electrotherapy, physiotherapy, hydrotherapy, massage, and practice of naturopathy, 750 hours; clinical practice, 300 hours; and such other subjects as the board may require, excepting materia media and major surgery, with a total of not less than 4,500 hours.

COMMENTS No credit for home study, extension or correspondence course. Advertising limited to use of business cards.

CONNECTICUT

(Year enacted—1930)

BOARD MEMBERSHIP Three members appointed by the Governor.

DEFINED "The practice of the psychological, mechanical and material sciences of healing as follows: The psychological sciences, such as psychotherapy; the mechanical sciences, such as mechanotherapy, articular manipulation, corrective and orthopedic gymnastics, neurotherapy, physiotherapy, hydrotherapy, electrotherapy, thermotherapy, phototherapy, chromotherapy, vibrotherapy, concussion and pneumatotherapy, and the material sciences, such as dietetics and external applications; but shall not mean internal medication or the administering of any substance simulating medicine or the form of medicine, except dehydrated foods."

EDUCATIONAL REQUIREMENT Graduate of approved high school. One year course in an approved scientific school or a college Graduate of four year resident course, college of naturopathy. Course of study not given. However, must take a written examination in " * * * anatomy, physiology, histology, psychology, chemistry, hygiene, public health, dietetics, jurisprudence, naturopathic pathology, diagnosis and theory and practice of naturopathic therapeutics."

COMMENTS Not permitted to use X-rays for therapeutic or cosmetic treatment, unless under the prescription, direction, or supervision of a licensed physician, surgeon, osteopath or dentist.

DISTRICT OF COLUMBIA

(Year enacted—1928)

BOARD MEMBERSHIP	Under Healing Arts Law.
DEFINED	Not given specifically Under "Drugless Healing." "Any system of healing that does not resort to the use of drugs, medicine or operative surgery for the prevention, relief or cure of any disease."
EDUCATIONAL REQUIREMENT	Not less than two years of preprofessional training before entering school for study. Has studied healing art in four graded courses of not less than nine months each in a registered school. And if required by commission, not less than one year of hospital training.
COURSE OF STUDY	Not specified.
COMMENTS	Commission administers licensing regulations over M.D, D.O., and medicines as well.

FLORIDA

(Year enacted—1927)

BOARD MEMBERSHIP	Three members appointed by the Governor Four-year term.
DEFINED	The use and practice of psychological, mechanical and material health sciences to aid in purifying, cleansing and normalizing human tissues for the preservation or restoration of health, according to the fundamental principals of anatomy, physiology, and applied psychology, as may be required. Naturopathic practice employs, among other agencies, phytotherapy, dietetics, psychotherapy, suggestotherapy, hydrotherapy, zone therapy, biochemistry, external applications, electrotherapy, mechanotherapy, mechanical and electrical appliances, hygiene, first aid, sanitation, and heliotherapy.
EDUCATIONAL REQUIREMENTS	Graduate of high school. Completed four-year course of nine months each in school of naturopathy.
COURSE OF STUDY	Not specified.
COMMENTS	Have the right to prescribe narcotics.

GEORGIA

(Year enacted—1950)

BOARD MEMBERSHIP	Four members appointed by the Governor. Must be naturopath Four-year term.
DEFINED	"That philosophy and system of the healing art embracing prevention, diagnosis, and treatment of human ills and functions by the use of several properties of air, light, heat, cold, water, manipulation, with the use of such substances, nutritional as are naturally found in and required by the body, excluding drugs, surgery, X-ray, and radium therapy, and the use of X-ray equipment."
EDUCATIONAL REQUIREMENT	Graduate of high school. One academic year of premedical school. Graduate of four-year study—4,400 hours approved college of naturopathy.
COURSE OF STUDY	"Any school, college or university *legally chartered* and having a regular professional course in naturopathy and its allied branches of four years of nine months each, and includes in its curriculum the following subjects: bacteriology, anatomy, diagnosis, comparative medicine, physiology, etiology, hydrotherapy, histology, pathology,

phytotherapy, biology, toxicology, electrotherapy, chemistry, hygiene and sanitation, massotherapy, analysis, biochemistry, orthopedics, systematology, physiotherapy, practice of naturopathy, autotherapy, ethics and jurisprudence, and dietetics shall be recognized by the Georgia State Board of Naturopathic Examiners and the above requirements shall constitute the definition of a recognized school, college, university of naturopathy."

COMMENTS Nothing may be construed to be authority to practice medicine. May not perform surgery of any kind, nor prescribe drugs, medicines, or narcotics.

Naturopathic licensing law was repealed by State Legislature in January, 1956.

OREGON

(Year enacted—1927)

BOARD MEMBERSHIP Three members appointed by the Governor. Three-year term

DEFINED "A system of treating the human body by use of drugless methods, which has for its object the maintaining of the body in, or of restoring it to, a state of normal health."

EDUCATIONAL REQUIREMENT High school graduate or equivalent Graduate four-year naturopathic course—not less than 4,000 hours. Basic science certificate.

COURSE OF STUDY "The studies required of the applicant for a license to practice naturopathy in the State of Oregon shall include: anatomy; histology; embryology; physiology; chemistry; pathology; bacteriology; public health and hygiene; toxicology; obstetrics and gynecology; diagnosis; theory, practice and philosophy of naturopathy; electrotherapy; hydrotherapy; physiotherapy; clinics; eye, ear, nose and throat; minor surgery; first aid; herbology; proctology; dietetics; jurisprudence, and such other naturopathic subjects as the board may require, except materia medica, pharmacology and major surgery, with a total of not less than 4,000 lecture or recitation hours"

COMMENTS Prohibits dispensing or prescribing use of pharmaceutic drugs. Authorized to sign death and birth certificates. Does not allow practice of chiropractic adjustments. Permits minor surgery.

SOUTH CAROLINA

Year enacted—1937)

BOARD MEMBERSHIP Four members appointed by the Governor.

DEFINED "The use and practice of psychological, mechanical and material health sciences to aid in purifying, cleaning and normalizing human tissues for preservation or restoration of health, according to the fundamental principles of anatomy, physiology, and applied psychology, as may be required. Naturopathic practices employ, among other agencies, heat, light, water, electricity, psychology, diet, massage, and other manipulative methods."

May practice phytotherapy, minor surgery, obstetrics, and gynecology.

EDUCATIONAL REQUIREMENT Graduate of four-year high school. Completed a two-year premedical course Graduate from approved naturopathic college after four years completed, total of 4,400 hours.

COMMENTS May not practice materia medica or surgery.

Bill signed repealing naturopathic licensing law on February 27, 1956

TEXAS

(Year enacted—1949)

BOARD MEMBERSHIP Six members appointed by the Governor. Six-year term.

DEFINED "* * * that philosophy and system of the healing art embracing prevention, diagnosis, and treatment of human ills and functions by the use of several properties of air, light, heat, cold, water, manipulation with the use of such substances, nutritional as are naturally found in and required by the body, excluding drugs, surgery, X-ray, and radium therapy, and the use of X-ray equipment."

EDUCATIONAL REQUIREMENT Graduate from high school. Two years of college. Four years of nine months each in a recognized naturopathic or medical school. One year of internship in a recognized hospital.

COURSE OF STUDY Not specified.

UTAH

(Year enacted—1939)

BOARD MEMBERSHIP Under general law re treatment of human ailments.

EDUCATIONAL REQUIREMENT High school graduate. One year college of liberal arts. Four-year course—4,500 hours legally chartered school of naturopathy. One year residence in hospital or office of licensed naturopath.

COURSE OF STUDY Not specified.

COMMENTS Three-day examination in subjects including minor surgery and narcotics.

VIRGINIA

(Year enacted—1944)

BOARD MEMBERSHIP Under Board of Medical Examiners.

DEFINED Not defined.

EDUCATIONAL REQUIREMENT Completion of a two-year academic course in an accredited literary college.

COURSE OF STUDY Completion of four-year course of at least eight calendar months each, from an approved school, to be examined by naturopathic board member on jurisprudence, philosophy, therapeutics, and practice.

APPENDIX C

STATE OF CALIFORNIA
OFFICE OF LEGISLATIVE COUNSEL
SACRAMENTO, CALIFORNIA, May 15, 1956

HONORABLE CHARLES H. WILSON
2106 West 78th Place
Los Angeles 47, California

LICENSING ACT FOR NATUROPATHS ADMINISTERED BY BOARD OF CHIROPRACTIC EXAMINERS—#2573

DEAR MR. WILSON:

QUESTION

In connection with a proposal to enact a licensing act for naturopaths, to be administered by an existing state agency, we are asked whether the administration can be placed under the jurisdiction of the Board of Chiropractic Examiners without submitting the proposal to a vote of the people.

OPINION

It is our opinion that legislation placing the administration of a licensing act for naturopaths under the jurisdiction of the Board of Chiropractic Examiners cannot be enacted without approval of the electors.

ANALYSIS

The Board of Chiropractic Examiners is created by, and its duties and powers are set out in an initiative measure (Stats. 1923, p. lxxxviii) commonly referred to as the Chiropractic Act, which was approved by the electors on November 7, 1922. The initiative power is reserved to the people by Article IV, Section 1, of the Constitution of California, and that section provides, in part, as follows:

> "No act, law or amendment to the Constitution, initiated or adopted by the people, shall be subject to the veto power of the Governor, and no act, law or amendment to the Constitution, adopted by the people at the polls under the initiative provisions of this section, shall be amended or repealed except by a vote of the electors, unless otherwise provided in said initiative measure * * *."

Under this provision, an initiative cannot be amended except by a vote of the electors unless the act itself otherwise provides. The Chiropractic Act contains no provision for effecting its amendment by means other than a vote of the electors, and it is our opinion that legislation to increase the scope of functions of the Board of Chiropractic Examiners to include the administration of a naturopathy act, if drafted in

the form of amendments to the Chiropractic Act, would clearly have to be submitted to a vote of the people.

A more complex question arises with respect to legislation taking the form of a separate act empowering the board to administer naturopathy licensing provisions, but which leaves the Chiropractic Act itself unamended, and we have been unable to find any decisions precisely involving this question. Such legislation would, of course, increase the scope of the board's functions far beyond those presently specified in the Chiropractic Act and, in this respect, could be interpreted as a means of amending it by indirection.

Statutes enacted by the Legislature, insofar as they conflict with or purport to modify initiative acts, are invalid because the latter have the force of constitutional provisions and cannot be amended except by vote of the electors (*Beneficial Loan Society* v. *Haight* (1932), 215 Cal 506). Thus, in *Beneficial Loan Society* v. *Haight*, a legislative enactment which permitted personal property brokers to charge interest rates in excess of 12 percent was declared invalid because it conflicted with the provisions of the Usury Law, an initiative act, which limited interest rates to 12 percent. In *Bartosh* v. *Board of Osteopathic Examiners* (1947), 82 Cal. App. 2d 486, the initiative act governing the Board of Osteopathic Examiners (Stats. 1923, p. xciii), was construed by the court. That act provides, generally, that with respect to regulating osteopathic schools and the practice of osteopathy the board shall apply the provisions of the Medical Practice Act and "*acts amendatory thereof*" (Stats. 1923, p. xcv, Sec. 2). In holding that an amendment to the Medical Practice Act which requires disciplinary proceedings to be conducted before a hearing officer in accordance with provisions of the Government Code is merely procedural and not in violation of constitutional provisions against amending initiative acts, the court nevertheless indicates that the Legislature is without power to amend the substantive provisions of the Osteopathic Act. Thus, it appears that even where an initiative act is expressly made subject to indirect amendment an attempt to effect a basic or substantive change by legislative enactment will be invalid.

The Chiropractic Act authorizes the Board of Chiropractic Examiners to issue only one form of certificate, to be designated "license to practice chiropractic" (Sec. 7). The powers granted the board do not go beyond those necessary to administer the provisions of the act with respect to the granting and revoking of chiropractic licenses and the regulation of chiropractic schools (Sec. 4). The only independent legislation to which all chiropractic licentiates are expressly made subject is state and municipal regulation pertaining to public health (Sec. 13). The act expressly repeals any conflicting portions of the Medical Practice Act or amendments thereof (Sec. 18). We believe that these provisions could be construed as evincing an aim to restrict the jurisdiction of the board to the function of administering the provisions of the Chiropractic Act alone, and that in any event legislation to increase the scope of the board's functions to include the administration of a licensing act for naturopaths would constitute a substantial change in its powers and duties and would be construed by the courts as an amendment.

It is our opinion, therefore, that vesting the administration of a licensing act for naturopaths in the Board of Chiropractic Examiners, whether by amendment of the provisions of the Chiropractic Act itself or by separate legislation, would constitute an amendment of the act which, in the case of initiative acts, can be achieved only by approval of the electors.

Very truly yours,

RALPH N. KLEPS
Legislative Counsel
By ERNEST H. KUNZI
Deputy

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ASSEMBLY INTERIM COMMITTEE REPORTS
1955-1957
VOLUME 9 NUMBER 8

REPORT OF SUBCOMMITTEE ON DISTRICT HOSPITALS TO ASSEMBLY INTERIM COMMITTEE ON PUBLIC HEALTH

House Resolution No. 174, 1955

MEMBERS OF SUBCOMMITTEE

REX M. CUNNINGHAM, *Chairman*
GLENN E. COOLIDGE CLAYTON A. DILLS
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LETTER OF TRANSMITTAL

CALIFORNIA LEGISLATURE
ASSEMBLY INTERIM COMMITTEE ON PUBLIC HEALTH
SACRAMENTO, CALIFORNIA, March 6, 1957

Hon. L. H. Lincoln
Speaker of the Assembly; and
Members of the Assembly
Assembly Chamber, Sacramento, California

GENTLEMEN: In accordance with House Resolution No. 201, 1955 Regular Session of the California Legislature, the attached report of the Subcommittee on District Hospitals, Assembly Interim Committee on Public Health, is herewith presented.

Respectfully submitted,

W. BYRON RUMFORD, Chairman

SUBCOMMITTEE LETTER OF TRANSMITTAL

CALIFORNIA LEGISLATURE
ASSEMBLY INTERIM COMMITTEE ON PUBLIC HEALTH
SACRAMENTO, CALIFORNIA, March 5, 1957

Hon. W. Byron Rumford, Chairman
Assembly Interim Committee on Public Health

DEAR MR. RUMFORD: Attached is the report of the Subcommittee on District Hospitals. The report presents the results of a subcommittee study conducted during the 1955-57 interim, summarizes the testimony presented at two public hearings, and presents the subcommittee findings and recommendations.

The committee wishes to express its appreciation to the many individuals and organizations for valued assistance, the results of which are reflected in this report. Among those who contributed are the district and nondistrict hospitals which provided detailed information concerning their hospital operations, the California Hospital Association, Association of California Hospital Districts, Inc., the Bureau of Hospitals of the State Department of Public Health, the Division of County Budgets and Reports of the State Controller's Office, the Legislative Counsel, and especially the staff of the Legislative Auditor whose assistance in the analysis and evaluation of data gathered during the interim was invaluable.

Respectfully submitted,

REX M. CUNNINGHAM, Chairman
GLENN E. COOLIDGE
CLAYTON A. DILLS

2—L-4944

SCOPE OF REPORT

This report presents the findings of the committee study conducted during the 1955-56 interim including a review of the development of hospital districts under the District Hospital Act of 1945, an analysis of selected physical and financial characteristics of district hospitals from the latest available data and a comparison of selected characteristics among district hospitals and between district and nondistrict hospitals.

The report further summarizes and evaluates several charges levied against one of the operating district hospitals by citizens of the district and presents the committee's findings and recommendations.

FINDINGS

1. Forty-nine hospital districts have been organized in accordance with the District Hospital Act of 1945, and 36 district hospitals are now in operation. These 36 hospitals provide close to 2,500 hospital beds or over 10 percent of the total general nonprofit hospital beds in California. The majority of the district hospitals are small units with less than 50 beds, serving low population areas in the State.

2. Hospital districts may levy a tax on real and personal property not to exceed 20 cents on each $100 of assessed valuation of taxable property within the district. Slightly over one-third of the 49 hospital districts in the 1954-55 Fiscal Year levied the maximum maintenance and operation tax permitted by law while one-fifth levied no tax.

3. A further and unlimited tax may be levied to pay interest and accumulate a sinking fund to pay the principal on outstanding bonds. Slightly over one-half of the 49 operating districts assessed a tax for this purpose.

4. In one-third of all districts during Fiscal 1954-55, the total of the maintenance and operation tax and the tax for service bonds exceeded 20 cents per $100 of assessed valuation.

5. The state law stipulates that a hospital district shall not incur a bonded indebtedness in excess of 10 percent of the assessed valuation of all taxable property in the district. During 1954-55 Fiscal Year no district approached the maximum, the highest indebtedness being 3.14 percent of the assessed valuation.

6. The dependence of operating district hospitals on tax moneys vs. income from services for operating expenses varies from hospital to hospital. However, there appears to be no clear-cut relationship between the extent of such dependence on any single factor such as size or location of hospital, length of time the hospital has been in operation, or percent of occupancy in the hospital. One-third of the hospitals reporting to the committee showed that income from patient charges for the 1954-55 Fiscal Year covered their total operating expenses (including depreciation).

7. No statistically significant differences were evident from the data available to the committee in a comparison between district and nondistrict hospitals of such items as room rates, salaries and employees per utilized bed. Because of variations in methods of accounting utilized by different hospitals and because the information available to the committee often lacked essential detail, it was impossible to make reliable comparisons between district and nondistrict hospitals of many of the significant physical and financial characteristics.

As a result of public hearings held to consider the operations of Eden Township District Hospital, the committee reports the following findings:

1. Eden Hospital, the largest operating district hospital in the State, provides excellent medical and professional services to citizens of the

district. However, many charges and complaints have been directed at the hospital and its operations by citizens and organizations within the district.

2. Under the present District Hospital Act it is possible for the owner of a private hospital to serve as a member of the board of a district hospital.

3. The present statutory regulations relating to the purchase of hospital equipment do not clearly specify those medical supplies which may be purchased without submitting the purchase contract to bid.

4. California statutes now provide (Penal Code, Section 928) for annual grand jury audit of the books, records and accounts of all hospital districts. The Legislative Counsel has ruled this provision as mandatory.

5. Although there is no indication that the hospital has not complied with the letter of the law in reporting hospital operations, it has apparently failed in its equally important obligation to the citizens of the district to keep them informed of those operations in which they express an interest. The faulty relations and flow of information between the hospital and the citizens resulted in misunderstanding and provided the basis for many of the complaints of the citizens. The committee feels it might be well to re-emphasize the fact that a district hospital is ultimately responsible to the citizens of the district which created it and that the hospital should strive to maintain such relationships with these citizens as will permit the most beneficial operations of the hospital.

RECOMMENDATIONS

1. That to avoid possible conflict of interest the District Hospital Act be amended to bar from board membership of a hospital district any person who has an interest of 5 percent or more in a private hospital operating in the same hospital service area.

2. That the District Hospital Act be amended, adding to the present requirement that contracts involving an expenditure of over $2,500 be let out to bid unless the contract involves medical or surgical equipment or supplies, the definition that medical or surgical "equipment or supplies" include only equipment or supplies used by or under the direction of a physician and surgeon in caring for or treating a patient in a hospital.

METHOD OF STUDY

At the request of citizens and interested organizations in Eden Township Hospital District and the board of directors of the hospital the committee held public hearings on November 13 and December 18, 1956, in Hayward, California. At these hearings extensive testimony was heard relative to the operations of the hospital. During the course of the hearings 22 witnesses were heard. A list of the witnesses and the organizations they represented may be found in Appendix 1.

No public hearings were held in the course of conducting the committee study to review the operations of all hospital districts and to analyze selected characteristics of the district hospitals alone and in contrast to operations of similar nondistrict hospitals. Rather the committee reviewed the laws enacted since passage of the original District Hospital Act of 1945, especially those enacted during the 1955 Regular Session of the California Legislature. The committee met on several occasions with representatives of the California Hospital Association and the California Hospital District Association, and the California State Department of Public Health. It was felt that an evaluation of district hospitals would be more meaningful if operations of these hospitals could be compared to the operations of similar nondistrict hospitals. The committee therefore prepared a detailed questionnaire to secure data on the general characteristics and financial aspects of all operating district hospitals and also to secure similar information from selected nondistrict hospitals.

CONSTRUCTION OF QUESTIONNAIRE

The preliminary draft of the questionnaire was the result of the joint efforts of the office of the Legislative Auditor and the Interim Committee on Public Health. The draft was sent to selected hospitals for their review and comments. A meeting of the subcommittee was held on November 18, 1955, to hear the comments and recommendations of all interested groups regarding the questionnaire. At this meeting, the California Hospital Association and the Association of California Hospital Districts, Inc., among other groups, presented their views on the questionnaire, item by item. Many of the suggestions made at that meeting were incorporated in the final draft of the questionnaire.

SELECTION OF THE SAMPLE

All operating district hospitals, 36 as of April, 1956, were included in the sample. However, since two of the district hospitals had been in operation only a few months, no attempt was made to pair them with nondistrict hospitals. It was therefore necessary to select 34 nondistrict hospitals to use as a control group. The Bureau of Hospitals of the State Department of Public Health assisted in the selection of the nondistrict hospitals. The first criterion was to select only nonprofit general hospitals. The second criterion in selection was to pair a nondistrict

with a district hospital by factors of size and geographical area. The Public Health Department has prepared a geographical breakdown of the State first by "hospital region" and then within those regions by "hospital service area." When it was not possible to match a district with a nondistrict hospital by service area, the hospital chosen was from the nearest and most comparable service area. The selected pairs of district and nondistrict hospitals were then submitted to the California Hospital Association and the Association of California Hospital District, Inc., for approval. No changes were made as a result of their review of the pairs.

QUESTIONNAIRE RETURNS

The questionnaires were mailed to the selected hospitals April 16, 1956. A completion date of May 15, 1956, was set because it was felt that most hospitals were familiar with the purpose and nature of the questionnaire. Because the returns came in so slowly, it was necessary to extend the completion date and send out follow-up letters in June and July to many of the hospitals, and a third follow-up in some cases. In addition, the California Hospital Association urged its member hospitals to complete and send in their questionnaires promptly. By the time the tabulation and analysis had begun on September 17, 1956, a total of 27 district hospitals and 17 nondistrict hospitals out of 34 of each type of hospital had returned questionnaires. In fact, all questionnaires which had come in as late as September 21, 1956, have been included in the study.

From the 27 district and 17 nondistrict hospital questionnaires returned and used in the study, a total of 19 pairs of comparable district and nondistrict hospitals evolved. In two instances in the original pairing submitted to the California Hospital Association and the District Hospital Directors Association, the same nondistrict hospital was paired with two district hospitals. Due to the lack of response from certain hospitals, it was necessary to make certain substitutions to the original pairs in order to have as many pairs as possible. In two cases, nondistrict hospitals not in the original sample were substituted for hospitals that did not respond. In a third case, a nondistrict and district hospital were paired because of a lack of response by hospitals with which they were originally paired. In this latter case, the paired hospitals are not from the same hospital region but from fairly similar adjacent regions. The committee feels that these changes do not affect the reliability of the data.

RELIABILITY OF THE QUESTIONNAIRE DATA

The information contained in the questionnaires has been assumed to be accurate and no test of reliability such as an audit has been made. Every hospital was requested to submit a copy of its most recent profit and loss statement However, less than 20 percent attached such a statement to their questionnaire.

While the questionnaire returns were not as great as was hoped, there were sufficient returns to make the sample representative. Out of a total of 34 pairs of questionnaires mailed out, the study is based upon a return of 75 percent of the district hospitals, 50 percent of the nondistrict hospitals and 56 percent of the possible pairs. Fifty-six

percent of the pairs or 19 pairs could be obtained from only a 50 percent return from nondistrict hospitals because in the original pairing one nondistrict hospital was paired against two district hospitals. However, it should be mentioned that for some comparisons of specific information fewer than 19 pairs were available because some hospitals did not answer completely all the questions in the schedule.

HOSPITAL DISTRICTS AND THEIR GROWTH

The District Hospital Act, passed by the California Legislature in 1945, provided for the formation of hospital districts.[1] These districts, political subdivisions of the State, can be organized to build and operate hospital facilities on a nonprofit basis. The measure was originally intended to fill a need for hospital facilities in rural areas and areas of low population and for the first two years that the law was operative the four largest counties in the State, Los Angeles, San Francisco, Alameda, and San Diego, were excluded from its provisions because of a stipulation in the law prohibiting counties with a population in excess of 200,000 from forming districts. As the population in the State grew and the need for hospital beds in urban areas increased, the law was amended to permit hospital districts to be formed any place in the State. A 1947 amendment eliminated the exemption of all counties but just those with a population in excess of 1,000,000 which in effect eliminated only Los Angeles. In 1949 this exemption was also eliminated.

The preponderant number of hospital districts were formed in the four years immediately after the Hospital District Act became effective. In the 11 years since the act was passed, 36 hospitals have been opened and close to 2,500 hospital beds have been made available to the people in the State. Table 1 below indicates the pattern of growth in district hospital facilities.

TABLE 1

GROWTH OF DISTRICT HOSPITALS
1945-1956

Year	*Number of districts*		*Number of hospitals*		*Number of beds*	
	Formed	*Cumulative*	*Opened*	*Cumulative*	*Opened*	*Cumulative*
1945	0	0	0	0	0	0
1946	14	14	4	4	175	175
1947	11	25	2	6	88	263
1948	12	37	1	7	103	366
1949	4	41	2	9	49	415
1950	1	42	6	15	428	843
1951	1	43	9	24	376	1,219
1952	1	44	5	29	228	1,447
1953	3	47	1	30	150	1,597
1954	--	47	3	33	573	2,170
1955	2	49	2	35	190	2,360
1956	--	49	1	36	14	2,374
Totals	--	49	--	36	--	2,374
Under construction			6	42	474	2,848

SOURCE: State Department of Public Health, Bureau of Hospitals, September, 1956

Although no new districts have been formed since 1955, the State Department of Public Health reported to the committee in September, 1956, that certificates have been filed with them relative to the formation of three additional districts (El Camino Hospital District, Santa

[1] See Appendix 2 for list of hospital districts

Clara County; Santa Clara Valley Hospital District, Ventura County; and Antioch Hospital District, Contra Costa County).

As indicated in Table 2, the greatest number of hospital districts has been formed in areas of low population. However, since the District Hospital Act has been amended to permit the formation of districts in all counties in the State, one hospital has been opened in Los Angeles County, three in San Diego County, and one in Alameda County; one hospital is under construction in Los Angeles County and one in Alameda County.

TABLE 2

POPULATION OF HOSPITAL DISTRICTS
1956

District population (civilian) estimated July 1, 1956	*Number of hospital districts*
1,000- 5,000	8
5,001- 10,000	9
10,001- 25,000	14
25,001- 50,000	7
50,001-100,000	6
Over 100,000	5
Total	49

SOURCE State Department of Public Health, Bureau of Hospitals, September, 1956

It has also been found that the majority of hospitals are small units with less than 50 beds. Table 3, for example, shows that 19 of the operating district hospitals fall in this category.

TABLE 3

NUMBER OF DISTRICT HOSPITALS IN OPERATION AS OF SEPTEMBER, 1956 GROUPED BY BED SIZE

Number of beds	*Number of hospitals*
Under 25	8
25- 49	11
50- 74	6
75- 99	3
100-149	3
150-199	3
200 plus	2
Total	36

SOURCE State Department of Public Health, Bureau of Hospitals, September, 1956

In the 10-year period since the first district hospital was opened, the importance of the district hospital in terms of total hospital facilities available to the people has steadily grown. Today district hospital beds represent slightly over 10 percent of the total general nonprofit hospital beds in California and over 2 percent of all the hospital beds in the State.[1]

HOSPITAL DISTRICTS AND THE STATE

Provision for district hospitals is found in Division 23, Section 32000 through 32490.9 of the California Health and Safety Code. The districts are political subdivisions of the State, organized for the purpose

[1] Total hospital beds includes, in addition to general hospital beds, those in chronic, mental, tuberculosis hospitals and in mental and nursing homes. See Appendix 7 (Table 1).

of operating hospital facilities. Essentially independent units, they operate directly under their own governing board. It is important to understand that the district hospital is not a county hospital nor a voluntary hospital, but is a quasi-governmental, nonprofit hospital serving pay patients. The county board of supervisors, having once declared a hospital district organized, has no further control over it. State control over district hospitals consists of the regulations applying to all hospitals in California under the Hospital Licensing Act. This act is administered by the State Department of Public Health, and the department is responsible for the licensing and inspection of district hospitals. The district hospital being a public hospital is exempt from payment of the license fee but is liable for all other requirements of the Hospital Licensing Act.

California also participates in the federal program adopted in 1946 (Public Law 725 discussed in the next section) to provide for joint federal and state cooperation in planning and in providing financial assistance to local communities building hospital and health facilities. In 1947 the state implemented California's participation by authorizing the allocation of state funds to match funds for construction of hospitals operated by a governmental body. Since then the State has authorized the granting of state funds to match federal funds for establishment of other non-profit hospitals.

FEDERAL GOVERNMENT AND THE HILL-BURTON BILL

District hospitals may apply for federal funds under Public Law 725 (1946) known as the Hospital Survey and Construction Act or the Hill-Burton Bill. This bill established a basis for joint federal and state cooperation in providing planning and financial assistance to local communities for hospital and health facilities. The Department of Public Health, designated as the state agency to carry out the provisions of the law, makes annual surveys of the existing facilities and the needs for additional hospital facilities in the State. From this survey a priority sequence for distribution of federal funds available for allocation is established and, on the basis of this priority both federal and state funds are allocated to various non-profit hospitals. Both the federal share and the state share of project cost is limited by state policy to one-third of the cost for construction, equipment, and related fees.

Two-thirds of the operating district hospitals have received assistance from hospital construction funds. Four of the six district hospitals now under construction have received these funds [1]

Between the time the Hill-Burton law became operative in 1947 and September, 1956, federal funds in the amount of $34,392,976 had been distributed in California. Approximately 24 percent of this money went to district hospitals, while 50 percent went to private non-profit hospitals and 25 percent to county hospitals. The money was used to assist in the construction of 7,104 hospital beds including 1,572 beds in district hospitals. (See Appendix 9—Tables 3 and 4.)

[1] State Department of Public Health, September, 1956

RECENT LEGISLATION

The Legislature has altered and revised the original District Hospital Act at each succeeding session. As was previously mentioned, the original act prohibited the four largest counties in the State (Los Angeles, San Francisco, Alameda, and San Diego) from forming hospital districts. Through amendments passed during the 1947 and 1949 sessions, the provisions of the act were extended to include the entire State.

In 1953 the Legislature directed the Assembly Interim Committee on Public Health to review and evaluate the entire district hospital program. The committee in its report to the Legislature in 1955 [1] recommended a number of amendments. Several of these were incorporated in the district legislation enacted at the 1955 session. The legislation enacted is summarized below (all sections referred to can be found in the Health and Safety Code):

Assembly Bill No. 3712 (Chapter 1525) amended Sections 32001, 32004, 32004.3, 32004.4, 32004.6, relating to the inclusion and annexation of lands to hospital districts. The law stated that the "territory comprising this district need not be contiguous" and provided that "the territory of a municipal corporation shall not be divided provided that land either in a municipal corporation or in unincorporated territory which the supervising authority finds will not be benefited shall not be included." The law allows a district to include either incorporated or unincorporated territory or both, or territory in one or more counties. The law further prohibits territory previously excluded from being included in or annexed to the district unless it is found that conditions within the area have changed sufficiently to warrant such inclusion. Lastly, it requires that notice of an annexation hearing include a statement that written requests for excluding all or a portion of the territory proposed for annexation be considered.

Assembly Bill No. 2287 (Chapter 441) added Sections 32004.7, 32004.8, 32004.9, 32004.91, and 32004.92. These sections prescribe alternative procedures for excluding land from hospital districts. No change was made in dissolution procedures.

Assembly Bill No. 2951 (Chapter 1568) amended Section 32002, and requires that the supervising authority file a certificate with the State Department of Public Health prior to a hearing on a formation petition. This certificate must show its findings, and the need for hospital beds in the hospital service area to be served, in accordance with standards established for allocated funds under California Hospital Survey and Construction Act. The law requires the Board of Supervisors to consider bed need when considering a formation petition but provides no set procedure.

Assembly Bill No. 2954 (Chapter 1296) amended Section 32128 and required district hospitals to include in their rules provision for the

[1] Report of the Subcommittee on District Hospitals to Assembly Interim Committee on Public Health, House Resolution No. 167, February, 1955, Assembly Interim Committee Reports, Vol. 9, No. 1.

organization of dentists as well as for physicians and surgeons and for staff appointments on an annual basis.

Assembly Bill No. 2958 (Chapter 1936) amended Section 32125 and 32127 and provided that hospital districts should discontinue the practice of caring for indigent county patients at below or equal cost for care. The law also prohibits monies in the maintenance and the operation fund from being expended for new construction for additional bed capacity other than as authorized by law for such expenditures from Capital outlay fund.

The remaining bills were essentially measures which applied further technical restrictions on the financial operations of hospital districts.

Assembly Bill No. 2952 (Chapter 975) amended Section 32311, regarding the sale of bonds by hospital districts.

The law prohibits board of directors of a district from accepting any proposal for purchase of bonds unless accompanied by certified or cashier's check, rather than certified check only, for such reasonable percentage of amount of bid on bonds as determined by board.

Assembly Bill No. 2956, adding Section 32133, provided that a qualified accountant shall be employed by the board at least once a year to audit the books of the hospital and prepare a report. It further required that the board publish in a recognized newspaper of general circulation in the district the financial statement of the district, certified by the auditor.

Assembly Bill No. 2956 (Chapter 1836) also added Section 32132, relating to powers and duties of hospital districts. It requires district board to let any contract involving expenditure of more than $2,500 for work to be done or for materials or supplies to be furnished, sold or leased to district, to lowest responsible bidder, or else reject all bids. This does not apply to medical or surgical equipment or supplies.

Assembly Bill No. 2955 (Chapter 1935) amended Section 32201, relating to assessments of hospital districts. It requires the district board to furnish board of supervisors a written estimate of amount of money necessary to be raised by taxation for district purposes for ensuing fiscal year, and a finding that rates and charges made for services and facilities in the hospital are comparable to charges made for similar services and facilities by nonprofit hospitals operated within the same hospital service area. Service area refers to that area delineated by State Department of Public Health.

Assembly Bill No. 2959 (Chapter 1298) added Section 32127.5 and provided for safekeeping and disbursal of hospital district funds. The law allowed the district to turn over those funds to the treasurer of the county in which the district was located at the discretion of the board of directors. From that date the functions of the district treasurer would be performed by the county treasurer. The district can thus either have its own treasurer or use the county treasurer.

Assembly Bill No. 2953 (Chapter 1675), amending Section 32221, prohibits the use of any part of the capital outlay fund of the hospital district for new construction of additional patient bed capacity for an existing hospital in excess of $50,000 over a four-year period, except for those funds received through gifts, donations, devices or

bequests or sources other than tax levees for hospital districts, unless the majority of district electors vote to approve of the use of this fund for construction purposes. The fund, however, can be used for remodeling, alteration, or conversion of existing facilities. This act became operative on January 1, 1956, and then only as to funds used to pay contracts or other obligations entered into or incurred after that date.

DISTRICT HOSPITALS—PHYSICAL AND FINANCIAL CHARACTERISTICS

The subcommittee, through the hospital questionnaire, has secured information on a number of characteristics of district hospitals. Appendices 6, 7 and 8 show this information as compiled from the questionnaires returned by 27 district hospitals. As was mentioned before, questionnaires were sent to all 36 operating districts and 27 or 75 percent were returned.

The 27 returned questionnaires were from hospitals having a total of 2,007 licensed beds, or 84.4 percent of the total licensed district hospital beds in California. Altogether the 36 operating districts have a total of 2,374 licensed beds. Therefore, the figures reflect the characteristics of 84 percent of the total number of district hospital beds in the State.

The committee found that size and location alone, in the case of the 27 district hospitals, have no bearing on the amount of income derived from services rendered by the hospital. It has sometimes been said that small hospitals operating in nonurban areas have a lower and less stable rate of occupancy than large urban hospitals. If this were the case with district hospitals it might be reflected in a relationship between the number of beds in a hospital and the percent of total income for that hospital derived from patient charges, the hypothesis being that a small rural hospital might not derive enough income from patient charges to cover expenses. However, statistical tests on these two items showed no correlation.

A test was also made for these 27 hospitals to determine whether or not there was a relationship between the size of the hospital (number of licensed beds) and the percent of occupancy.[1] Inspection indicated that there is no correlation. Only two hospitals reported space unopened for occupancy, both giving lack of patients as the reason.

The rest of the information shown in Appendices 6, 7 and 8 is discussed in a following section in which comparisons are made between district and nondistrict hospitals.

TAXING POWERS

Hospital districts as quasi-governmental bodies may, through the county board of supervisors, levy a tax on real and personal property. The tax, for maintenance of the district, must not exceed 20 cents on each $100 of assessed valuation of the taxable property within the district (Section 32202, Health and Safety Code). A further tax may be levied by the board of supervisors upon the order of the hospital board of directors to pay the interest and accumulate a sinking fund to pay the principal, at maturity, on any outstanding bonds of the district. No limitation has been placed on this tax. The committee

[1] Percent of occupancy is figured as the number of patient days of service divided by the total number of licensed beds

studied the extent to which these taxing powers are being used by the hospital districts and the degree of their dependence on these funds in relation to other types of hospital income.

MAINTENANCE AND OPERATION TAX

Of the 35 district hospitals in operation during the 1954-55 Fiscal Year, slightly over one-third levied a 20-cent tax, the maximum permitted them by law. Three districts levied no tax at all and a fourth levied a tax of only $0.001.

Fourteen additional hospital districts had been formed but had not opened their hospitals during the 1954-55 fiscal period. Of these, half levied no tax at all and six levied over $0 15. The detailed breakdown may be seen in Table 4.

TABLE 4

MAINTENANCE AND OPERATION TAX LEVIED BY HOSPITAL DISTRICTS, 1954-55 FISCAL YEAR

Tax charge	*Number hospitals*	*Districts without hospitals*	*Total districts*
No tax	3	7	10
Less than 0 01	1	--	1
0.01-.04	1	--	1
0 05-.09	6	1	7
0.10-.14	4	--	4
0 15-.19	7	2	9
0 20	13	4	17
Total	35	14	49

SOURCE Controller's Annual Report of Financial Transactions Concerning Special Districts of California, Fiscal Year 1954-55

The rate of levy assessed by the various districts has in many cases decreased since the districts first became operative and in several cases the hospitals reported that the rate would decrease in the coming fiscal year. Information on the rates for the 1955-56 Fiscal Year for all districts was not available to the committee at the time the report was prepared; it has since been gathered and can be seen in Appendix 10.

The revenue from this tax is considered a part of income and can be used for the day to day operation of the hospital. Over half of the 35 operating district hospitals (20) received less than 15 percent of their total income from taxes during 1954-55 Fiscal Year. Three hospitals received no income from taxes.

In one case, Cambria, tax income constituted 64 percent of total income. This hospital, however, was reported by the State Department of Public Health to be inactive, and the collected tax amounted to less than $3,000.

Four of the hospitals received more than one-fourth of their income from taxes—Coalinga, Corcoran, Fallbrook, and Westside. The reasons for the dependence of these hospitals on tax money for their operations was not discernible from the data available to the committee. It was noted, however, that two of the hospitals had an occupancy rate of only 34 percent. The tax rates for these hospitals were $0.039 and $0 18, both less than the maximum permitted them by law. The third hospital with an occupancy rate of 58.6 percent assessed a levy of $0.02. The

fourth hospital with a bed capacity of 10 did not submit a questionnaire to the committee, and their tax rate for the 1954-55 Fiscal Year was $0.20.

The information for the district hospitals may be seen in Table 5.

TABLE 5

PERCENT OF INCOME FROM TAXES FOR OPERATING DISTRICT HOSPITALS, 1954-55 FISCAL YEAR

Percent of income from taxes	*District hospitals in operation 1954-1955 (number)*
Over 65	0
40-64	1
25-39	4
20-24	3
15-19	7
10-14	10
5- 9	5
1- 4	2
0	3
Total	35

SOURCE Controller's Annual Report of Financial Transactions Concerning Special Districts of California, Fiscal Year 1954-55.

TAX FOR SERVICE BOND

As was mentioned above, no limit has been placed on the tax rate which can be assessed to redeem bonds or to pay the interest on these bonds. During Fiscal Year 1954-55, as can be seen from Table 6, close to one-half or 22 of the 49 established districts did not assess any tax for service bonds. Twenty-five of the 35 districts with operating hospitals did assess such a tax ranging from $0.012 to $0.33 per $100 of assessed valuation of property within the district.

TABLE 6

BOND REDEMPTION TAX LEVIED BY HOSPITAL DISTRICTS 1954-55 FISCAL YEAR

Tax rate	*Number of hospitals*	*Number of districts without hospitals*	*Total districts*
Over 30 cents	1	--	1
20-29 cents	1	--	1
10-19 cents	7	1	8
5- 9 cents	10	1	11
1- 4 cents	6	--	6
0	10	12	22
Total	35	14	49

SOURCE Controller's Annual Report of Financial Transactions Concerning Special Districts of California, Fiscal Year 1954-55.

The committee was concerned about the total amount of tax assessed by the districts since the 20-cent limitation imposed by the Health and Safety Code applies to only one of the types of tax levy permitted the districts. It was found that in fiscal year 1954-55 the summation of the maintenance and operation tax and the tax for service bonds exceeded 20 cents per $100 of assessed valuation in 16 of the total 49 existing

districts. In two of these cases the districts were not operating hospitals during the year—Antelope Valley Hospital in Los Angeles County which opened in late 1955, and Feather River Hospital, Plumas County, which opened in 1956.

CAPITAL OUTLAY FUND

A capital outlay fund may be established by the board of directors. Tax moneys can be used to build up this fund if the amount assessed for this purpose plus the amount assessed for the maintenance and operation tax do not exceed the 20-cent limitation placed on the latter alone. This restriction was not operative until January, 1956 The board may also transfer to this fund any unincumbered surplus funds remaining on hand at the end of a fiscal year. The fund may not be used for new construction of additional bed capacity for an existing hospital in excess of $50,000 over a four-year period except for those funds received through gifts, donations, devices or bequests or sources other than the tax levies for maintenance and operation of the district unless the majority of district electors approve such an expenditure. If it is found that the fund or a part of the fund is no longer required for capital outlay purposes, four-fifths of the members of the board may vote to discontinue the fund or transfer a portion of it for the repayment of outstanding bonds or for the payment of current district expenses. (Sections 32221, 32222, and 32223, Health and Safety Code.)

SPECIAL ASSESSMENTS

Assessments in excess of the 20-cent limitation can be levied only after an election in the district and two-thirds of the votes cast at such an election are necessary to approve the assessment. (Article 3, Health and Safety Code.)

BONDS

Bonds may be issued by a district for the purpose of acquiring, maintaining, constructing, or altering work when the board of directors feels that a special assessment would be inadvisable and when more money is needed by the district than is available through the regular annual assessment of the maintenance and operation tax. (Chapter 4, Section 32300, Health and Safety Code.) If two-thirds of the votes cast at the bond election are in favor of the bond issue, the board of directors can issue the bond. Specific stipulations for time of maturity, interest rate, denomination, and conditions of sale for such bonds are found in Sections 32300-32312.

Section 32308 of the code, however, states that "no hospital district shall incur a bonded indebtedness exceeding 10 percent of the assessed valuation of all the taxable property in the district * * *." As can be seen from Appendix 3 no district during the 1954-55 Fiscal Year even closely approached the maximum permitted them by law—the highest is seen to be 3.14 percent for the Washington Township Hospital District which is now in the process of constructing a 150-bed hospital.

PATIENT CHARGES AS A SOURCE OF INCOME

Section 32125 of the Health and Safety Code provides that the board of directors in fixing rates "shall, insofar as possible, establish such rates as will permit the hospital to be operated upon a self-supporting basis * * *." In reviewing the income and expense data received from the questionnaires, it was found that in 11 of the 27 district hospitals reporting, income from patient charges covered their operating expenses. When depreciation was included as an operating expense, 9 of the 27 hospitals were able to meet expenses from patient revenue alone.

Although it seems logical to assume that those hospitals which have been in operation the longest would be the best able to meet expenses from patient charges, data does not show this to be the case. All of the 11 hospitals noted above commenced operation in 1950 or after.

Of those hospitals which did not meet expenses (including depreciation) 9 out of 18 were in operation in or before 1950. No other pattern was seen by the committee in the data they received to explain the reason for this. For instance, those hospitals which met their expenses had a varying history as to the percent of occupancy for the year ranging all the way from a low of 52 percent to a high of 90 percent. Nor did the ability of the hospitals to meet their expenses seem to be related to the size of the hospital (the number of licensed beds in this group ranged from 20 to 254).

OTHER

The committee attempted to analyze variations, if any, among district hospitals in the operational costs by equating the costs to some common factor such as the number of patient days of service, the number of licensed beds or the number of utilized beds. The data available to the committee did not permit such an evaluation; the information from the questionnaires was not sufficiently detailed to permit a breakdown of the income and expenses attributable to in-patient vs. outpatient service for all hospitals. The variations in methods of accounting used by different hospitals resulted in noncomparable classifications of expenditures. The committee feels that this type evaluation is one of the many that could be accomplished only by a uniform audit of all hospitals

DISTRICT AND NONDISTRICT HOSPITALS—COMPARISON OF SELECTED PHYSICAL CHARACTERISTICS

PERCENT OF OCCUPANCY

A question of importance in evaluating the operations of district hospitals involves the amount of their utilization by people in the districts as measured by the percent of occupancy in the hospitals. The average percent of occupancy for all 27 district hospitals which returned questionnaires was found to be 53.7 percent. The American Hospital Association reported that the percent of occupancy for all nonprofit hospitals in California in 1955 was 74.9 percent.[1]

A comparison of these two figures alone is not too reliable because it does not take into account variations among hospitals which might result from differences in size or geographical location. A more reliable comparison was felt to be one based on the questionnaire data which would determine whether or not a significant difference in percent of occupancy existed between district and nondistrict when paired by approximate bed size and geographical location. Data for this evaluation was received from 38 hospitals or 19 pairs. The average percent of occupancy for the district hospitals was 58.97 and for the nondistrict 69.14. The figures show that there is evidence of a real difference in the percent of occupancy between the district and nondistrict hospitals. (See footnote for calculations.)[2]

EMPLOYEES PER UTILIZED BED

Each hospital was asked to indicate the average number of employees on its hospital pay roll. From this information the committee was able to study the relationship between the number of employees and the number of licensed beds in each hospital and the difference in this relationship between district and nondistrict hospitals. (A more accurate measure of the relationship could have been made if the number of employee hours had been known rather than the average number of employees per month.)

With 27 district and 17 nondistrict hospitals reporting, it was found that the average number of employees per utilized bed for the district hospitals was 2.43 and for the nondistrict 2.34, a statistically insignificant difference.[3]

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[1] *Hospitals Guide Issue,* Journal of the American Hospital Association, August 1, 1956, Part Two.

[2] Using the formula $\sqrt{\frac{\Sigma d'^2}{N-1}} \Big/ \sqrt{N}$ the standard error of the mean was found to be 3.818; the critical ratio was found to be 2 66. Using the "t" table to test this ratio, the value at the 5 percent level of significance was 2.10, less than our critical ratio of 2.66. At the 1 percent level, however, the value was 2.88 or somewhat greater than our ratio

[3] The test for difference between two means. With a sample of 27 district and 17 non-district hospitals the following was found. Standard error for the difference of the means $\left[\sigma_d = \sqrt{\sigma^2_{\bar{x}_1} + \sigma^2_{\bar{x}_2}}\right]$ equaled .974. The difference between the means for the two groups equaled .09. At the 5 percent confidence level for a sample of this size there was no significant difference between the means.

It would seem logical that the number of persons employed by a a hospital would be related to the number of utilized beds within the hospital and that the hospital would increase its staff as the number of patients increased. Conversely when the number of patients decreased, so would the number of employees. Although this relationship could not be exact because of the need of maintaining certain staff members regardless of the percent of occupancy, a wide departure from such a relationship would clearly affect the operating costs of a hospital. To determine how closely the relationship was adhered to by the hospitals, a test was made of the extent of variance or dispersion around the average number of employees per utilized bed for both types of hospital. District hospitals, as noted above, had an average of 2.43 employees per utilized bed. Yet, it was found that one hospital had only 1.3 employees per utilized bed while at the other extreme was a district hospital with 3.7 employees per utilized bed. For the nondistrict hospitals with an average of 2.34, the range ran from 1.4 to 2.7. The figures available show that there is a significant difference between the district and nondistrict hospitals, and that there is a greater consistency in the relationship between the number of employees and number of utilized beds for the nondistrict hospitals than for the district hospitals.[1]

AVERAGE LENGTH OF PATIENT STAY

A factor which might affect variations between district and nondistrict hospitals with regard to cost of operation, relation of patient income to total expenditures, cost for nursing and the like would be the average length of stay of patients in the different hospitals. Since the length of stay might well be affected by the size of the hospital or its location within the State, the test of variation between the two groups of hospitals was done by pairs—a district and a nondistrict hospital paired by size and location. With 18 pairs reporting, eight district hospitals reported a longer average stay than their comparable nondistrict hospitals; 10 nondistrict hospitals reported a longer average stay. Of all the district hospitals reporting the average length of stay ranged from 1.4 to 8.6 while these figures for the nondistrict hospitals were 3.25 and 9.7. From this data it cannot be said that the length of stay is different between the two types of hospitals. Further, there did not appear to be any correlation between the size of the hospital and the average length of patient stay. Therefore, this factor should not affect the other comparisons made in this study.

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[1]The comparison of two variances. Estimate of variance $\Sigma x^2/(N-1)$ for district hospitals equals .4154, for non-district hospitals equals .1063. $\left[F\,(n_1 = 26, n_2 = 16) = \frac{.4154}{.1063} = 3.9078\right]$

From F table for this size sample the 5 percent value is 2 24, the 1 percent value is 3.18. Difference between dispersion in two groups is thus seen to be significant.

DISTRICT AND NONDISTRICT HOSPITALS FINANCIAL COMPARISONS

RELATIONSHIP OF SELECTED EXPENDITURES TO TOTAL OPERATING EXPENSE

The hospitals were asked to supply detailed information on their operating expenses including a categorical breakdown of these expenses. From this information the committee hoped to determine whether or not there are significant differences in the nature of hospital expenses between district and nondistrict hospitals. Since the information secured on the questionnaire was not complete in all cases, it was possible to compare selected items of expense only. The items chosen for study and comparison included administrative, nursing, and dietary expenses and also the amount which the hospitals allocated to depreciation.

Analysis by Pairs

Those items of expense and the comparisons between the district and nondistrict hospitals paired by size and geographical area are shown in Appendix 6. It was found that a greater number of district hospitals had a higher proportion of administrative expense in relation to total operating expenses than did their comparable nondistrict hospitals in this analysis by pairs. Of a total of 16 pairs reporting, in 11 cases district hospitals showed a greater proportion of total operating expense devoted to administrative costs. In five cases, the opposite was true and the nondistrict hospitals showed a greater proportion of total operating expense devoted to administration.

For the other items—nursing, dietary and depreciation—no significant difference was seen.

Nursing Expense. Seven district hospitals reported a higher percent than the seven comparable nondistrict hospitals with which they were paired. Six nondistrict hospitals reported a higher percent than the six comparable district hospitals with which they were paired.

Dietary Expense. Eight district hospitals reported a higher percent than the eight comparable nondistrict hospitals with which they were paired. Eight nondistrict hospitals reported a higher percent than the eight comparable district hospitals with which they were paired. In one pair, the district and nondistrict hospital reported the same percent of total operating expense devoted to dietary expense.

Depreciation. Nine district hospitals reported a higher percent than the nine comparable nondistrict hospitals with which they were paired. Seven nondistrict hospitals reported a higher percent than the seven comparable district hospitals with which they were paired.

Analysis by Group

Further analysis of these items of expenditure was made by taking an average of all district hospitals grouped, and comparing that with the average of grouped nondistrict hospitals A summary of this analysis may be seen in Table 7.

TABLE 7

AVERAGE PERCENTAGE OF SELECTED EXPENSE ITEMS TO TOTAL OPERATING EXPENSES

	Hospitals	
Selected items of expenditure	*District (percent)*	*Nondistrict (percent)*
Administrative	12 4	10 8
Depreciation	3 7	4 1
Nursing	25 8	27.5
Dietary	11.6	10 2

SOURCE Committee questionnaires

The average percentage for administration for all district hospitals was 12.4 percent compared to 10 8 percent for all nondistrict hospitals. The percentage of operating expense devoted to depreciation and nursing service was slightly higher for the nondistrict hospitals while the percentage for dietary expense was higher for the district hospitals. From these averages for all hospitals there appears to be little difference between the district and nondistrict hospitals for the percentage of total operating expense devoted to selected items of expense.

SALARY RANGES

The hospitals surveyed were questioned regarding the monthly salaries paid to selected categories of personnel generally employed by all hospitals. Of the five categories of personnel, administrator, registered nurses, other nursing, clerical and maintenance, there is no significant difference in the monthly salary ranges paid as between the district and nondistrict hospitals. In only two categories, other nursing and maintenance, does any difference appear for the number of pairs reporting and in those cases the district hospitals paid higher monthly salaries.

TABLE 8

MONTHLY SALARY RANGES PAID SELECTED CATEGORIES OF PERSONNEL BY HOSPITALS PAIRED BY SIZE AND GEOGRAPHICAL LOCATION

	Categories of personnel				
Monthly salary ranges	*Administrator*	*Registered nurses*	*Other nursing*	*Clerical*	*Maintenance*
Same ranges	--	1	1	--	--
Higher range paid by nondistrict	4	7	5	7	4
Higher range paid by district	5	8	8	7	11
Total pairs	9	16	14	14	15

SOURCE Committee questionnaires

PERCENT OF INCOME FROM PATIENT CHARGES

The district and nondistrict hospitals were requested to indicate total operating revenue by source for a specified fiscal period. The primary factor for comparison between district and nondistrict hospitals is the revenue from patient charges All of the 17 nondistrict hospitals

reporting indicated that over 90 percent of their total income for operations comes from patient charges. The principal source of income for district hospitals is also patient charges. However, district hospitals under the law are permitted to levy a tax for maintenance and operation.

With 27 district hospitals (or 75 percent of all operating district hospitals) returning questionnaires, data on income from patient charges showed the breakdown seen in Table 9.

TABLE 9

PERCENT OF INCOME FROM PATIENT CHARGES DISTRICT HOSPITALS

Percent of income from patient charges	*District hospitals reporting on questionnaire*
Over 90	7
80-89	12
70-79	6
60-69	2

SOURCE Committee questionnaires

Based on the returns from 27 hospitals, it appears that 70 percent of the district hospitals receive 80 percent or more of their income for operations from patient charges.

ROOM RATES

Room rates were compared for those hospitals which returned questionnaires to the committee. Comparison could only be made between district and nondistrict hospitals of similar size and in the same approximate geographic area. Again, because of incomplete response it was possible to make the comparison for only 17 pairs of hospitals.

It was found that nondistrict hospitals charged higher rates for single rooms in over half of the cases. In five cases the room rates are the same. For two-bed rooms the nondistrict hospitals charged higher rates in two-thirds of the pairs reporting. The rates of the district hospitals appeared to be higher only in the case of wards and there are too few pairs reporting to show any significance.

TABLE 10

COMPARISONS OF ROOM RATES FOR HOSPITALS PAIRED BY SIZE AND GEOGRAPHICAL AREA

	Type of room			
Rate	*Single*	*2 bed*	*3 bed*	*Ward*
Same rate	5	--	1	--
Higher rate charged by nondistrict	9	10	2	2
Higher rate charged by district	3	6	--	5
Total pairs reporting	17	16	3	7

SOURCE Committee questionnaires

An important factor which is not shown by these figures is the possible differences in room rates of comparable hospitals due to services included in the charge. For example, some hospitals absorb charges for drugs in their room rates. The questionnaire did not inquire into this or other factors making up room charges.

The Health and Safety Code provides that district hospitals may charge a higher rate to nonresidents of a district than to residents (Section 32125). The district hospitals were asked to specify whether or not they did differentiate in their charges in this way. All 27 district hospitals returning questionnaires reported on this question. Nine of the district hospitals reported that a higher rate for nonresidents is charged while 18 charged the same rate.

Section 32201, Health and Safety Code, stipulates that "the board of directors of each local hospital district shall furnish to the board of supervisors for each tax year * * * a resolution of said board of directors finding that the rates and charges made for services and facilities in the hospital on an over-all basis are comparable to charges made for similar services and facilities by the nonprofit hospitals operated within the hospital service area in which the district hospital is located * * *." On the basis of the committee's study, there is reason to believe that the district hospitals are charging comparable rates in compliance with the Health and Safety Code.

EDEN TOWNSHIP HOSPITAL DISTRICT

Eden Hospital has been in operation since November 15, 1954. Now, with 254 licensed beds, it is the largest district hospital in the State.

The hospital has been highly commended for the medical and professional services it provides the district. However, for many months, there have been criticisms of the operations of the district from the citizens. Complaints have been directed toward the question of whether or not the hospital is serving the best interests of the public responsible for its establishment, toward the actions of the board of directors in its trusteeship function for the citizens who elected it, and toward the administration of the hospital

At the request of persons in the district and of the hospital board of directors, this committee held public hearings on November 13th and December 18, 1956, to review the charges and determine whether or not any changes in the District Hospital Act were warranted. The charges are reviewed and discussed on the following pages. For a list of witnesses testifying at the two hearings see Appendix 1.

ACCOUNTING OPERATIONS AND FINANCIAL PROCEDURES

During May, 1956, headlines in newspapers in the vicinity of Eden Hospital were claiming "Financial Blunders Exposed at Eden Hospital," "Find Thousands of Dollars Error in Simple Addition." Subsequent newspaper articles contained accusations against the hospital that the public was refused the right to look at the books, that the hospital had imposed a "blackout" of books Newspaper criticism was accompanied by citizens' complaints and the formation of the Citizens' Committee to Investigate Eden Hospital. Mr. Paul Rhodes, a member of the district board of directors, charged that the hospital accounting records contained errors amounting to several thousand dollars.

Mr. Harry Blythe, the hospital administrator, explained at the public hearing that he had for some time followed the practice of submitting a monthly financial report to the board members. This report was, according to Mr. Blythe, an "extremely comprehensive and detailed report" prepared primarily for his own use and distributed to the board "as a courtesy to the board members. * * * One report was not a reflection of the previous report (Rather) it reflected the status, the condition of the hospital's books at the end of that month. It did not necessarily have to coincide with or dovetail the preceding month's report " He further stated that the normal necessary accounting adjustments, though reflected in general ledgers, were not reflected in the monthly reports.

Apparently, the fact that such adjustments were not reflected in the monthly reports gave rise to the many complaints Because of the complaints, the board of directors of Eden Hospital ordered a special audit by an outside accounting firm. The auditor's report, as of April 30, 1956, was submitted to the board on June 22, 1956; it contained the following comments:

In the course of our audit we reviewed monthly financial statements prepared by the comptroller for the board of directors. These statements set forth revenue and expenditures for the current month, the total for the year to date and the total from November 15, 1954, to the end of each current month. * * * In reviewing the statements the rather general practice was noted of showing as transactions of the current month the monthly figures taken from the books without incorporating thereby adjustments affecting operations of the period prior to the month under consideration This resulted in the absorption of prior period adjustments in the year to date figures and in the inability to reconcile succeeding months' statements with those of the prior period If all monthly figures were added together, they would not agree with the totals to date by the amount of adjustments affecting prior periods, which had not been reflected in the statements.

The auditor's report further stated that:

The general accounting records of the district have been set up and maintained in substantial conformity with the system outlined in the *Handbook on Accounting Statistics and Business Office Procedures for Hospitals,* published by the American Hospital Association. * * * The accounting system and procedures employed appeared to be generally adequate. * * * While it appears that improvements can be made in the accounting operation in certain instances, it should be recognized that our findings and recommendations pertain to a relatively complex financial operation with a sizeable volume of transactions. * * * We found nothing in the course of our audit to indicate to us that the financial affairs of the district were not being conducted in an honest and conscientious manner.

Although the over-all accounting procedures of the hospital appear, from this report, to be adequate, monthly financial statements such as those used by Eden Hospital until the time of the audit were misleading and confusing to many persons in the district properly interested in the hospital operations. The committee is in full accord with a suggestion made by the accounting firm in its report to Eden Hospital that.

The best procedure to be followed in preparing such (monthly) statements would be to show as monthly transactions differences between year to date totals at the end of each month setting out as separate items any adjustments that may appear necessary as affecting the prior period.

Since the special audit, Eden's hospital administrator has discontinued the practice of submitting a detailed monthly financial report to the board; rather he submits a simplified statement which serves to keep the board informed of hospital activities.

The question which arises is the extent and nature of the responsibility of the board and the hospital in keeping the public informed of the financial status of a district hospital. Section 32133 of the Health and Safety Code states that "At least once each year the board shall engage the services of a qualified accountant * * * to conduct an audit

of the books of the hospital and prepare a report." It also provides that the board must publish the financial statement so prepared in a newspaper of general circulation. Whether or not a report of the financial status of a district hospital is made more than once a year is within the discretion of the board itself. The experiences in Eden Township, however, seem to indicate the advisability in some cases of reporting on the hospital's status more frequently than is required by law. Since the board is ultimately responsible to the public for administration of the hospital, it should supply that public with the information in which it expresses an interest.

GRAND JURY AUDIT

Several witnesses recommended a mandatory annual grand jury audit to protect the public's interest in the hospital. In 1955, Section 928 of the Penal Code was amended to read in part:

> *It shall be the duty of the grand jury annually to make careful and complete examination of the books, records and accounts,* of all the officers of the county, *of all hospital districts which were organized in the county,* and of every city board of education within the county, and especially those pertaining to the revenue, and report as to the facts they have found, with such recommendations as they may deem proper and fit; and if, in their judgment, the services of an expert are necessary, they shall have power to employ one, at an agreed compensation, to be first approved by the court; and if, in their judgment, the services of assistants to such expert are required, they shall have power to employ such, at a compensation to be agreed upon and approved by the court. (Emphasis added.)

This section has been variously interpreted by district attorneys in several counties of the State. In some, it has been interpreted as meaning a compulsory grand jury audit; in others, as permissive. At the request of this committee the Legislative Counsel prepared an opinion dated February 18, 1957, stating that "In our opinion this language (contained in Section 978 of the Penal Code), on its face, makes mandatory the examination referred to."

PUBLIC RECORDS AND PUBLIC MEETINGS

Paralleling the complaints concerning hospital accounting procedures was the complaint that the public was prohibited from seeing certain records of the hospital. There are no provisions in the Local Hospital District Law or elsewhere relating specifically to the right to inspect the records of a local hospital district. In the Code of Civil Procedure and Government Code, however, are provisions relating to the inspection of public records generally. The Legislative Counsel, in an analysis dated November 12, 1956, stated:

> Section 1892 of the Code of Civil Procedure gives each citizen the right to inspect and take a copy of any public writing of this State, except as otherwise provided by statute. A public writing is defined in Section 1888 of the Code of Civil Procedure as either: (1) the written acts or records of acts of the sovereign authority,

of official bodies and tribunals, and of public officers, legislative, judicial, and executive, whether of this State, of the United States, of a sister state, or of a foreign country; or (2) public records kept in this State of private writing. Section 1894 of the same code divides public writings into four classes: laws, judicial records, other official documents, and all public records kept in this State of private writings.

Section 1227 of the Government Code gives to any citizen of the State the right to inspect public records and other matters in the office of any officer at any time during office hours, except as otherwise provided.

If the financial records of a local hospital district are "public writings" or "public records," the provisions of law mentioned would authorize their inspection.

To define specifically what hospital records are public would in the opinion of the committee add an unnecessarily complicated and unwieldy section to the District Hospital Law and would be of little value. Existing statutes indicate that a district hospital has no authority to prohibit the public from inspecting "public records," presumably those records which relate to hospital operations, and not the confidential medical records of patients.

The question of secret versus public board meetings was also raised at the committee hearings. Section 32106 of the Health and Safety Code states that "All sessions of the board of directors, whether regular or special, shall be open to the public * * *." The committee feels that this section and sections in Chapter 9 of the Government Code (the Brown Act) relative to meetings of public agencies clearly indicate that policy decisions should be reached by the board only during the course of publicly held meetings.

CONFLICT OF INTEREST

One member of the board of directors of Eden Township Hospital District has a financial interest in and operates a private hospital in the same hospital service area as Eden Hospital. Although none of the witnesses knew of or reported any specific instances of abuse because of this situation, many felt that a "conflict of interest" existed which might affect the actions of the director in serving the public interest as a member of the board.

Mr. Robert L. Coate presented a petition to the committee signed by about 250 citizens of the district reading:

> We, the undersigned, believe a question exists concerning a possible conflict in the Eden Hospital District. Julius Levine, M.D., a director of the Eden Hospital, owns and operates a hospital competing in the same district and service area. He thus sets rates in his hospital and also sets rates in a hospital operated in the public interest. We do not know whether the question is one of legality or propriety, but we respectfully request that steps be taken to obtain an answer.

He also submitted the following list of ways in which such a situation might affect the public interest.

1. It is the duty of the directors of a public hospital district to set rates for that public hospital (Health and Safety Code Sec. 32125); a director of a public hospital district who is also the owner of a private hospital within that district could favor the establishment of high rates for the public hospital in order to provide a competitive advantage for his private hospital.
2. It is the duty of the directors of a public hospital district to procure all equipment and material necessary for the operation of that public hospital (Sec. 32122); a director of a public hospital district who is also the owner of a private hospital within that district could use his position as a director of the public hospital district to establish relationships with vendors serving both hospitals more favorable to the private hospital than would otherwise be possible.
3. It is the duty of the director of a public hospital district to establish facilities and services of the public hospital according to the best interests of the public health (Sec. 32125 and Sec. 32121); for example, such facilities and services could include emergency, out-patient, laboratory and radiological services; a director of a public hospital who is also the owner of a private hospital within that district could favor restriction of such services and facilities, thus preventing competition with services and facilities of his private hospital.
4. It is the duty of the director of a public hospital district to employ and determine the compensation of all officers and employees of that district (Sec. 32121); a director of a public hospital district who is also the owner of a private hospital within that district, could favor wage and employment policies which would give a competitive advantage to his private hospital.
5. It is the duty of the director of a public hospital district according to the best interests of the public health to favor the expansion of hospital bed facilities to meet the needs of a growing community (Sec. 32121 and Sec. 32125); a director of a public hospital who is also the owner of a private hospital within that district could favor a policy which would not lead to an adequate expansion program.

The committee has no reason to believe that the board member in this instance has not acted in the best public interest during his term as hospital director. However, it is possible that the action of a director with such dual interest might, consciously or unconsciously, be guided by his personal interest in the private hospital. Therefore the committee recommends that legislation be passed at this session of the Legislature to bar from board membership of a hospital district any person who has an interest of 5 percent or more in a private hospital operating in the same hospital service area (as defined by the State Department of Public Health).

The committee also heard criticism of the practice of permitting doctors to serve on hospital district boards. Both the American Medical Association and the Joint Commission on Accreditation have approved the practice of permitting doctors to serve in the capacity of board members. The committee does not feel that a distinction should be made between district hospitals and private nonprofit hospitals in this regard.

CONTRACT SERVICES

A principal complaint voiced by witnesses at the hearings regarded the manner in which the hospital contracted for ancillary services. Section 32129 of the Health and Safety Code states that "Local hospital districts shall not have power or authority to render or furnish any professional services * * * either directly or through persons employed by that district." However it does authorize the board of directors of a hospital district to "contract with a physician or surgeon for the rendering of professional services in the hospital, under the direction or as requested by attending physicians of patients in the hospital, on such basis as does not result in any profit or gain to the district from the professional services of such physician and surgeon."

Eden Hospital has contracts with a radiologist, a pathologist and an anesthesiologist to perform those services necessary to the operation of the hospital.

The percent of the amount collected by the hospital for the services rendered by each doctor which is to be retained by the hospital and the amount which is to be paid over to the doctor is specified in the contract. Each contract doctor employs assistants to work within his own department and pays their salaries from the sum paid him by the hospital.

Mr. Rex Tussing indicated that many of the citizens felt that the contracts entered into possibly resulted in the payment of excessive amounts to the contract doctors. He stated that "we have in this instance, with a public institution, what amounts to a concession of profitable departments for a person with a captive clientele. * * *" He also stated that it was difficult to determine just what payments were made to the contract doctors, the amount that accrued to the head doctor in a department and what amount was distributed to others employed by the doctor.

The representative of the California Hospital Association, Theodore McCabe, pointed out that the type contracts used by Eden Hospital are similar to those used by other hospitals throughout the State. "They use a * * * contract based on a form that was published by the California Hospital Association, * * * constructed after extensive consultations through the California Medical Association and the taxing authorities at a state and county level * * *." According to Mr. McCabe it is necessary for a district hospital to enter into the same type contracts with radiologists, pathologists and anesthesiologists as do other hospitals in the State in order to attract competent men to the hospital.

The contracts at Eden Hospital appear to be comparable to those used by other hospitals in the State, and the fees charged patients for services from the contract doctors are based on the Alameda County median fee schedule. Since it was the intent of the Legislature in enacting the District Hospital Law to permit the establishment of a hospital

which would operate as do private nonprofit hospitals, the committee does not feel that legislative action should be taken, either to control the type contracts which a district hospital may make or to require that the hospital provide these ancillary services iteslf.

RATES AND CHARGES TO PATIENTS

It was charged that patients were required to pay excessive rates for services rendered by the hospital. The determination of rates and charges is by law a function of the board of directors. The Health and Safety Code, Section 32125, provides that the "board shall, insofar as possible, establish such rates as will permit the hospital to be operated on a self-supporting basis. * * *," while Section 32201 provides that the rates and charges shall be comparable to the rates and charges of nonprofit hospitals operating in the same hospital service area.

There is nothing in the language requiring district hospitals to charge lower rates than charged in other hospitals. It was pointed out at the hearing that because there are no other nonprofit hospitals in the service area, rates cannot be established in the manner stipulated in Section 32201. The hospital, therefore, sets its charges so that they are comparable with those in comparable hospitals in the Bay area. The chairman of the hospital board of directors reported that action was being taken to reduce the charges to residents of the district.

PURCHASING

A charge was made that purchases involving several thousands of dollars were made without meeting the legal requirement that contracts for such purchases be let to the lowest responsible bidder. Section 32132 of the Health and Safety Code establishing the legal requirements reads:

> The board of directors shall let any contract involving an expenditure of more than two thousand five hundred dollars ($2,500) for work to be done or for materials and supplies to be furnished, sold or leased to the district, to the lowest responsible bidder who shall give such security as the board requires, or else reject all bids; provided, however, that the provisions of this section shall not apply to medical or surgical equipment or supplies.

The primary difficulty appeared to be in interpretation of the term "medical supplies," which as presently stated in the code permits liberal definition. Because the committee feels that the requirement that all but those supplies which are used directly by the medical staff in performance of their medical functions should be let out to bid, it recommends that the Legislature enact an amendment to define more precisely the meaning of "medical supplies."

LABOR RELATIONS

The Citizens Committee to Investigate Eden Hospital submitted a charge reading:

> Refusal to bargain with employees: The California Nurses Association being duly chosen bargaining agent for a group of employees, sought repeatedly to bargain with the hospital board.

> The board refused to negotiate with these employees, and refused even to meet with them, instead delegating its public responsibility and authority to a private agent.

The law does not require any local hospital district to enter into a collective bargaining agreement with a labor union in respect to the employees of the district. However, it evidently has authority to enter into such an agreement. Such authority is contained in subdivisions (g), (h) and (i) of Section 32121, Health and Safety Code, which give a district power to employ officers and employees, to prescribe their number, compensation, duties and powers and to do "any and all things which an individual might do which is necessary for and to the advantage of a hospital * * *."

The board of directors at Eden has engaged the services of United Employers, Inc., to act as spokesman and consultant in its dealings with labor unions. The nurses have chosen the California State Nurses Association to serve as their bargaining agent in dealings with the hospital. Mr. Robert O. Wright was one of the several witnesses who claimed that Section 32121 provided the authority and "perhaps the necessity" for the board to deal directly with the agent for the nurses, the C. S. N. A.

Testimony of the Industrial Relations Consultant for the C. S. N. A. and the Counsel for United Employers, Inc., indicated that there is no disagreement concerning the right of the hospital to employ such a representative since the employees have acted in the same way in designating the C. S. N. A. as their representative. It appears that the disagreement between the nurses and the C. S. N. A. on the one hand and the hospital and United Employers, Inc., on the other is a matter properly left to these groups and not a matter for state legislative action.

OTHER CHARGES

Several other charges directed by various citizens and organizations at the hospital are listed here to indicate the nature of the discontent in the district. They included charges that:

1. "The hospital board used the funds of the hospital to further the campaign for the incumbent president and his running mate" (by the use of the hospital multilith equipment);
2. The medical profession was spending unreasonable amounts of money to "keep control of the hospital out of the hands of people who voted the districts and the bonds to pay for it;"
3. The wards were mismanaged, and the supervisor of nursing did not have the qualifications to fit her properly for her job;
4. Inventory controls over hospital supplies were inadequate;
5. Unwise or illegal verbal agreements were made between the board members and the hospital administrator.

Again it should be pointed out that the professional services offered by Eden Hospital have been generally commended and the hospital has met the standards established by the Joint Commission on Accredita-

tation.[1] However, the mere existence of the many complaints reflects a basic citizen discontent with the district's operations. The committee feels that the confusion and ill will in the district indicate a failure on the part of the hospital and its board of directors to recognize their proper relationship to the community.

A district hospital is not a private hospital but rather a community hospital brought into existence by action of citizens of the district to meet a community need. It was the intention of the Legislature in enacting the District Hospital Law that the hospitals would serve pay patients and operate as much as possible on a self-supporting basis and that the hospital through its governing body, the board of directors, would be responsible to the residents of the district for its operations. The committee feels that a board of directors should not only recognize this relationship with the community but should recognize the values and benefits which can accrue to a hospital fortunate enough to have citizens actively interested in its operations.

Following the November committee hearing, a citizens advisory committee was formed to consult and work with the Eden Hospital board of directors. The committee commends this action and feels that such an advisory committee, if it fairly represents the community, can be of great value in resolving the many conflicts and misunderstandings.

[1] Accredited on December 12, 1956. Members of the Joint Commission on Accreditation include the American College of Physicians, American College of Surgeons, American Hospital Association, American Medical Association and Canadian Medical Association.

APPENDIX 1

PUBLIC HEARING WITNESSES

November 13 and December 18, 1956

Citizens' Committee to Investigate Eden Hospital

Leslie L. Williams, President
Wilbur Yeoman, Secretary
John W. Stone
Robert O Wright, Committee Counsel

Eden Township Hospital District

Marvin D. Richardson, President, Board of Directors
Paul Rhodes, member, Board of Directors
Perry Bardellini, legal counsel for Board of Directors
Harry A. Blythe, Administrator, Eden Hospital
Mrs Wanda Loftis, Administrative Secretary

Private Citizens

Mrs. Opal Knapp
Elizabeth R. Bilter, R N., former employee of Eden Hospital
Hedy Jane Jackson, former employee of Eden Hospital
Howard F. Kuder
Mrs. F. May Williams
Robert L. Coate
Robert S. Ash, Alameda County Central Labor Council, AFL-CIO
Rex Tussing, San Leandro Morning News
C. Blaine Kimball, F. W Lafrentz & Co , Certified Public Accountants
John Cantrell, United Employers, Inc.
George L. Rice, California State Nurses Association
Theodore McCabe, Jr., California Hospital Association
Oliver C. Stivers, Eden Hospital Citizens Advisory Committee

APPENDIX 2

HOSPITAL DISTRICTS, STATE OF CALIFORNIA

Hospital district	*County location*	*District organized*	*Hospital opened*	*Hospital beds*
Alta Local *	Tulare	1946	1951	51
Antelope Valley *	Los Angeles	1953	1955	85
Avenal	Kings	1948	1951	29
Cambria Community	San Luis Obispo	1947	Inactive	--
Chowchilla	Madera	1948	Under construction	19
Coalinga	Fresno	1946	1947 †	40
Concord	Contra Costa	1948	1952 †	54
Corcoran *	Kings	1951	1951 †	22
Corning Memorial *	Tehama	1946	1952	31
Del Norte County Local *	Del Norte	1946	1946 †	51
Desert	Riverside	1948	1951	38
Eden Township *	Alameda	1948	1954	254
Fallbrook	San Diego	1950	1950 †	10
Feather River *	Plumas	1953	1956	14
Grossmont *	San Diego	1952	1955	105
Heffernan Memorial	Imperial	1947	Inactive	--
Hemet Valley *	Riverside	1946	1946 †	37
John C. Fremont *	Mariposa	1947	1951	20
Lompoc Community	Santa Barbara	1946	1946 †	52
Marin County *	Marin	1946	1952	108
Mark Twain *	Calaveras	1946	1951	86 ‡
Northern Inyo County Local *	Inyo	1946	1949	31
Northern San Diego County *	San Diego	1948	1950	73
Norwalk	Los Angeles	1953	Inactive	--
Palo Verde	Riverside	1948	Inactive	--
Paso Robles Memorial *	San Luis Obispo	1946	1950	32
Patterson (Del Puerto Hospital) *	Stanislaus	1948	1950	25
Peninsula	San Mateo	1947	1954	154
Petaluma *	Sonoma	1946	Under construction	52
Pioneers Memorial *	Imperial	1947	1950	80
Pittsburg Community	Contra Costa	1948	1948	103
Plumas *	Plumas	1955	Under construction	25
Salinas Valley	Monterey	1947	1953	150
San Gorgonio Pass Memorial *	Riverside	1947	1951	46
Seneca *	Plumas	1947	1952	14
Sequoia	San Mateo	1947	1950	208
Sierra Valley *	Sierra	1946	1951	10
Sierra View Local *	Tulare	1949	Under construction	40
Soledad Community	Monterey	1948	Inactive	--
Sonoma Valley	Sonoma	1946	1946 †	35

APPENDIX 2—Continued

HOSPITAL DISTRICTS, STATE OF CALIFORNIA

Hospital district	*County location*	*District organized*	*Hospital opened*	*Hospital beds*
Southern Inyo County *	Inyo	1949	1949 †	18
Tahoe Forest *	Nevada	1949	1952	21
Tehachapi Valley	Kern	1949	Inactive	--
Tulare Local *	Tulare	1946	1951	74
Washington Township	Alameda	1948	Under construction	150
West Contra Costa *	Contra Costa	1948	1954	165+43 under con.
West Side	Kern	1947	1947 †	48
West Valley	Santa Clara	1949	--	--
South Bay *	Los Angeles	1955	Under construction	145

Total districts	49
Total hospitals in operation	36
Total hospitals under construction	6
Total additions under construction	1

* Projects which have received Hill-Burton (P. L. 725) assistance.
† Date district assumed operation
‡ Includes 30 general and 56 chronic beds.
SOURCE State Department of Public Health, Bureau of Hospitals, September, 1956

APPENDIX 3

POPULATION, ASSESSED VALUATION, TAX RATES, AND RATIO OF BONDED INDEBTEDNESS TO ASSESSED VALUATION FOR DISTRICT HOSPITALS, FISCAL YEAR 1954-55

Hospital	*Population*	*Assessed valuation*	*Tax rate*		*Ratio debt to valuation*
			Maintenance and operation *	*Bond redemption*	
Alta Local (Tulare)	18,000	$22,088,480	$0.20	$0.07	$0.99
Antelope Valley (L. A.)	41,000	41,827,420	0.169	0.079	1.55
Avenal (Kings)	4,700	39,672,730	0.08	0.06	0.57
Cambria County (S. L. O.)	7,200	4,498,870	0.07	--	--
Chowchilla (Madera)	11,500	16,532,707	0.20	--	--
Coalinga (Fresno)	14,900	163,196,000	0.039	--	--
Concord (Contra Costa)	41,200	50,179,775	0.20	--	--
Corcoran (Kings)	17,400	22,338,945	0.18	--	--
Corning Memorial (Tehama)	8,400	15,681,321	0.155	0.045	0.44
Del Norte County Local (Del Norte)	17,500	17,787,485	0.001	0.33	0.07
Desert (Riverside)	13,400	55,901,040	0.116	0.038	0.42
Eden Township (Alameda)	183,000	157,763,907	0.20	0.10	0.13
Fallbrook (San Diego)	7,300	7,017,140	0.20	--	--
Feather River (Plumas)	2,300	5,624,790	0.19	0.13	1.92
Grossmont (San Diego)	93,800	99,206,560	0.094	0.106	0.76
Heffernan Memorial (Imperial)	10,300	Inactive	--	--	--
Hemet Valley (Riverside)	12,300	19,143,640	--	0.065	0.62
John C. Fremont (Mariposa)	4,100	7,947,740	0.20	0.248	2.07
Lompoc (Santa Barbara)	9,200	17,880,562	0 16	--	--
Marin County (Marin)	115,200	108,645,363	--	0.05	0.55
Mark Twain (Calaveras)	9,500	21,199,895	0.20	0.13	1.29
Northern Inyo County Local (Inyo)	7,300	19,361,626	0.141	0.072	0.67
Northern San Diego (San Diego)	46,900	52,987,330	0.05	--	--
Norwalk (L. A.)	66,800	32,700,150	--	--	--
Palo Verde (Riverside)	12,800	17,378,210	0.052	--	--
Paso Robles Memorial (S. L. O.)	11,600	22,006,173	0.18	0.05	0.59
Patterson (Stanislaus)	6,500	12,307,190	0.072	0.048	0.97
Peninsula (San Mateo)	162,000	188,552,956	0.20	0.137	2.08
Petaluma (Sonoma)	26,000	31,818,775	0.20	--	--
Pioneers Memorial (Imperial)	24,400	24,007,101	0.20	0.19	1.58
Pittsburg Community (Contra Costa)	51,000	62,443,275	0.18	0.034	0.41
Plumas Hospital District (Plumas)	5,000	--	--	--	--
Salinas Valley (Monterey)	73,000	125,429,160	0.129	0.071	2.99
San Gorgonio Pass Memorial (Riverside)	18,800	21,221,740	0.142	0.069	0.66

APPENDIX 3—Continued

POPULATION, ASSESSED VALUATION, TAX RATES, AND RATIO OF BONDED INDEBTEDNESS TO ASSESSED VALUATION FOR DISTRICT HOSPITALS, FISCAL YEAR 1954-55

Hospital	*Population*	*Assessed valuation*	*Tax rate*		*Ratio debt to valuation*
			Maintenance and operation *	*Bond redemption*	
Seneca (Plumas)	1,400	6,807,235	0 20	0 07	0 73
Sequoia (San Mateo)	115,200	165,827,504	--	0.153	1.55
Sierra Valley (Sierra)	1,300	1,787,545	0 20	--	--
Sierra View Local (Tulare)	30,000	45,837,905	--	--	--
Soledad Community (Monterey)	7,700	8,049,175	0.20	--	--
Sonoma Valley (Sonoma)	17,700	13,942,450	0 20	--	--
Southern Inyo County (Inyo)	5,000	9,697,760	0.20	0 092	0.97
Tahoe Forest (Nevada)	3,000	15,029,165	0.16	0 16	0.93
Tehachapi Valley (Kern)	5,400	--	--	--	--
Tulare Local (Tulare)	31,000	46,234,875	0.15	--	1 02
Washington Township (Alameda)	26,800	39,799,870	0 20	--	3.14
West Contra Costa (Contra Costa)	180,000	173,497,140	0 20	0.012	0 48
West Side (Kern)	25,000	194,590,520	0.08	0.02	0.09
West Valley (Santa Clara)	52,800	--	--	--	--
South Bay (L. A.)	87,800	--	--	--	--

* Tax rate for secured property only

SOURCE Controller's Annual Report of Financial Transactions Concerning Special Districts of California, Fiscal Year 1954-55 Population estimate by Department of Public Health September, 1956

APPENDIX 4

INCOME BY TYPE FOR DISTRICT HOSPITALS

District hospital and county location	Total income	Income from			Percent of total income from		
		Taxes	Charges	Subventions and grants	Taxes	Charges	Subventions and grants
Alta Local (Tulare)	$301,210	$44,659	$250,940	$42	14.8	83.3	0.01
Antelope Valley (L. A.)	376,342	65,423	--	306,162	17.1	--	81.20
Avenal (Kings)[1]	248,098	35,392	210,024	--	14.2	84.6	--
Cambria Community (S. L. O.)	3,687	2,380	753	--	64.5	20.5	--
Chowchilla (Madera)[2]	33,388	33,129	--	--	89	--	--
Coalinga (Fresno)	175,906	61,692	112,445	--	35	63.9	--
Concord (Contra Costa)	503,196	100,158	403,757	--	19.9	80.1	--
Corcoran (Kings)	145,400	40,383	104,379	--	27.8	71.7	--
Corning Memorial (Tehama)	169,801	23,756	139,182	--	14	81.9	--
Del Norte County Local (Del Norte)	405,604	4,918	--	94,637	1.2	--	23.30
Desert (Riverside)	296,067	65,968	227,628	--	22 2	76.8	--
Eden Township (Alameda)	1,837,342	320,181	840,280	667,404	17.4	45.7	36.30
Fallbrook (San Diego)	44,706	14,446	26,628	171	32 2	59.4	0.04
Feather River (Plumas)	10,993	10,582	--	--	96.2	--	--
Grossmont (San Diego)	106,331	99,731	--	--	93.7	--	--
Heffernan Memorial (Imperial)	--	--	161,863	--	--	--	--
Hemet Valley (Riverside)	162,597	--	108,682	--	--	99.5	--
John C. Fremont (Mariposa)	126,798	16,137	249,191	--	12.7	85.7	--
Lompoc (Santa Barbara)	285,564	28,510	1,126,085	--	11	87.2	--
Marin County (Marin)[1]	1,184,412	15,995	319,448	--	1 3	95	--
Mark Twain (Calaveras)[3]	369,985	41,861	185,455	275	11.3	86 3	--
Northern Inyo Co. Local (Inyo)	213,839	27,984	487,317	--	13	86.7	0.01
Northern San Diego (San Diego)	515,181	27,000	--	--	5.2	94.5	--
Norwalk (L. A.)	2,253	2,247	--	--	99.7	--	--
Palo Verde (Riverside)	8,613	8,613	--	--	100	--	--

Paso Robles Memorial (S. L. O.) [4]	202,888	33,798	169,090	--	16 6	83.3	--
Patterson (Stanislaus)	113,630	8,782	102,292	--	7.7	90	--
Peninsula (San Mateo)	1,547,537	362,195	1,180,082	--	23.4	76.3	--
Petaluma (Sonoma)	64,504	61,003	--	--	94 5	--	--
Pioneers Memorial (Imperial)	564,012	48,556	513,305	--	8.6	91	--
Pittsburg Memorial (Contra Costa)	791,857	112,556	676,704	$1,455	14.2	85.4	0 02
Plumas Hospital District (Plumas)	--	--	--	--	--	--	--
Salinas Valley (Monterey) [1]	1,245,836	228,832	1,009,138	--	--	18.3	81
San Gorgonio Pass Memorial (Riverside) [1]	271,376	30,334	241,035	--	11.2	88.8	--
Seneca (Plumas)	87,711	14,669	43,655	24,145	16 7	49.7	27.50
Sequoia (San Mateo)	1,790,027	--	1,778,663	--	--	99 3	--
Sierra Valley (Sierra)	44,457	3,478	39,908	--	7.8	89.7	--
Sierra View Local (Tulare)	--	--	--	--	--	--	--
Soledad Community (Monterey)	16,860	16,053	--	171	95.2	--	0.01
Sonoma Valley (Sonoma)	146,549	7,748	133,900	--	5.2	91.3	--
Southern Inyo County (Inyo)	124,348	19,222	103,630	--	15.4	83.3	--
Tahoe Forest (Nevada) [1]	149,612	22,686	126,881	--	15.1	84.8	--
Tehachapi Valley (Kern)	32	32	--	--	100	--	--
Tulare Local (Tulare) [1]	486,328	66,958	415,478	47	13.7	85.4	0 01
Washington Township (Alameda)	82,250	79,713	--	--	96.9	--	--
West Contra Costa (Contra Costa) [1]	1,550,481	345,039	467,482	705,389	22.2	30.1	45.40
West Side (Kern)	420,770	160,789	254,402	--	38.2	60.4	--
West Valley (Santa Clara)	763	--	--	--	--	--	--
South Bay (L. A.)	--	--	--	--	--	--	--

[1] Information from accrual records.
[2] Chowchilla Hospital consolidated with Chowchilla Memorial District November 28, 1954. Includes figure in consolidation of district and hospital.
[3] Report for Fiscal Year September 1, 1954-August 31, 1955. Information from accrual records.
[4] Report for calendar year ended December 31, 1954.
[5] Report for Fiscal Year November 1, 1954-October 31, 1955.

SOURCE: Controller's Annual Report of Financial Transactions Concerning Special Districts of California, Fiscal Year 1954-55

APPENDIX 5

BALANCE OF INCOME OVER EXPENDITURES FOR DISTRICT HOSPITALS

Hospital	*Income*	*Income less taxes*	*Expenditures*	*Balance of income over expenditures*	
				Including taxes	*Excluding taxes*
Alta Local (Tulare)	$301,210	$256,552	$282,745	$18,465	—$26,193
Antelope Valley (L. A.)	376,342	310,919	65,392	310,950	245,527
Avenal (Kings)	248,098	212,706	207,774	40,324	4,932
Cambria Community (S. L. O.)	--	--	3,507	--	--
Chowchilla (Madera)	33,388	259	767	32,621	—508
Coalinga (Fresno)	175,906	114,214	197,990	—22,084	—83,776
Concord (Contra Costa)	503,915	403,757	567,380	—63,465	—163,623
Corcoran (Kings)	145,400	105,017	130,638	14,762	—25,621
Corning Memorial (Tehama)	169,801	146,045	161,036	8,765	14,991
Del Norte County Local (Del Norte)	405,604	400,687	293,074	112,530	107,613
Desert (Riverside)	296,067	289,471	261,640	34,427	27,831
Eden Township (Alameda)	1,837,342	1,517,161	1,814,004	23,338	—296,843
Fallbrook (San Diego)	44,706	30,260	39,140	5,566	—8,880
Feather River (Plumas)	10,993	411	2,851	8,142	—2,440
Grossmont (San Diego)	106,331	660	30,347	103,248	—29,687
Heffernan Memorial (Imperial)	--	--	--	--	--
Hemet Valley (Riverside)	162,597	--	141,779	20,818	--
John C. Fremont (Mariposa)	126,798	110,661	104,536	22,262	--
Lompoc (Santa Barbara)	285,565	257,055	286,997	—1,432	—29,942
Marin County (Marin)	1,184,411	1,168,416	1,167,380	17,031	1,036
Mark Twain (Calaveras)	369,985	328,124	345,812	24,173	—17,688
Northern Inyo Co. Local (Inyo)	213,838	185,580	203,159	16,679	—17,579
Northern San Diego (San Diego)	515,181	488,181	438,215	76,966	49,966
Norwalk (L. A.)	2,252	5	7,685	—5,433	—7,680
Palo Verde (Riverside)	8,613	--	--	--	--

Paso Robles Memorial (S. L. O.)	$202,888	$169,090	$212,537	—$9,649	—$43,447
Patterson (Stanislaus)	113,630	104,848	113,954	—324	—9,106
Peninsula (San Mateo)	1,547,537	1,185,342	1,541,617	5,920	—356,275
Petaluma (Sonoma)	64,504	350	58,187	6,317	—57,837
Pioneers Memorial (Imperial)	564,012	515,456	580,294	55,088	6,532
Pittsburg Community (Contra Costa)	791,857	679,301	796,454	—4,579	—117,153
Plumas Hospital Dist. (Plumas)	--	--	--	--	--
Salinas Valley (Monterey)	1,245,836	1,017,004	1,140,820	105,016	—123,816
San Gorgonio Pass Memorial (Riverside)	271,376	241,041	260,305	11,017	—19,264
Seneca (Plumas)	87,711	73,042	54,857	32,854	18,185
Sequoia (San Mateo)	1,790,628	--	1,800,263	—9,365	—9,365
Sierra Valley (Sierra)	44,467	40,989	42,922	1,545	—1,933
Sierra View Local (Tulare)	--	--	3,200	--	--
Soledad Community (Monterey)	16,859	806	--	--	--
Sonoma Valley (Sonoma)	146,549	138,800	150,183	—3,634	—11,383
Southern Inyo (Inyo)	124,348	105,125	127,112	—2,764	—21,987
Tahoe Forest (Nevada)	149,613	126,926	150,020	—407	—23,094
Tehachapi Valley (Kern)	32	--	--	--	--
Tulare Local (Tulare)	486,328	419,369	415,365	70,963	4,004
Washington Township (Alameda)	82,250	707,926	2,736	79,514	—199
West Contra Costa (Contra Costa)	1,550,481	1,205,014	1,796,080	—245,599	591,066
West Side (Kern)	420,770	259,981	370,334	50,436	—110,353
West Valley (Santa Clara)	763	--	1,369	—606	--
South Bay (L. A.)	--	--	--	--	--

SOURCE Controller's Annual Report of Financial Transactions Concerning Special Districts, Fiscal Year 1954-55.

APPENDIX 6

DISTRICT HOSPITALS BY NUMBER OF BEDS, EMPLOYEES, PERCENT OF OCCUPANCY, AND EMPLOYEES PER UTILIZED BED

District hospitals and county	*Number of licensed beds*	*Number of employees*	*Percent of occupancy*	*Employees per utilized bed*
Southern Inyo (Inyo)	18	28 [1]	68.8	2.3
John C. Fremont (Mariposa)	20	19	75.7	1.3
Sonoma Valley (Sonoma)	20	31	62.0	2.5
Tahoe Forest (Nevada)	21	22	52 0	2.0
Corcoran (Kings)	22	20	34.0	2.7
Patterson (Stanislaus)	25	23	48.7	1.9
Avenal (Kings)	30	35	63.3	1 8
Concord (Contra Costa)	31	60	85.0	2.3
Northern Inyo (Inyo)	31	54	71.0	2.5
Hemet Valley (Riverside)	37	35	73.9	1.3
Desert (Riverside)	38	60	42.6	3.7
Coalinga (Fresno)	40	42	34.0	3.1
West Side (Kern)	48	61 [2]	58.6	2.8
Alta Local (Tulare)	51	61	47.8	2.5
Lompoc (Santa Barbara)	52	64	49.4	2.5
Northern San Diego (San Diego)	63	90	80.9	1.8
Tulare Local (Tulare)	74	95	52.8	2.4
Antelope Valley (L. A.)	75	148	65.6	3.0
Pioneers Memorial (Imperial)	80	100	53.1	2.4
Mark Twain (Calaveras)	89	84	63.0	1.5
Pittsburgh Community (Contra Costa)	103	114	56.3	2 1
Grossmont (San Diego)	105	184	58.2	3.0
Salinas Valley (Monterey)	150	234	53.5	2.9
Peninsula (San Mateo)	154	296	59.0	3.3
West Contra Costa (Contra Costa)	165	259	52.2	3.0
Sequoia (San Mateo)	208	331	90.0	1.8
Eden Township (Alameda)	254	475	56.0	3.3

[1] Eighteen full time and 21 part time.
[2] Fifty-two full time and 18 part time.
SOURCE Questionnaire submitted to subcommittee (27 of 36 operating district hospitals returned questionnaires)

APPENDIX 7

RELATION OF SELECTED HOSPITAL EXPENDITURES TO TOTAL OPERATING EXPENSES—DISTRICT AND NONDISTRICT HOSPITALS

Hospitals by pairs	*Administration as percent of total operating expense*		*Nursing as percent of total operating expense*		*Dietary as percent of total operating expense*		*Depreciation as percent of total operating expense*	
	District	*Nondistrict*	*District*	*Nondistrict*	*District*	*Nondistrict*	*District*	*Nondistrict*
Pair number 1	9.6	13.8	26.1	29.6	12.1	8.8	5.3	4.1
2	14.2	11.8	32.2	27.0	9.4	12.2	6.2	5.1
3	19.4	11.8	31.9	27.0	11.7	12.2	1.0	5.1
4	NA	10.3	NA	41.5	4.8 [1]	12.2	12.0	2.2
5	13.6	11.4	32.3	23.3	11.5	10.4	NA	3.1
6	12.3	NA	21.3	NA	16.6	NA	14.6	2.4
7	13.6	12 5	29.9	NA	13.1	7.7	1.5	6.6
8	10.0	9.1	32.5	21.2	10.9	8.3	5.8	7.5
9	14.8	8.3	39.0	NA	9.9	11.2	9.1	4.6
10	13.6	13.8	27.0	36.8	13.8	10.5	2.7	3.1
11	9 3	10.8	16.5	31.4	11.0	11.1	9.6	5.2
12	12.4	11.9	32.2	25.9	10.7	11.7	NA	4.7
13	12.5	13.1	34.6	33.5	9.6	9.8	2 8	5.3
14	11.1	9.5	26.3	33.5	11.8	10.9	1.0	2.9
15	15 5	NA	18.8	NA	13.9	NA	6.2	NA
16	10.2	13 8	27.4	29.6	8.8	8.8	9.9	4.1
17	11.2	10.0	20.6	35.6	11.3	11.1	3.2	3.1
18	19.7	13.1	NA	NA	5.0	4.8	3.7	6.1
19	16.8	9 2	30.2	33.3	10.6	12.5	9 1	6.9

[1] Food purchases only.

NA—Not available.

SOURCE Questionnaires submitted to subcommittee.

APPENDIX 8

SELECTED COMPARISONS BETWEEN DISTRICT AND NONDISTRICT HOSPITALS PAIRED BY APPROXIMATE SIZE AND GEOGRAPHICAL AREA

Hospitals by pairs		*No. of licensed beds*		*Number of employees*		*Percent of occupancy*		*Employees per utilized bed*	
		D	*ND*	*D*	*ND*	*D*	*ND*	*D*	*ND*
Pair number	15__	18	24	[1] 28	24	68.8	70.0	2.3	1.4
	6__	20	24	19	38	75.7	74.7	1.3	2.1
	13__	20	42	31	78	62.0	67.5	2 5	2.7
	19__	21	25	22	41	52.0	71.7	2 0	2.3
	3__	22	29	20	50	34.0	67.9	2.7	2.6
	9__	25	26	23	42	48.7	70.0	1.9	2.3
	2__	30	29	35	50	63.3	67.0	1.8	2.6
	18__	31	43	60	56	85.0	65.9	2.3	2 0
	4__	40	30	42	35	34 0	47.0	3.1	2 5
	1__	51	73	61	62	47.8	37.5	2.5	2 3
	7__	52	57	64	70	49.4	58.5	2.5	2.1
	8__	63	75	90	190	80.1	96.0	1.8	2.6
	16__	74	73	95	62	52.8	37.5	2.4	2.3
	11__	80	76	100	125	53.1	63.9	2.4	2.6
	5__	105	105	184	240	58.2	89.8	3 0	2.5
	12__	150	93	234	167	53.5	69.0	2.9	2.6
	10__	154	154	296	300	59.0	86 3	3.3	2.3
	17__	165	95	259	200	52.2	78.5	3.0	2 7
	14__	208	200	331	445	90.0	95.8	1.8	2.3

D—District
ND—Nondistrict.
[1] Eighteen full time and 21 part time.

SOURCE Questionnaire submitted to subcommittee.

APPENDIX 9

TABLE I

THE RELATION OF DISTRICT HOSPITALS TO OTHER HOSPITALS IN CALIFORNIA
HOSPITAL FACILITIES IN CALIFORNIA, JULY 1, 1956
NUMBER OF HOSPITAL AND NURSING HOME BEDS IN OPERATION AND UNDER CONSTRUCTION BY TYPE OF FACILITY AND OWNERSHIP

Bed category	*Total*	*Nonprofit*	*Proprietary*	*County*	*District*	*City*	*State*	*Federal* *
Total	127,238 (100.00%)	27,508 (21.62%)	24,330 (19.12%)	26,206 (20.60%)	2,784 (2.19%)	323 (0.25%)	36,722 (28.86%)	9,365 (7.36%)
General	49,297 (38.74%)	23,706 (18.63%)	6,110 (4.80%)	10,853 (8.53%)	2,706 (2.13%)	323 (0.25%)	820 (10.64%)	4,779 (3.76%)
Chronic	3,911 (3.08%)	875 (0.69%)	120 (0.09%)	2,894 (2.28%)	22 (0.02%)	-- --	-- --	-- --
Mental	46,524 (36.56%)	318 (0.25%)	5,772 (4.53%)	1,005 (0.79%)	-- --	-- --	35,902 (28.22%)	3,527 (2.77%)
T. B.	8,352 (6.56%)	586 (0.46%)	215 (0.17%)	6,492 (5.10%)	-- --	-- --	-- --	1,059 (0.83%)
Mental Homes	464 (0.37%)	-- --	464 (0.37%)	-- --	-- --	-- --	-- --	-- --
Nursing Homes	18,690 (14.69%)	2,023 (1.59%)	11,649 (0.16%)	4,962 (3.90%)	56 (0.04%)	-- --	-- --	-- --

* Excludes military hospitals.

SOURCE. Department of Public Health, Bureau of Hospitals, September, 1956.

APPENDIX 9—Continued

TABLE II

HOSPITAL CONSTRUCTION IN CALIFORNIA 1947-1956
NUMBER AND TYPE OF BEDS PLACED IN OPERATION OR UNDER CONSTRUCTION BETWEEN 1947 AND 1956

Type	*Total*	*Nonprofit*	*County*	*District*	*City*	*Proprietary*	*State*
Total	37,262 (100%)	9,848 (26.4%)	6,382 (17.1%)	2,519 (6.8%)	318 (0.9%)	6,661 (17.9%)	11,534 (30.9%)
General	17,038 (45.7%)	8,268 (22.2%)	2,467 (6.6%)	2,441 (6.5%)	318 (0.9%)	2,724 (7.3%)	820 (2.2%)
Chronic	1,300 (3.5%)	422 (1.1%)	856 (2.3%)	22 (1.0%)	-- --	-- --	-- --
Tuberculosis	2,186 (5.8%)	160 (0.4%)	2,026 (5.4%)	-- --	-- --	-- --	-- --
Mental	11,341 (30.4%)	150 (0.4%)	477 (1.3%)	-- --	-- --	-- --	10,714 (28.7%)
Nursing home	5,397 (14.6%)	348 (2.3%)	556 (1.5%)	56 (0.2%)	-- --	3,937 (10 6%)	-- --

PERCENT BY CATEGORY

General	100 0	48.2	14.8	14.3	1.9	16.0	4 8
Chronic	100.0	32.5	65.8	1.7	--	--	--
Tuberculosis	100.0	7.3	92.7	--	--	--	--
Mental	100 0	1.3	4.2	--	--	--	94.5
Nursing home	100.0	15.7	10.3	1.0	--	73.0	--

APPENDIX 9—Continued

TABLE III

DISTRIBUTION OF FEDERAL FUNDS FOR HOSPITAL CONSTRUCTION IN CALIFORNIA (DOLLARS)
Fiscal Year 1947-48 Through 1956-57

Type	*NPA*	*County*	*District*	*City*	*Total*
General	$14,933,317 (43.42%)	$3,648,035 (10.61%)	$8,055,919 (23.42%)	$386,760 (1.13%)	$27,024,031 (78.58%)
Chronic	436,411 (1.27%)	939,577 (2.73%)	85,840 (0.25%)	-- --	1,461,828 (4.25%)
Mental	321,852 (0.94%)	122,725 (0.35%)	-- --	-- --	444,577 (1.29%)
Tuberculosis	-- --	1,770,869 (5.15%)	-- --	-- --	1,770,869 (5.15%)
Nursing homes	318,015 (0.92%)	123,992 (0.36%)	-- --	-- --	442,007 (1.28%)
Diagnostics and treatment center	423,561 (1.23%)	212,770 (0.62%)	-- --	-- --	636,331 (1.85%)
Rehabilitation facility	492,007 (1.43%)	-- --	-- --	-- --	492,007 (1.43%)
Public health center	-- --	1,817,335 (5.29%)	-- --	303,991 (0.88%)	2,121,326 (6.17%)
Total	$16,925,163 (49.21%)	$8,635,303 (25.11%)	$8,141,759 (23.67%)	$690,751 (2.01%)	$34,392,976 (100.00%)

APPENDIX 9—Continued

TABLE IV

NUMBER OF BEDS ASSISTED BY HOSPITAL CONSTRUCTION FUNDS

Type	*NPA*	*County*	*District*	*City*	*Total*
General	2,897 (40.79%)	726 (10.22%)	1,550 (21.82%)	87 (1.22%)	5,260 (74.05%)
Chronic	321 (4.51%)	475 (6.69%)	22 (0.31%)	-- --	818 (11.51%)
Mental	79 (1.11%)	43 (0.60%)	-- --	-- --	122 (1.71%)
Tuberculosis	-- --	705 (9.93%)	-- --	-- --	705 (9.93%)
Nursing home	150 (2.11%)	49 (0.69%)	-- --	-- --	199 (2.80%)
Total	3,447 (48.52%)	1,998 (28.13%)	1,572 (22.13%)	87 (1.22%)	7,104 (100.00%)

APPENDIX 10—Continued

TABLE 5

FINANCIAL TRANSACTIONS OF HOSPITAL DISTRICTS IN CALIFORNIA

RECEIPTS AND DISBURSEMENTS FROM INDEBTEDNESS

FISCAL YEAR 1955-56

(From Preliminary Data for the Annual Report of Financial Transactions Concerning Special Districts of California)

District name and county of location	Receipts from debt obligations			Disbursements from debt obligations			Balance available June 30, 1956
	Total	Sale of bonds	Other	Total	Capital outlay	Other	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Corning Memorial (Tehama)							$33,366.58
Del Norte County Local (Del Norte)				$24,690 26	$24,690.26		23,673.46
Desert (Riverside)				29,373.47	29,373.47		
Eden Township (Alameda)				13,000.00	13,000 00		227,972.00
Fallbrook (San Diego)	$778.98		$778.08				3,285.07
Feather River (Plumas)	74,212.30		74,212.30	116,343.59	116,343.59		19,724.96
Grossmont (San Diego)	441,387.43		441,387 43	463,080.73	463,080.73		161,895.10
Hemet Valley (Riverside)	941 72		941.72				41,359 06
Southern Inyo County (Inyo)	16,459 32		16,459 32	2,648.39	2,648.39		
Tulare Local (Tulare)	553.42		553.42	19,631.43	19,631.43		9,839.53
Washington Township (Alameda)				582,288.51	582,288.51		567,711 49
Total	$534,333.17		$534,333.17	$1,251,056.38	$1,251,056.38		$1,088,827.25

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House Resolution No. 174, 1955

REPORT OF SUBCOMMITTEE ON DRUGS FOR THE MENTALLY ILL

March, 1957

MEMBERS OF SUBCOMMITTEE

W BYRON RUMFORD, *Chairman*
GLENN E. COOLIDGE
REX M. CUNNINGHAM
SETH J. JOHNSON
CHARLES H WILSON

DIANA CLARKSON, *Executive Secretary*

Published by the
ASSEMBLY
OF THE STATE OF CALIFORNIA

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LETTER OF TRANSMITTAL

CALIFORNIA LEGISLATURE
ASSEMBLY INTERIM COMMITTEE ON PUBLIC HEALTH
SACRAMENTO, CALIFORNIA, March 8, 1957

HON. L. H. LINCOLN, *Speaker, and*
Members of the Assembly
Assembly Chamber

GENTLEMEN: Mental hospitals throughout the Country have, in the last five years, made increasing use of the new tranquilizing drugs, especially chlorpromazine and reserpine, in their treatment programs Because mental illness constitutes California's largest single health problem, the Assembly Interim Committee on Public Health felt that it should study the effect these drugs might have on the program of the California State Department of Mental Hygiene. This report presents the results of the study conducted by the Subcommittee on Drugs for the Mentally Ill

The committee wishes to express its appreciation to the many persons, especially the hospital administrators and staffs, and administrative officers of departments of mental hygiene in this and other states, whose cooperation and assistance have been invaluable

Respectfully submitted,

W. BYRON RUMFORD, Chairman
Assembly Public Health Committee, and Subcommittee on Drugs for the Mentally Ill
GLENN E. COOLIDGE
REX M. CUNNINGHAM
SETH J. JOHNSON
CHARLES H WILSON

SCOPE OF REPORT

This report: (1) defines the new so-called tranquilizing drugs being used in mental hospitals in the treatment of the mentally ill; (2) reviews their use in state hospital systems both within and outside California; (3) reviews the research that is being conducted to evaluate the extent of usefulness of the drugs; and (4) examines the possible implications of their use in state hospital systems

FINDINGS

1. Mental illness is recognized as an increasingly serious problem in California and throughout the Nation, and although half of all hospital beds are occupied by the mentally ill, far less is known about the causes and treatment of mental than physical illness.

2. Use of the "tranquilizing" drugs for treatment of the mentally ill has experienced rapid growth in the past five years. The drugs are now being used in varying degrees by large mental hospitals throughout the country. A number of hospitals in other states initiated extensive drug treatment programs earlier than did the hospitals in California, and further, many hospitals are using the drugs on a higher proportion of the patient population than are California hospitals.

3. The results obtained from the drugs are dependent on many variables, including the amount and duration of medication, the duration of a patient's hospitalization, the use of adjunctive therapy and the nature of the patient's illness. Although opinions as to the extent of usefulness of the drugs vary, often according to the attitudes and philosophies of the doctors, it is generally agreed that the drugs constitute an important contribution to treatment methods and that they are especially valuable in that they, in soothing and relaxing highly agitated patients, make them accessible to other forms of therapy.

4. Because of the recent introduction of the drugs, knowledge as to the exact physiological and psychological effects of prolonged drug treatment is as yet incomplete. Additional physiological, pharmacological and biochemical, as well as psychological and psychiatric investigation is needed.

5. Many hospitals reported that the drugs have been responsible for reducing ward management problems by minimizing the need for restraint and seclusion and by reducing destruction in the hospital wards; a beneficial result has been an improvement in staff morale and the "atmosphere" of the entire hospital which, in turn, is a stimulus to the staff to treat rather than simply care for the patients.

6 Many hospitals have reported increased patient release rates and reduced readmission rates since the introduction of the drugs. However, because of the many other variables affecting release and readmission rates, it is not agreed by all professionals in the field that the drugs alone have created the change.

7 The drugs have given added emphasis to the need for more personnel in mental hospitals Because the drugs apparently make more patients accessible to other forms of therapy, additional personnel are needed who can offer that therapy Because of an intensification of medical orientation in many hospitals, more physicians and psychiatrists are needed who can obtain the most effective and safe use of the drugs.

8. The advent of the drugs has given added emphasis to the possibility that many persons suffering from mental illness might be treated by their own private physicians, in general hospitals or in outpatient clinics rather than being committed to a state hospital for treatment

Further, there is a strong possibility that many patients will, after release from a hospital, need after-care clinic treatment and be required to continue taking maintenance dosages of the drugs.

9. The exact nature of the effect of the drugs, either alone or in combination with other treatment methods, on the type facilities needed in the future, is not yet clearly discernible. However, the increasing need for both preventive and after-care out-patient clinics has been clearly indicated.

10. A number of valuable research studies are being conducted in research centers and large mental hospitals throughout the country. The value of research units within the individual state hospitals has been demonstrated by the New York Department of Mental Hygiene.

11. Several important studies have been conducted in California State Hospitals and plans are now being formulated for development of a long-range coordinated program of research within the Department of Mental Hygiene. However, research in the California State System has thus far lacked adequate direction and coordination, has been limited in scope and has been generally inadequate to the needs

RECOMMENDATIONS

1. That the Department of Mental Hygiene expand its research program according to the present plan as rapidly as possible.

2. That all possible efforts be made to coordinate not only the research within the State but also with that research being done in other parts of the country.

3. That serious consideration be given to the advisability of early provision for research units at each of the state hospitals.

4. That the Department of Mental Hygiene include in their research program the following:

   a. Continued and intensive study of the tranquilizing drugs including any newer drugs which may become available; the studies need to be coordinated from the state level with objective and uniform standards for evaluation of the drugs.

   b. A study of the use of the drugs to determine whether or not they permit an earlier release of patients and to determine their value in caring for patients in after-care outpatient clinics.

   c. Study as to the number of patients who could be treated in outpatient clinics established at the state hospitals rather than in the hospitals themselves, the type facilities that would be needed, the relationship between preventive and after-care clinics and between such clinics and the existing program of the Bureau of Social Work.

5. That after-care clinics be established at selected state hospitals during the 1957 Session of the Legislature.

6. That serious consideration and study be given to an increasing use of outpatient clinics for the treatment of the mentally ill in the planning of future hospital construction.

2—L-4984

INTRODUCTION

The Subcommittee on Drugs for the Mentally Ill was appointed by Assemblyman W. Byron Rumford, Chairman of the Interim Committee on Public Health, under authority of House Resolution 174, 1955 General Session. The subcommittee was directed to study recently developed methods of treating mental illness involving the use of the new tranquilizing drugs, chlorpromazine, reserpine, and others, and the effect of these new methods of treatment in California's mental hospitals might have on the amount of capital outlay needed for mental hospital facilities

The drugs have received extensive and highly commendatory publicity in recent years in both popular magazines and medical journals. The committee felt that, because of the magnitude of the problem created by mental illness throughout the country and in California, the claims made in these reports as to the effectiveness of drug treatment merited intensive investigation. Because the drugs have been used both more extensively and for longer periods of time in certain of the eastern and midwestern state hospitals than in California's hospitals, the committee felt that its understanding of the part played by the drugs would be increased by visiting selected hospitals which have been active in drug treatment and research programs and by discussing the value of the drugs with the doctors and psychiatrists heading the program. The list of hospitals visited and doctors interviewed both out-of-state and in California will be found in Appendix A.

MENTAL ILLNESS AND THE CALIFORNIA DEPARTMENT OF MENTAL HYGIENE

On April 1, 1956, 45,295 persons were hospitalized for mental illness in California state hospitals. An additional 2,555 were under treatment on an outpatient basis, while 9,866 were under treatment and care for mental deficiency [1] The fact that one of every two hospital beds in California is occupied by a person suffering from mental illness perhaps more clearly indicates the seriousness of the problem.[2]

The responsibility for treating and rehabilitating the mentally ill and mentally deficient has been placed with the Department of Mental Hygiene. This department, created by an act of the 1945 Legislature to replace the Department of Institutions, has also been directed to license and inspect private institutions for mental patients, conduct a program of public education for the prevention of mental illness and conduct research in the treatment of mental disorders. It operates 11 hospitals (including Langley Porter Clinic) for the treatment and care of the mentally ill, three for the mentally deficient (an additional

[1] Western Interstate Commission for Higher Education, *Mental Health Training and Research in the Western Region*, Deseret News Press, Salt Lake, June 1, 1956

[2] Statement by Alfred Auerback, M.D., President of the Northern California Psychiatric Society, April, 1956

hospital for the care of the mentally deficient is presently under construction and is expected to begin operations during the 1957-58 Fiscal Year) The department also administers an outpatient clinic program and licenses 275 private institutions which care for the mentally ill or mentally deficient, alcoholics, epileptics or other persons suffering psychiatric disabilities.

The Bureau of Social Work of the Department of Mental Hygiene is responsible for the care of patients on leave from state hospitals, for carrying out the work placement and family care program, for maintaining regular contact with families of hospitalized patients and for working with patients who have been released from state mental institutions until they become readjusted to community life Other facilities for the care of the mentally ill are operated by local governmental units and the Veterans Administration

The amount expended by the State for the treatment and care of the mentally ill has increased rapidly and steadily over the past years. During the Fiscal Year 1955-1956 the total support cost for the program was estimated to be $67,000,000, or according to the Legislative Auditor, 24 percent of the total general fund cost of state operations. An additional $18,362,000 was authorized for capital outlay purposes during this period.

The support cost for 1956-57 was originally estimated to be approximately $73,000,000, but the Legislative Auditor has reported that actual expenditures are now expected to reach $78,500,000.

The Department of Mental Hygiene estimates a potential annual increase of 800 admissions to state hospitals for the mentally ill. During the year ending June, 1954, 16,000 patients were admitted. By 1965 the annual admission rate is estimated to be 54,000.[1] The department has indicated that 50 percent to 60 percent of the potential increase in admissions will result from the predicted increase in California's civilian population from about 12,000,000 in 1954 to 16,000,000 in 1965. Forty to fifty percent of the increase will be due to a potential increase in rate of admissions, which it is anticipated will be 156 per 100,000 state civilian population in contrast to a rate of 133 per 100,000 in 1954.

[1] Department of Mental Hygiene, *Potential Mental Hospital Increase to June 30, 1965*

THE TRANQUILIZING DRUGS

Many medications introduced in recent years are being used for the treatment of a wide range of psychiatric disorders. The use of the tranquilizing drugs by mental hospitals has been steadily increasing since their first introduction in the United States four or five years ago; at the same time an ever-increasing variety of medications is becoming available by the introduction of several potential new drugs each year.

The first two drugs to receve prominent attention from the profession were chlorpromazine and reserpine. They are still the most widely used of the tranquilizing drugs for the treatment of the mentally ill in large mental hospitals. Chlorpromazine (brand name: Thorazine), a synthetic alkaloid developed in France in 1951, became available for general use in this country in the spring of 1954. Rauwolfia Serpentina or reserpine (brand names include Serpasil, Raudixen, Reserpoid) is an alkaloid derivative of the rauwolfia serpentina or snakeroot plant. Before its value in treating the mentally ill became known in Europe or this country, the herb was used for centuries in India as a sedative, for the treatment of epilepsy and a variety of other illnesses.

Other drugs frequently mentioned as being used in the mental hospitals include azacyclonol (brand name: Frenquel), meprobamate (brand names: Miltown and Equanil), mepazine (brand name: Pacatol); promazine (brand name: Sparine), doxylamine, hydroxyzine, and lysergic acid.

EXTENT OF DRUG USAGE IN CALIFORNIA AND OTHER STATES

These new drugs, singly or in combination, are being used in all the hospitals visited by the committee. Although opinions varied as to the usefulness of the drugs and the effectiveness of one drug over another, there was unanimity of opinion that they represent an important contribution to treatment methods.

Beginning in late 1953, California was receiving complimentary supplies of drugs from various drug companies, as were many of the state hospitals throughout the country. California's first separate budget request for the drugs was in 1955. The budget for the Department of Mental Hygiene for 1955-56 Fiscal Year included a separate allowance of $48,300 for the purchase of drugs for all hospitals in the system. The allowance was in excess of that budgeted for regular drugs and supplies. During the first year that the drugs were used they were distributed on a per capita basis, with funds being divided among the state hospitals on the basis of $1 per patient per year.

The original budget request for the Fiscal Year 1956-57 was $206,688 The department has been using more drugs than had been anticipated and has, therefore, requested an augmentation to bring the 1956-57 figure to $368,869. The department is requesting $380,000 for the 1957-58 Fiscal Year.

Dr. Rapaport reported that the drugs during the 1956-57 and 1957-58 Fiscal Years will be used on about 10 percent of the total hospital population. Although some free drugs are being given to the hospital for experimental purposes, the amount of these drugs is far less than it was three years ago. The extent to which the drugs have been used in California's hospitals has, within the budgetary limitations, varied from hospital to hospital.

Several hospitals in other states initiated drug treatment programs on an extensive scale in late 1954, earlier than did the hospitals in California For example the Veterans Hospital in Topeka has been using the drugs on many of its patients since late 1954, as has St. Elizabeth's Hospital in Washington, D. C. Hospitals in the Maryland system were using the drugs on a wide scale in 1954 and all the hospitals in the New York system were conducting extensive drug treatment programs by January, 1955.

It has also been noted that the drugs have been used on a higher percentage of the patient population in several of the out-of-state hospitals visited by the committee than in California hospitals. The New York hospitals report that drugs are being used on over 25 percent of the total patient population. The extent to which the drugs are being used in the individual hospitals in the system varies according to the desires of the doctors at the hospitals, and while some report using the drugs on only 10-15 percent, others report using them on as many as

50 percent. The director of the Ohio Department of Mental Health stated that between 10 and 15 percent of the total mental hospital population is being treated with the drugs, while the Maryland Department reported a figure of between 20 to 25 percent.

Further, some doctors interviewed by the committee expressed a belief that the drugs would be used on a much higher proportion of patients were the funds for their purchase available. Dr. Douglas Goldman, Clinical Director of Cincinatti's Longview State Hospital, believed 75 percent of the total patient population would benefit; Dr. Herman C. B. Denber at New York's Manhattan State Hospital claimed that from 50 to 60 percent would be benefited by the drugs

ACTION OF THE DRUGS

The results obtained from the drugs are dependent on many variables including the amount and duration of medication, the duration of a patient's hospitalization, the use of adjunctive therapy and the nature of the patient's illness.

Although different drugs are being used by different doctors in different hospitals, the committee found it generally agreed that the drugs soothe and relax highly agitated psychotic patients and often make these patients accessible to other forms of therapy. The following statement by Dr Morton Kramer seemed to the committee to reflect the attitude of several of the doctors as to the action of the drugs:

> The significant action of the tranquilizing drugs is their ability to reduce motor activity, disturbed behavior, tension and anxiety without producing sleep The tranquilizing effect has been reported to be of value in the treatment of psychotic patients by diminishing disturbed behavior without preventing patients from continuing to take part in psychotherapy and in occupational, recreational, and other forms of therapy It is further claimed that these drugs make accessible to psychotherapy patients who otherwise might not have been accessible had these drugs not been available [1]

A report from J. Howard Bryant and Bernard M. Bass of the Division of Research of the Louisiana State Department of Institutions entitled *Drug Therapy—A Survey of the Literature* indicated that after receiving drugs "patients can be aroused easily and the grogginess usually found after barbiturate sedation is not present. Both drugs (chlorpromazine and reserpine) tend to decrease the amount of fear, rage and anxiety and promote a sense of well-being. They cause a reduction in irritability and, concomitantly, aggressive impulses become easier to control."

At St Elizabeth's Hospital in Washington, D. C., it was reported to the committee that both chlorpromazine and reserpine contributed immeasurably to the management of geriatric patients because of their effectiveness in controlling anxiety, agitation, assaultiveness and destructiveness The doctors there feel that the drugs are far better than barbiturates, that patients become quiet and cooperative with an improvement in behavior which makes them more amenable to nursing care and permits them to participate in social and group activities

Dr Benjamin Pollack, Assistant Director of Rochester State Hospital, New York, also indicated that the use of chlorpromazine produced a rapid and beneficial change on geriatric patients He noted that the improvements in patients included increased calmness and sociability, loss of confusion, improved appetite and increased ability to participate in occupational and recreational therapy. He indicated that in many

[1] Morton Kramer, Sc D., *Facts Needed to Assess Public Health and Social Problems in the Widespread Use of the Tranquilizing Drugs*, U S Department of Health Education and Welfare, Public Health Service, Public Health Monograph No 41, August, 1956, p 2

cases the use of the drugs resulted in the release of patients to their homes, or permitted them to go home on short visits.[1]

These indications of the successful use of drugs in treating aged patients seem particularly important in view of the fact that about 38 percent of all new admissions a year to state mental hospitals are 60 years of age or older, according to the National Mental Health Committee.

While the committee found apparent agreement that the drugs are valuable in the treatment of highly agitated psychotics and geriatric patients, they found some disagreement as to their value in the treatment of juveniles. At Bellevue Psychiatric Hospital the doctor in charge of the adolescent section appeared to be generally opposed to the drugs, stating that in many cases their use had not produced beneficial results. This, others felt, was due to the fact that many juveniles are committed to Bellevue because of social rather than psychological maladjustments. Dr. Brill reported that the drugs, while valuable for the treatment of psychotic children, have been of little value in the treatment of juveniles whose problems are behaviorial rather than psychological. He also indicated that the drugs have proved valuable for mental defectives with violent reactions and behavior patterns.

Certain of the tranquilizers are known to be effective in controlling specific physical problems, including recurrent hiccoughing, some types of high blood pressure or skin conditions. It is also known that certain of the tranquilizers produce undesirable toxic or side effects, including skin rash, jaundice, hypotension, Parkinsonism, depressive reactions, confusion, nasal congestion, and diarrhea. Many of the doctors interviewed, however, felt that the dangers of the side effects had been greatly over-emphasized; that they were of no greater concern than the side effects of other drugs used by the medical profession; that their control was not a major task and that the beneficial results from the drugs in the treatment programs of state mental hospitals outweighed the dangers of any side effects. Several doctors, for example, Dr. Denber at Manhattan State Hospital, felt that the side effects merely serve as an indication that the drug "is doing its job."

It is recognized, nevertheless, that the drugs should not be handed out indiscriminately but only under close supervision of the medical staff, which can, through control of the dosage and use of other drugs control or counteract the side effects. The same care must be exercised in prescribing these drugs as in prescribing any other potent drug.

Dr. Porterfield, Director of the Ohio Department of Mental Hygiene Correction, remarked to the committee that it is imperative to guard against the indiscriminate use of the drugs since hospital attendants were inclined to prescribe doses to all patients to reduce ward disturbances. The Ohio department, therefore, is attempting to control use of the drugs by the individual hospitals to insure that they are given only to patients who will benefit and to whom other therapies can subsequently be given.

[1] Letter to committee dated July 24, 1956; and Benjamin Pollack, M D, "The addition of Chlorpromazine to the treatment program for emotional and behavior disorders in the aging" *Geriatrics*, Vol II, pp. 253-59 June, 1956.

Because of the relatively recent introduction of the drugs, little is known about the physical effects of prolonged treatment with the tranquilizers, and less is known about the effects the tranquilizers might have on the brain. Some theories have been advanced about which parts of the brain and which of its chemical reactions are affected by tranquilizers, but no one as yet can blueprint the mechanism by which the tranquilizing drugs act on the body to effect a change in the mental state of the treated patient.

Morton Kramer in Public Health Monograph No. 41 outlined what he considered the basic questions on the safety of the drugs:[1]

> How safe are these agents for the patient?
> How toxic are these drugs?
> What are their immediate as well as their long-range effects?
> How are these effects related to dosage?
> How should dosage be modified in relation to the various characteristics of patients, such as age, sex, race, type of psychiatric disorder, duration of illness, general physical state of the patient?
> How long should patients be kept on these drugs?
> Because of their tranquilizing properties, it is important also to know about the psychological effects of the drugs—for example, production of depressive reaction with reserpine—and the characteristics of the individuals in whom these effects are most likely to occur.

In this Monograph, Kramer also brought out the need for study to determine the part played by the drugs in hospital treatment.

> The questions being raised about the effect of the tranquilizing drugs on the outcome of treatment of the mentally ill emphasize quite sharply the need for clarification of what constitutes psychiatric treatment and of the objectives of treatment within the hospital setting. If hypotheses with respect to the effectiveness of these drugs in accomplishing the goals of hospital treatment are to be tested, it is essential that experiments and studies be devised that will permit assessment of the effectiveness of a treatment method without use of the tranquilizing drugs and of the effectiveness of the same method when the drugs are used. Indeed, careful evaluation of the existing psychiatric therapies becomes all the more essential and urgent. This is particularly important in psychotherapy since the many statements being made about the promise of the tranquilizing drugs have emphasized that these drugs make patients more accessible to this form of therapy.[2]

Many of the articles have reported on the degree of improvement made by patients treated with the drugs.[3] The standards used in many of the studies reported therein to rate patient improvement have been subjective. Because so many variables affect the treatment of mental illness, it is difficult to isolate contributing factors and to assess the degree to which the tranquilizing drugs alone affect a patient.

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[1] Morton Kramer, Sc D., *Public Health Monograph No. 41*, "Facts Needed to Assess Public Health and Social Problems in the Widespread Use of the Tranquilizing Drugs," U. S. Department of Health, Education and Welfare, Washington, D. C., August, 1956, p. 3

[2] Morton Kramer, *Op. Cit.*, pp. 15-16.

[3] See, for example, Appendix C, pp. 35-36

ATTITUDE TOWARD THE DRUGS

As indicated by the following comments made to the committee,[1] the attitude toward the drugs and the belief as to their effectiveness varies with the philosophies of the doctors, the type institution and the staff available to the hospital.

Topeka State Hospital. Alfred Paul Bay, M.D., Superintendent "The therapeutic success brought about by the introduction of most of these drugs is inversely proportional to the general level of psychiatric care prevailing in the setting where the drug is introduced; that is, where a good program is in progress the introduction of the new drugs will contribute only modest gains in therapeutic success; where a clinical program is poor or limited, the introduction of the ataraxics may produce dramatic improvement in long neglected patients. Even those most skeptical of the true value of the tranquilizing drugs will agree that they are physiologically active agents in spite of the fact that their mode of action is not completely understood At the present time we consider the use of some of the tranquilizing drugs as indispensable. We suspect that new and improved compounds will soon become available which we will want to use as they appear."

Veterans Administration Hospital, Topeka. R. C. Anderson, M.D., Manager. "For the most part we have not observed the dramatic response reported elsewhere, and it is our impression that the more efficient the total treatment program has been, prior to the advent of these drugs, the less likely it is that dramatic results will be observed For this reason, I am unable to estimate what the future of these drugs may be in this hospital, but it is my personal opinion that their use will likely decline."

Bellevue Psychiatric Hospital. The staff does not feel that the drugs cure but, by calming the patient, in effect restrain him enabling the doctors to utilize other types of therapeutic treatment They are secondary rather than primary agents and, although a certain amount of reintegration takes place, will not alone keep a patient out of the hospital or cure him once he is in.

Saint Elizabeth's Hospital, Washington, D. C.

"Never in the history of psychiatry has any form of treatment been adopted so quickly by so many hospitals as has the use of chlorpromazine and reserpine. The reasons for this are readily apparent and lie in the effectiveness, relative safety, and great ease of administration of these drugs. * * *

"Our staff received these drugs initially with some considerable skepticism and lack of enthusiasm. The idea of treating psychologic illness with chemical agents is not new and in the past has invariably resulted in disappointment and disillusionment Most of us looked, incorrectly, upon chlorpromazine and reserpine as, at the most, 'two more sedatives.' However, it is evident that these drugs represent a different and new type of chemical agent. * * *

[1] In interviews, letters to the committee or in material presented to the committee

"We are not prepared to say that these drugs have curative properties or that they attack the psychopathologic process directly or specifically. * * * We have, however, noted remarkable symptomatic improvement in a considerable number of our patients, some 75 percent or more showing some degree of symptomatic improvement." [1]

Maryland Department of Mental Hygiene. Clifton T Perkins, M D., Commissioner "The drugs have had the greatest impact of anything that has come into this field in 29 years. We are releasing patients now who would not have been released before. The drugs in themselves have cured nothing There is a need for rehabilitation therapy after administration of the drugs or the patient will regress. * * * Their effect on the patients—in fact, on all the challenges posed in the hospitals—has been so remarkable, that the widespread use of them has been encouraged without any attempt to take specific accountability of their use."

Manhattan State Hospital. Herman C. B Denber, M D., Director of Psychiatric Research. "Our present experience indicates that chemotherapy will eventually become the accepted means of treatment in psychiatric hospitals Tentative experience indicates that long-term intensive follow-ups will be necessary to keep these discharged patients from returning to the hospital."

Rockland State Hospital. Nathan S Kline, M D . Director of Research "Analysis has a place, but it is not in large state hospital systems. It can't be done " The factors he indicated as being responsible for this included the large numbers of patients, the nature of their diseases, and the nationwide shortage of trained psychiatrists. For example, at Rockland the hospital population is 8,500, there are between 55 and 60 psychiatrists and Dr. Kline pointed out that "it is just not possible to treat these patients by analysis alone even if it were the best way to treat them * * * and we do not think it is the way to treat all patients "

In discussing the value of the new drugs, a number of the doctors consulted by the committee, especially in the New York hospitals, made a point of distinguishing between organic or physiological causes of mental illness and the social or psychological causes. The director of research at Manhattan State Hospital, for example, expressed the opinion that in many instances mental illness is produced by a combination of physiological and psychological factors, and that drug therapy may well be effective in controlling the physiological causes. Along the same line, Dr. Nathan Kline at Rockland State Hospital stated that schizophrenia might well be an "organic" disease and, as a result, persons suffering from this disease may have to continue using the drugs the rest of their lives in the same way that diabetics must remain on insulin The value of the drugs will be more apparent when it is known if, as many professionals believe, the causes of mental illness do lie in a composite of factors ranging from the biochemical to the behavioral.

[1] Jay L Hoffman, M D., Chlorpromazine and Reserpine, Symposium on Experiences at St Elizabeth's Hospital, *Medical Annals of the District of Columbia*, Vol XXV, No 5, May, 1956, pp 267-8

In addition, a knowledge of the specific action of the tranquilizers is needed to determine what might be the physiological and mental effect of prolonged treatment, whether or not the drugs do perform a compensatory function as suggested in New York, or whether they are merely "tranquilizers."

The variety of opinion expressed to the committee as to the value of the drugs emphasizes the need for physiological, pharmacological, and biochemical, as well as psychological and psychiatric investigations.

IMPLICATIONS OF DRUG USAGE

In the course of its study, the committee encountered many favorable reports as to the effect of the tranquilizing drugs on state hospitals, notably, their effect on the management of patients within the hospital, on release and admission rates, and on staffing requirements. The director of research at Rockland State Hospital, Orangeburg, New York, for example stated that the drugs served to:

1. Keep people out of state hospitals by treating many patients either in general hospitals by private physicians or in out-patient clinics, who prior to introduction of the drugs would have required treatment in state mental hospitals.
2. Facilitate the management of patients within hospitals.
3. Aid in getting people out of the hospitals.
4. Keep patients out of the hospital by prescribing a maintenance dosage of drugs for those who have been released.

EFFECT ON HOSPITAL SECURITY MEASURES

One of the earliest benefits reported to result from use of the drugs related to the management of patients including a reduction in the use of restraints and seclusion. There is said to have been a marked decrease in destruction of equipment within the hospital wards and the comment was frequently heard that patients no longer destroy the ward furnishings or their own clothing. The following excerpt from a paper presented to the committee at Rockland State Hospital is typical:

> "Beyond all question, security problems in mental hospitals have been reduced Destruction, assault and aggression have been lessened and the classic 'disturbed ward' is rapidly becoming an anachronism. Although the application of the pharmaceuticals to the Rockland State Hospital patients was very gradual and is still incomplete, the effects on the use of camisoles, restraints and seclusions is dramatic. Figures for the entire female population of the hospital follow the trend of our original population. Our use of the drugs on females before males was on a chance basis so that our figures are more complete with this group and are therefore presented here After remaining constant for a considerable number of years the use of restraints and seclusions in the entire New York State Hospital System with its 100,000 plus patients has been cut approximately in half in the past year since the introduction of the pharmaceuticals, despite the fact that only a percentage of cases have been considered suitable for treatment to date. The highly agitated patient who formerly presented such a problem at the time of admission can now be regularly and rapidly relieved in a matter of hours with the consequent procedure of hospitalization running much more effectively for both the patient and the personnel. The comparative safety of such a procedure and its

real humaneness recommends that it be introduced as a regular routine wherever and whenever such circumstances occur."[1]

EFFECT ON RELEASE RATES

Because admission, release and return rates are easily calculable, many hospitals have used these in an attempt to measure the effectiveness of the drugs Some of the most spectacular reports have come from the New York State Hospital System Dr. Henry Brill, Assistant Commissioner of Mental Health in New York, wrote the committee on December 14, 1956, that "Since the use of large scale drug therapy, the release rate (of all hospitals in the New York State System) increased slightly over 20 percent and has been maintained at the new level ever since. Because of the new level of releases the number of patients on convalescent care from the state hospitals stands today at 13,048, which may be compared with 9,079 on March 31, 1954 The rate of return to the hospital expressed as a proportion of the number of patients released remains approximately the same as it was originally, although for a number of months it was definitely lower This figure describes the total population. It is not limited to the group of patients who receive treatment " He also stated that "to assume that the sudden change in population trend was actually brought about even in part by the drug program is open to the usual objections by the post hoc reasoning, but we have as yet been unable to identify any other simultaneous change in conditions which would satisfactorily account for it."[2]

The reports made by Manhattan State Hospital are equally spectacular. At this hospital it was reported that during 1952-53 the return rate was about 30 percent Since then under an extensive treatment program, including increased psycho-therapy and drug therapy the return rate has been reduced to 7 percent. The admission and return rates reported to the committee are indicated in the following table.

	Admitted	*Released*
1952-53	865	612
1954-55	840	820

At Longview State Hospital in Cincinnati it was reported that between 50 percent and 60 percent of released patients were returned to the hospital in 1946. During the first year of extensive drug treatment, 1954 and 1955, 30 percent of the released patients were returned Of those who were treated with chlorpromazine only 10 percent were returned and, according to Dr. Goldman, they "had stopped taking their prescribed maintenance medication."

Such figures as these would appear to indicate a definite change because of the availability of drugs. It is difficult to evaluate the effect of the drugs alone, however, because of the many variables which affect the admission, release and return rates in any hospital. These variables include such things as the variation in practices in different states and regions throughout the Country; the nature of the illness of patients admitted to hospitals, which appears to vary from year to year and from area to area; the rate of admission in terms of total population;

[1] Henry Brill, M D, and Nathan S Kline, M D, *Implications of the Usefulness of Reserpine and Chlorpromazine*

[2] For Dr Brill's full evaluation of the effects of chlorpromazine and reserpine therapy on the hospital population, see Appendix D, p. 44.

the age of the patients (for instance, an increasing percent of hospital population is composed of senules); and the attitude of the hospital staff as to the required condition of a patient prior to release.[1]

Whether the encouraging changes in release and readmission rates have resulted from the drugs alone or whether a result of the drugs in combination with other types of treatment does not seem to the committee a valid reason for minimizing the value of the drugs. The committee feels it more important to recognize the importance of any form of treatment effective in reducing the population of mental hospitals and to devote increasing effort to the evaluation of all new treatment methods.

EFFECT ON THE HOSPITALIZATION OF PATIENTS AND OUTPATIENT CARE

The advent of the tranquilizer has given emphasis to the possibility that a large number of persons suffering from mental illness might now be treated by their own private physicians, in general hospitals or in outpatient clinics rather than being committed to a state hospital. According to Dr Nathan Kline (Rockland) the practice of sending mental patients directly to state hospitals is becoming rapidly outmoded General hospitals historically have objected to treating mental patients because of their highly disturbed and often violent behavior; however, the "tranquilizing" effects of the new drugs have done much to minimize or eliminate this objection

In a paper entitled "Implications of the Usefulness of Reserpine and Chlorpromazine," Dr Kline and Dr Brill raised the whole issue of whether many patients who formerly would have been committed to a mental hospital might not be given treatment somewhere else:

> "In the first instance the general practitioner, the family physician who is most apt to first see the patient should probably be made thoroughly familiar with the possibilities inherent in the prompt, fairly drastic use of the drugs in the treatment of acute psychoses once there is reasonable certainty as to the diagnosis. This may subvert the need for hospitalization. Such a patient should be passed along the line to a practicing psychiatrist or clinic Here greater familiarity with the most effective application of the drugs in conjunction with psychotherapy, EST or other means of treatment should be utilized Where these methods fail or are not available it may be desirable to place the patient where he can be medically managed while under fairly large doses of pharmaceuticals For this purpose either a general hospital, psychopathic hospital in the community, a private sanitarium, or a day hospital may be adequate. The state hospital should no longer be automatically considered as the first line of defense in the treatment of the psychoses"

This statement indicates that the availability of drug therapy will permit treatment of larger numbers of mental patients on an outpatient basis without the need for hospitalization In addition there is likely to be an increasing need for outpatient facilities to provide

[1] For the changes in resident patient populations in public hospitals between 1955 and 1956, see Appendix C

after-care including maintenance dosages of drugs when needed for those patients who have been released from hospitals.

The principal responsibility for after-care of released patients in California rests with the Bureau of Social Work of the State Department of Mental Hygiene, with headquarters in Sacramento.

Under a separate program, the California Department of Mental Hygiene initiated formal psychotherapy on an outpatient basis in the spring of 1943 with the outpatient department of the Langley Porter Clinic. Between 1947 and 1952 seven additional state mental hygiene clinics were established. None of these clinics (with the exception of Langley Porter) is located at or connected with a state hospital.

Outpatient clinics are maintained at Camarillo, Napa, Pacific and Patton State Hospitals. It should be noted, however, that no specific budgetary provision has been made to provide the personnel necessary for the operation of the outpatient clinics at these four hospitals. The hospitals have maintained the programs without receiving any funds earmarked for that purpose. Similarly, although all of the state hospitals offer advice and assistance to released patients who request it, it has been done without the benefit of formal budgetary provision, and no formal after-care service is offered by the hospitals.

Nor have any funds been budgeted for the purchase of the tranquilizing drugs by the state mental hygiene clinics. Many clinics are, however, prescribing the drugs both to persons who have not been hospitalized but who need treatment and to persons who have been released from state hospitals. The drugs are then obtained by the patient from his own private physician, from the county hospital or from sample drugs supplied to the clinics by the various drugs firms.

In several states provision has been made to enable the mental health departments to supply drugs to released patients. In Maryland, for example, which has clinics in conjunction with four of the five hospitals in the system, the department is responsible for caring for and supplying drugs to those patients who, after their release, are unable to obtain care from their own private physicians. The Manhattan Chlorpromazine Center, located in New York City, cares for patients released from the hospital, and supplies drugs to those who must be kept on a maintenance dosage. Commenting on the value of this center, the staff of the Manhattan State Hospital observed that "it is impossible and unrealistic to operate a mental hospital without such an after-care clinic."

The director of the Department of Hygiene and Correction in Ohio, as well as many others interviewed by the committee, emphasized the increasing importance of the after-care outpatient clinic. In this connection the question of the state responsibility for patients released from mental hospitals has likewise become increasingly important. In November, 1955, the Attorney General in the State of Louisiana ruled that state mental hospitals may furnish drugs to patients after they leave the hospital. The ruling stated: "We are of the opinion that such continued furnishing of chlorpromazine to former patients is not prohibited by any law in the state. It is our thinking that such prescriptions, either free or at a nominal cost, are nothing more than a continuation of treatment on an outpatient basis."

It is obvious that the question of clinic care deserves continued study and consideration because of the possible need to continue many released patients on a maintenance dosage for an indefinite period of time. This introduces the question of the extent and duration of state responsibility. It is necessary that study be given as to the number of patients who could be treated in such facilities rather than in the hospitals, the type facilities that would be needed, the relationship between prophylactic and after-care clinics and between such clinics and the existing program of the Bureau of Social Work. It is especially important that the changing emphasis on outpatient treatment clinics be given serious consideration in planning major capital expenditures for building and facilities in the future.

EFFECT ON PERSONNEL REQUIREMENTS

It has been widely recognized that one of the principal needs of mental hospitals is more personnel. The increased use of the tranquilizing drugs has added greater emphasis to that need because more people are now accessible to therapy. Dr. Alfred Bay, of Topeka State Hospital, stated in a letter to the committee: "The introduction of the tranquilizing drugs and the increased responsiveness of the patients thereby produced will make it necessary for us to plan for increased numbers of ward personnel and adjunctive therapists. A responsive patient population requires more personnel than does a regressed and apathetic one." At St. Elizabeth's Hospital it was pointed out that more services are needed not only in the wards but also to provide after-care for those persons who have been released from the hospitals.

Additional personnel with a variety of skills and training are required to provide the therapy, including occupational and recreational therapy which the patients now want and need. Because of an intensification of medical orientation in many hospitals, more physicians and psychiatrists are needed who can obtain the most effective and safe use of the drugs.

In addition to the need for increased staff, the duties of the existing staff appear to be altered. The nature of the change was reported in the February, 1956, issue of *Mental Hospitals* in an article entitled, *The New Drugs—Administrative Aspects:* "We need a new kind of doctor in a psychiatric hospital—one who is not afraid of medicine, who is not alarmed by seeing an eruption which is the result of medication and who is not afraid if Parkinsonism occurs from either reserpine or chlorpromazine, but who will evaluate it as an index of the activity of the drug and understand how to control it. Such problems require a new kind of attitude in addition to the psychiatric point of view, and this new attitude we might call a medical or pharmacologic understanding of what is going on."

The duties of the nursing staff and ward personnel are also changing. That the drugs make more patients accessible to therapy indicates a need for personnel with the skills needed to treat rather than merely care for the patients. Dr. Jay Hoffman at St. Elizabeth's Hospital indicated that the use of drugs, rather than solving difficult problems in the treatment of the mentally ill, introduces additional problems for

the hospital administrator, psychiatrist and nurse, and that the challenge for providing additional psychiatric treatment for those no longer disturbed will test the ingenuity, skill and resources of all hospitals.

One of the most widely acclaimed results of the drugs has been the beneficial effect of the drugs on the atmosphere of the hospital An improved staff morale by itself is resulting in improved care for the patients

EFFECT ON HOSPITAL OPERATING COSTS

Because of reports of reduced costs in hospital administration in many of the early articles on the drugs, the committee was interested in learning whether or not the use of drugs had an effect on actual dollars and cents savings It was found, however, that few hospitals are attempting to isolate savings attributable to the drugs alone. Dr Denber at Manhattan State Hospital feels that savings cannot be stated in mathematical terms. He indicated that they are, however, evident in the hospital in terms of decreased destruction, injuries to patients, and attacks on attendants.

On the other hand it appears that in many cases such savings are offset by requirements for additional personnel. The over-all effect, then, is a shifting in cost rather than a reduction in cost. The greatest hope for significant savings would appear to rest with the long range efforts, through increasing knowledge in prevention and cure of mental illness, to bring about a permanent decrease in population of the hospitals.

EFFECT ON ARCHITECTURAL REQUIREMENTS

Use of the tranquilizing drugs has also emphasized the changing nature of building requirements for mental hospitals For the past several years the trend has been away from a maximum security type facility and toward the "normal" hospital facility The drugs have already affected the architectural requirements for many hospitals by reducing or eliminating the need for such security facilities as detention rooms or detention screens. At several hospitals the committee was advised that there was no further need for heavy indestructible furnishings, but that, on the other hand, there was an increased need for more activity rooms, more recreational and occupational therapy rooms and facilities, and more outpatient and day care facilities

It should be noted that in some hospital systems the trend away from the maximum security type of facility was well on its way before the introduction of the drugs California has been one of the leading states in this trend toward minimum security hospitals with well-designed and planned wards and adequate provision for recreation.

The exact nature of future building requirements cannot, at this time, be accurately predicted. Dr Denber indicated that, although there will always be a need for mental hospitals, the future plant will very likely be composed of small units of several hundred patients, and that the entire structure will change with most of the patient load going to outpatient clinics. Dr. Porterfield, Director of Ohio's state department, feels that large capital expenditures should not be planned until it is

known whether the drugs will cause any revolutionary changes in building requirements. Because it seems likely that many persons now treated in hospitals may in the future receive treatment in outpatient clinics, he advocates a "wait and see policy" now rather than a large-scale building program involving heavy capital outlay expenditures

The problems of hospital construction in California differ from those in other states largely as a result of California's rapid population growth in relation to the population growth in other states However, in view of the evidences of a trend towards increased utilization of outpatient clinics for the treatment of the mentally ill, heightened by the use of the drugs, the committee feels that major building expenditures should be postponed until this trend is further understood and evaluated.

RESEARCH

That expansion of research in the entire field of mental illness is of prime importance is widely recognized. Although one-half the hospital beds in the country are occupied by the mentally ill, far less is known about mental than physical illness; major questions relating to the causes, means of prevention, diagnosis and treatment remain largely unanswered. Governor Robert B. Meyner of New Jersey, in his Budget message on March 21, 1955, dramatized the lack of research in this field when he pointed out that while expenditures for research amounted to only $4.75 per mentally ill patient they amounted to $44.90 per polio patient and $25.60 per cancer patient in 1951.

In 1954 the National Governors' Conference on Mental Health recommended that 10 percent of all public mental health budgets be devoted to research and allied training programs. According to Mike Gorman, Executive Director of the National Mental Health Committee, this would mean an expenditure of about 100 million dollars per year; during the Fiscal Year 1956-57 he estimates total research expenditure will amount to about one-third of the recommended amount.

Because of the rapid acceptance of the new tranquilizing drugs for treatment of the mentally ill, not only for patients in large mental hospitals, but also for those persons under treatment in outpatient psychiatric clinics or under the care of private psychiatrists, and general practitioners, the need for additional understanding of the drugs is strikingly apparent. As indicated elsewhere in this report, many questions as to the actions, effects and ultimate value of the drugs remain unanswered. Scientific evaluation of all facets of their use—from the determination of the type patients to be benefited and the extent and intensiveness of drug treatment, to the effectiveness of such treatment in both the short and long run—is needed.

A number of national governmental agencies receive appropriations for research in mental health, portions of which are currently being devoted to pharmacological and biochemical investigation. The Veterans Administration has recently initiated a controlled study of the drugs One of the most extensive research programs is that being conducted by the U. S. Public Health Service through the National Institute of Mental Health at Bethesda, Maryland. In addition a number of private foundations, notably the Ford Foundation, are providing funds for research.

During the past 5 to 10 years an increasing amount of experimentation with drugs and chemical compounds has been directed towards finding a physiological basis for mental illness. An important aspect of this question is being investigated at Galesburg State Research Hospital in Illinois where Dr. Harold Himwich is engaged in a 10-year project to develop a chemical map of the brain. A number of studies are also being conducted to determine whether or not the schizophrenic differs chemically from the normal person. Particularly important in this respect has been the work with lysergic acid and its schizophrenic-

inducing action at such instructions as Rockland State Hospital in New York.

The values of conducting research in state mental hospitals themselves (in contrast to research in universities or in facilities isolated from mental patients) were frequently pointed out to the committee. Many of the most significant advances, not only in the use of the new drugs but in all areas of psychiatry, are reported to have originated in large state or federal hospitals. According to Dr. Henry Brill, the advantages of having research units in the individual hospitals included:

1. Improvement in atmosphere or "tone" of the hospital and staff morale.
2. Stimulation to staff to keep informed of new developments and new forms of therapy in the field thus improving the level of treatment.
3. An aid to personnel recruitment in the hospital.

Dr. Brill stated in a letter to the committee on December 14, 1956:

> "We believe that a research unit has a very stimulating effect on the academic aspects of a hospital and, furthermore, at the present time when evaluation of new medications is such an urgent matter, it is a very useful thing to have a number of experienced research groups who can investigate various aspects of this problem. Research units, in the nature of their work, must keep in touch with the latest events in the world of psychiatry and because of their position in the hospitals, they retain a clinical orientation and bring to the hospitals the benefits of their reading and their personal contacts."

Since one of the main objectives of research is to find effective ways to cure the mentally ill and since the great majority of psychiatric patients are in large state hospitals, it seems apparent that there should be adequate provision for the conduct of research in these hospitals. As Dr. Brill put it, "Research has to be done where the patients are."

NEW YORK PROGRAM

Under a program coordinated at the state level, New York has made provision for research units at several of its hospitals. The general plan provides for appointment of a staff psychiatrist as director of research for each institution with a staff of varying size appointed to work with him. The annual research budget for the units ranges from $50,000 to $175,000.

For the Fiscal Year 1956-57, the operating budget for New York's Department of Mental Hygiene is approximately $163,000,000, of which $2,300,000, or 1.5 percent, is earmarked for research. This amount is augmented by an estimated $450,000 from grants-in-aid from nonstate sources. These figures, according to Dr. Brill, do not take into account additional research expenditures including such items as space, certain allocated services, or part-time activities by personnel who have service functions as their main responsibility.

CALIFORNIA

Several valuable studies have been conducted in California's state hospitals. For example, the studies on reserpine at Modesto State

Hospital, on miltown at Camarillo State Hospital, on chlorpromazine and reserpine at DeWitt State Hospital. Langley Porter Clinic is making a continuing study of the drugs. These and other studies are adding to knowledge of the part of drugs in the treatment of the mentally ill. However, because, with the exception of Langley Porter, only minimal provision has been made for research facilities and personnel, research projects have been limited in scope; work has had to be done on employee's own time or at the expense of the treatment program. Further, there has been little or no state-wide coordination of the various studies or effective exchange of findings.

The Legislative Auditor in his 1956 Report to the Joint Legislative Budget criticized the Department of Mental Hygiene for neglecting to carry out studies of the tranquilizing drugs, during the 1955-56 Budget Year when special funds in the amount of $48,300 were provided for the purchase of the drugs. He stated:

> "The hospitals were informed by the central office *after* the beginning of the fiscal year that a report regarding results of use of the new drugs should be submitted. No further direction was provided The state hospitals were not informed that this should be treated as a research project, no planning was done or coordination provided, and no provision was made for standards, controls, or uniform reporting. As a result 'study' at most of the hospitals was limited to recording and reporting a few subjective observations."

Recognizing the need for additional research in California in the field of mental health, plans are now being formulated for a coordinated long-range program. Funds were appropriated in the amount of $33,786 for a director of research and an office staff for the State Department of Mental Health, for a research program to become operative on July 1, 1956. This is the initial step in the department's long-range research program which, according to present plans, will eventually consist of:

1. A headquarters staff for direction, coordination, planning, evaluation of results and distributing pertinent information to the department's facilities and personnel.
2. A research team in each hospital
3. The research staff of the hospitals would carry on appropriate research and evaluation projects. Funds would be requested from private and public sources for additional research projects. In addition, funds would be requested annually in the state budget for carrying on other projects for which outside funds may not be obtained.

Since California is spending increasing amounts of money both for the treatment of patients and for construction of new facilities and since the trend can only be reversed by finding more efficient and economical ways of caring for patients or of preventing mental illness, it is apparent that California's program of research in mental health, including studies relating to the tranquilizing drugs, should be expanded as rapidly as possible.

APPENDIX A

HOSPITALS AND DEPARTMENTS VISITED BY SUBCOMMITTEE

Date	*Place*	*Persons Interviewed*
Friday, July 20	Topeka State Hospital Topeka, Kansas	Alfred Paul Bay, M.D. Superintendent Paul E. Feldman, M.D., Director of Research and Education William Simpson, M.D., Clinical Director
	Veterans Administration Hospital	R. C. Anderson, M.D., Manager
	Menninger Clinic	H. I. Schlessinger, M.D. D. H. Miller, M.D.
Monday, July 23	Longview State Hospital Cincinnati, Ohio	Douglas Goldman, M.D., Clinical Director Robert A. Hames, M.D., Superintendent
Tuesday, July 24	Ohio Department of Mental Hygiene and Correction Columbus, Ohio	John D. Porterfield, M.D., Director L. P. Ristine, M.D., Acting Commissioner, Division of Mental Hygiene
Thursday, July 26	Manhattan State Hospital New York, New York	John H. Travis, M.D., Director Herman C. B. Denber, M.D., Director of Psychiatric Research
	Narcotics Division, New York City Police Department	Joseph L. Coyle, Inspector
Friday, July 27	Bellevue Psychiatric Hospital New York, New York	John Frosch, M.D., Acting Superintendent (and staff)
Monday, July 30	Rockland State Hospital Orangeburg, New York	Alfred M. Stanley, M.D., Director Nathan S. Kline, M.D., Director of Research and Staff
Tuesday, July 31	New York Department of Mental Hygiene Albany, New York	Henry Brill, M.D., Assistant Commissioner
Wednesday, August 1	Spring Grove State Hospital Baltimore, Maryland	Albert A. Kurland, M.D., Director of Medical Research M. Smith, Chief of Nursing
Thursday, August 2	Maryland Department of Mental Hygiene Baltimore, Maryland	Clifton T. Perkins, M.D., Commissioner
Friday, August 3	St. Elizabeth's Hospital Washington, D. C.	Winfred Overholser, M.D., Superintendent Jay L. Hoffman, M.D., First Assistant Physician
May 9, 1956	Veterans Administration Hospital Palo Alto, California	John J. Prusmack, M.D., Manager Leo Hollister, M.D., Chief of Medical Services Roy Hubbs, M.D., Director of Clinical Services

Date	*Place*	*Persons Interviewed*
May 10, 1956	Mendocino State Hospital Talmage, California	Daniel Lieberman, M.D., Superintendent and Medical Director William O'Brien, M.D., Assistant Superintendent, Medical Services Andrew G. Robertson, Assistant Superintendent, Business Services Gertrude Elliott, Hospital Administrative Assistant and Personnel Officer
May 11, 1956	DeWitt State Hospital Auburn, California	G. D. Tipton, M.D., Superintendent and Medical Director Albert A. Almada, M.D., Director of Clinical Services Waldo H. Pate, M.D.
May 12, 1956	Langley Porter Clinic San Francisco, California	Karl M. Bowman, M.D., Medical Superintendent Alexander Simon, M.D., Assistant Medical Superintendent Lester H. Margolis, M.D.
November 1, 1956	Camarillo State Hospital Camarillo, California	F. H. Garrett, M.D., Superintendent and Medical Director Louis R. Nash, M.D., Assistant Superintendent, Medical Services Philip May, M.D., Director of Clinical Services Mary A. Sylvia, Superintendent of Nursing Services Albert Olsberg, Food Administrator
October 30, 1956	Meeting with Walter Rapaport, M.D., Director, Department of Mental Hygiene	

APPENDIX B

PERCENTAGE CHANGE IN RESIDENT PATIENT POPULATION IN PUBLIC MENTAL HOSPITALS

(Difference at End of Years 1955 and 1956 *)

State	Percent difference	State	Percent difference
District of Columbia	—5.8	Michigan	—1.4
Kentucky	—5.6	Illinois	—1.3
North Dakota	—5.4	New Jersey	—1.2
New Hampshire	—4.9	Rhode Island	—1.2
Massachusetts	—4.7	Minnesota	—0.8
Vermont	—4.6	Kansas	—0.6
Utah	—4.3	Maine	—0.5
Indiana	—4.0	New York	—0.5
Iowa	—4.0	Nevada	—0.2
West Virginia	—3.8	Louisiana	—0.0
Montana	—3.1	California	+0.3
Texas	—3.1	Florida	+0.5
Arizona	—3.0	Wisconsin	+0 5
Washington	—2.8	South Dakota	+0.6
Colorado	—2.7	Delaware	+0.7
Idaho	—2.7	Alabama	+1.1
Arkansas	—2.5	Georgia	+1.2
Pennsylvania	—2.4	Mississippi	+1.2
Virginia	—2.4	Wyoming	+1.7
Missouri	—2.2	Oregon	+1.9
Oklahoma	—2.2	New Mexico	+2.0
Ohio	—2.1	South Carolina	+2.6
North Carolina	—1.7	Maryland	+4.5
Connecticut	—1.5	Tennessee	+5.7
Nebraska	—1.5		

* SOURCE National Health Committee (from "Selected Tables on Resident Population, Finances and Personnel in State Mental Health Programs"—December, 1956, Interstate Clearing House on Mental Health, Council of State Governments)

APPENDIX C

REPORTS FROM SELECTED CALIFORNIA HOSPITALS RELATING TO THE TRANQUILIZING DRUGS

Mendocino State Hospital, Daniel Lieberman, M.D., Superintendent and Medical Director, June 4, 1956

A summary of our opinion regarding the use of the tranquilizing drugs in a state mental hospital at this time is as follows:

These drugs appear to be quite useful in the treatment of the acute alcoholic and narcotic state, especially in the control of withdrawal symptoms. The use of the drugs in the long-term treatment of the alcoholic or narcotic addict is extremely questionable. For the most part, alcoholic and narcotic addicts admitted to our hospital have already recovered from the acute phase of the illness.

In regard to the acute psychiatric illnesses, we find the drugs to be of value in the treatment of the symptoms of the agitated and disturbed patient. The acute catatonic schizophrenic also often responds favorably to the drug. It should be remembered, however, that in the acute psychiatric illnesses we have had favorable responses in about 90 percent of the patients prior to the use of the drug. It is not possible to ascertain which patient will respond most rapidly with any specific treatment procedure. The important thing is to understand the environ-

mental and personality factors that contribute to the onset of the acute illness and to take the necessary steps to eliminate these factors to as great an extent as possible and to prevent them from recurring.

In summary then, in the acute psychiatric illnesses the tranquilizing drugs have been of value in controlling symptoms of agitation and hyperactivity so that the physicians and nursing staff can proceed with the treatment of the underlying factors causing the disease.

For the most part at this hospital the tranquilizing drugs have been used in the treatment of the chronic mentally ill person, that is, one who has been hospitalized for a psychiatric illness for over a year and who presents chronic or recurring symptoms of agitation and disturbance. In this group we can say with assurance that approximately 40 percent are definitely and substantially improved in their behavior. For the most part, however, these individuals do not recover from their mental illness as a result of taking the drug and in only a few cases have we been able to discharge these persons as recovered or improved. Many such patients, however, may with further treatment of a rehabilitative nature, be placed in a supervised setting outside of the hospital or gain further improvement with other treatment.

We have been using the tranquilizing drugs at Mendocino State Hospital for approximately one and one-half years. It is interesting to note that, while Mendocino State Hospital has one of the highest therapeutic release rates in the country, that this figure began climbing about two years ago and was before the use of the tranquilizing drugs. This points out the fallacy of ascribing any statistical data that is accumulated solely to the action of the drugs when the other variable factors do not remain constant.

There is no doubt in my mind that the indirect effects of the drug have been far more valuable than the direct effect in our total therapeutic program. For example, were it not for the dramatic impact of the drug on the public at this time, fine committees, such as yours, would not be as interested in the problem of the treatment of the mentally ill. Furthermore, the heralding of the successful results of the drugs, unscientific as it may be, has caused a change in attitude among both lay and professional groups regarding the prognosis of the mentally ill person. The more hopeful attitude has in itself, contributed considerably to our progressively successful treatment program.

In my opinion the most significant single factor contributing to the success of our treatment program has been the increased numbers of professional personnel, particularly physicians, working with the patients. As we gain additional medical personnel resulting in more intensive therapy, research, and increased knowledge we can anticipate further gains. It is the belief of many that as our knowledge of the mental disease process increases that tranquilizing drugs may one day be obsolete. However, it is my opinion at this time that these drugs are of definite value in our armamentarium and that we should continue to use them when it appears indicated. Continuous evaluation of an objective type is necessary. Experiments utilizing the "double blind" procedure should be used to a greater extent. The ultimate place of these drugs in our treatment program will only be determined after the test of time.

Langley Porter Clinic, Karl M. Bowman, M.D., Medical Superintendent, June 8, 1956

Available evidence provides hope that with chlorpromazine to a considerable extent, with reserpine to a lesser extent, and much less so with other ataraxics, psychiatric treatment can be carried out at a much higher level but in order to maintain treatment at this new level, more funds for personnel and equipment and buildings will be required There will be a special need for the total care of the patients, including his after care following discharge from hospitalization More stimulus will be provided for meaningful research and, as with all advances in medical treatment in the past, the cost of medical care will be increased rather than reduced Any plans for broader utilization of the newer drugs in our state hospital system should take these factors into consideration and should be implemented by provisions to meet them

Metropolitan State Hospital, Robert E. Wyers, M.D., Superintendent and Medical Director, December 11, 1956

The tranquilizing drugs have been used in this hospital since January, 1955 The first supplies of the drug were furnished by the drug manufacturers for trial use and evaluation In November, 1955, the state-purchased drugs became available We have continued to use this supply plus an additional amount of the drugs furnished privately by relatives of patients and by drug manufacturers

The following figures indicate the extent to which the tranquilizing drugs are used Patients receiving drugs on October 31, 1956, are listed as follows:

Patients receiving Thorazine	
State supply	180
Private supply	27
Total patients on Thorazine	207
Patients receiving serpasil	
State supply	182
Private supply	3
Total patients on Serpasil	185
Patients receiving Miltown (Meprobromate)	
State supply	7
Private supply	5
Total patients on Miltown	12
Patients receiving Sparine	
State supply	2
Total patients on Sparine	2
Patients receiving Thoraserpine	
Private supply	32
Total patients on Thoraserpine	32
Total patients on tranquilizing drugs	338

Total patients in hospital 2,248. 338 patients = 15% of total population

As of October 31, 1956, approximately 482 patients have completed treatment with tranquilizing drugs

Results of the Use of Tranquilizing Drugs

A tabulation of the results of a series of 188 patients (out of the above-mentioned total of 338 patients) gives an approximate idea as to the results obtained

Response of patient to drug	*Number of patients*	*Percentage*
Marked improvement	62	33%
Moderate improvement	79	42
Slight improvement	12	6
No improvement	27	14
Too early to evaluate	8	5
	188	100%

In the series of 188 patients mentioned above, 50 are described as having been assaultive, combative, and destructive to the point that they were very difficult problems in management. After being treated with tranquilizing drugs, 39 of these patients showed improvement, and 11 patients showed no improvement.

The use of the tranquilizing drugs has helped to reduce the amount of electroshock treatments given in the hospital The electroshock has also been reduced by other important factors as shown on the following tabulation. As a result of the reduction in the use of shock treatment, the number of fractures (as a complication of shock treatment) has been greatly reduced.

Use of Electroshock Therapy

The use of electroshock therapy has been gradually reduced over the last three years. Shock treatment has been reduced by use of: (1) tranquilizing drugs; (2) improved hospital treatment program; (3) more doctors due to growth of residence training program; (4) fewer complications due to increased use of anectine.

	Number of ECT per month	*Fractures or complications*
Medical staff increased		
July, 1953	2,364	2
August	1,781	0
September	1,768	0
October	1,327	3
November	1,609	3
December	1,279	1
January, 1954	1,590	1
February	1,154	2
Started use of anectine on occasional patient		
March	1,467	5
April	1,346	1
May	1,370	2
June	1,009	2
Totals	18,064	22
Development of residence program		
July, 1954	1,111	0
August	1,365	1
September	1,382	1
October	1,542	1
November	1,748	1
December	1,359	2
Started use of tranquilizing drugs supplied by drug companies for evaluation		
January, 1955	825	0
February	868	1
March	916	0
April	997	2

	Number of ECT per month	*Fractures or complications*
Anectine used in more routine fashion		
May	789	0
June	631	2
Totals	13,533	11
July, 1955	677	0
August	653	0
September	604	0
October	521	1
Started use of state-purchased drug supply		
November	578	0
December	730	3
January, 1956	599	0
February	476	0
March	419	0
April	373	1
May	298	0
June	324	0
Totals	6,252	5
July, 1956	448	0
August	450	0
September	328	1

The use of tranquilizing drugs has not changed the number of reported incidents (fights, injuries, etc.). The figures are as follows:

July 1, 1954, to June 30, 1955	
Incidents on female wards	883
Incidents on male wards	516
Total	1,399
July 1, 1955, to June 30, 1956	
Incidents on female wards	804
Incidents on male wards	594
Total	1,398

The above figures may be explained by the practice of bringing patients out of seclusion and restraint at an early date after being placed on tranquilizing drugs.

You will observe by the above that we consider Chlorpromazine and Reserpine to be helpful adjuncts in the therapy treatment for the mentally ill. The most spectacular results appear to be in the agitated, excited and combative patients. In the majority of these patients showing excitement and anxiety we see improvement. They become more manageable and more receptive to other therapeutic programs. In other words, they are more accessible to psychotherapy and it is easier to get them to participate in other respects. It is difficult to clearly delineate the exact effectiveness of this type of therapy in a program being improved in other ways to give the patient an opportunity for response.

It is our opinion that these drugs will continue to be used in the treatment of the mentally ill. As to just what part they will play it is hard to evaluate. It depends somewhat on the refinement of the drugs and the research they are subjected to.

Patton State Hospital, O. L. Gericke, M.D., Superintendent, December 13, 1956

The program at our hospital regarding the use of the tranquilizing drugs, including Chlorpromazine and Reserpine, is being handled on a conservative basis. We have purchased some tranquilizers from budgeted funds, and a number of drug houses have donated various amounts of tranquilizing drugs. We presently have a small research program underway, both for tabulation and for evaluation of the effects of various tranquilizers.

We first began to use these drugs at our hospital in 1952. Currently, $21,150 is in the 1956-57 budget for the purchase of tranquilizing drugs. Together with donations from drug houses, we estimate that during this fiscal year we will treat 10 percent of our patients. Use of these drugs is concentrated to a great extent on the receiving unit and the intensive treatment unit because of our belief that, generally, the most effective use of available supplies is through treatment of the newly admitted patient. These patients, if considered as optimum subjects for use of the drugs, may remain on this regimen for three months.

While we cannot, at this stage of our experience, make a categorical reply as to the type of patients who will benefit most from the tranquilizers, it is our impression that the tranquilizers are most useful for excited, hypertensive patients, with the best prognosis for the schizoaffective, schizophrenic, the excited catatonic, and the undifferentiated schizophrenic.

Some program evaluation is being made with the paranoid. The acutely disturbed, excited, recently mentally ill, appear to react best to Chlorpromazine, as do some of the paranoid group. Some of the longer range illnesses, featuring withdrawal, appear to respond better to Reserpine. Members of our medical staff tend to consider Thorazine as the drug of choice in paranoid disorders. Chlorpromazine, which appears to have more effective action than Reserpine, is more expensive and is rationed to the admissions and intensive treatment unit, with small amounts spread as available to the long-term patients. It should be noted that Reserpine, while reasonably available and less expensive, is being given considerable reappraisal because of undesirable side effects noted in its use. It appears that there are certain contraindications to the use of this drug for the regressed and retarded.

As to the future use of these drugs in our hospital, we consider that they are an indispensable part of the armamentarium and that they will continue to play a most important and expanding part in the treatment of the mentally ill as research and experience make more knowledge available. We are constrained to point out that our experience at the present time is inconclusive; the tranquilizer may be considered a type of restraint, a chemical form of restraint which calms the patient, helps keep him out of conflict and trouble areas, and lowers his anxiety level. If *nothing* else, such reaction permits the patient's own recuperative powers to take over—it must be borne in mind that tranquilizers do not change the patient. Certainly it is of great importance if use of a tranquilizer will maintain any remission obtained through other techniques, such as electroconvulsive or CO^2 therapy.

Continued successful experience with these drugs will, in our opinion, require significant changes in the future operations of mental hospitals Even if there is no increase in release rate, there probably will be less emphasis on security and indestructibility of furniture and more on comfort and beauty of physical surroundings. This also will require more and better trained rehabilitation therapists, psychiatrists, psychologists, industrial therapists. More volunteer activities will be needed There will be less patient labor available to operate the hospital, requiring more paid staff If there is an increasing release rate, more out-patient treatment facilities will be needed, and after-care, day-care, and night-care facilities must be available to take advantage of these gains Research is under way and much more is needed. We will continue to study, observe and catalog our findings, and correlate them with other workers in the field of psychiatry

DeWitt State Hospital, Albert A. Almada, M.D., Director of Clinical Services, June 29, 1956

It is our feeling that the tranquilizing drugs have not been tested for a sufficient time so that we may make a definite evaluation of their effect No doubt, it will require at least a five-year test period in order that we may arrive at a valuable conclusion regarding the importance of tranquilizing drug therapy. It is our opinion that whatever amounts of tranquilizing drug therapy have been administered in this hospital does not materially influence the patient release rate We also feel that the drug has not been available for sufficient time to allow proper evaluation of its effects Probably after a four or five year therapeutic test of tranquilizing drugs we will have valid information regarding the value of this kind of medication

Veterans Administration Hospital, Palo Alto, John J. Prusmack, M. D., Manager, June 4, 1956

Our medical staff feels that none of the tranquilizing drugs can be considered a cure of themselves Drugs of this type make the patients less combative and less irritable which in turn makes them more responsive to psychotherapy and to the hospital treatment activities. In fact, rather than diminishing the need for more personnel and capital expenditures we find that there is an increased requirement This has surprised us, in a way because we thought that our tranquilized patients could soon move out of the hospital and back to the community. Although some patients did this, the vast majority required more personal attention from our medical and nursing staff, treatment activities had to be more individualized in our physical medicine rehabilitation and social service programs, and extra-medical services, such as patients' funds, laundry, clothing supplies, registrar and secretarial, etc., had to be increased

At present we have had to have our operating budget increased and a new 1,000-bed NP hospital is in the planning stage to be completed by 1959, not only because of increased patient load but because our present facilities are inadequate to handle the increased treatment requirements for our patients with us now which has been brought about by the use of these drugs.

APPENDIX D

REPORTS FROM OTHER STATES RELATING TO THE TRANQUILIZING DRUGS

Topeka State Hospital, Alfred Paul Bay, M.D., Superintendent, September 4, 1956

The introduction of tranquilizing drugs at the Topeka State Hospital has been carried out over the past two years on a very extensive scale. However, in contrast to the methods of introduction used in some other hospitals, our studies have been very cautious, with the emphasis on careful control and evaluation of results. As a result of our use of these new drugs, we would conclude:

(1) That the therapeutic success brought about by the introduction of most of these drugs is inversely proportional to the general level of psychiatric care prevailing in the setting where the drug is introduced; that is, where a good program is in progress the introduction of the new drugs will contribute only modest gains in therapeutic success; where a clinical program is poor or limited, the introduction of the antaraxics may produce dramatic improvement in long neglected patients.

(2) Even those most skeptical of the true value of the tranquilizing drugs will agree that they are physiologically active agents in spite of the fact that their mode of action is not completely understood.

(3) At the present time we consider the use of some of the tranquilizing drugs as indispensable.

(4) We suspect that new and improved compounds will soon become available, which we will want to use as they appear.

(5) The introduction of the tranquilizing drugs and the increased responsiveness of the patients thereby produced will make it necessary for us to plan for increased numbers of ward personnel and adjunctive therapists. A responsive patient population requires more personnel than does a regressed and apathetic one.

Veterans Administration Hospital, Topeka, R. C. Anderson, M.D., Manager, September 21, 1956

This hospital has an average population of about 800 patients for whom the tranquilizing drugs might be considered indicated. Approximately 50 percent of this patient population might be classified as of a continued treatment (chronic) type. We began using the tranquilizing drugs a little over two years ago, and our earliest use of them was intended to determine, if possible, the types of cases and symptoms in which they were most useful. We established several research projects to this end, and in terms of the primary objective, discovered very little. That is, it seems impossible to predict what type of symptomatology may respond, or fail to respond to these drugs. The exception to this statement is the symptom of depression, which does not respond, and is often made worse by the use of these drugs.

Since these initial studies in 1954 we have used these drugs on a large percentage of our patients, being guided in their applicability by the response of the individual patient. I would estimate that ap-

proximately 75 percent of the group of 400 patients noted above have received and/or are receiving one or more of the drugs of this type. In this latter group of patients particularly we are able to report an improvement in the total hospital adjustment on the part of practically all, and improvement of individual symptomatology following no predictable pattern, on the part of many.

At the present time we are spending approximately $30,000 per year for these drugs, and in considering this figure, it should be understood that, for the most part, this does not replace any other cost, but is an addition to an existing budget It should further be considered that in many hospitals and particularly those in which these drugs may prove most useful, if their maximum value is to be obtained, the cost is greater than the drugs themselves. This is because advantage cannot be taken of the effect of the drugs for the most part without additional personnel in many categories

It might interest you to know that the Central Office of the Veterans Administration is initiating a most ambitious research project concerning these drugs, with the use of elaborate blind controls. I should imagine it will be at least two years before any results of this study are available

Michigan Department of Mental Health, V. A. Stehman, M.D., Deputy Director, July 31, 1956

It is difficult to make a detailed evaluation of the effect of the new drugs at this time. Certainly it is obvious that the new tranquilizing drugs will play an increasingly important role in treatment programs in our mental hospitals. With the use of these drugs, we have significantly reduced the numbers of somatic treatments such as electroshock, and there has been an almost complete discontinuance of the use of those hydrotherapy techniques of sedative packs and tubs The problem of management of the acutely disturbed patient has also been greatly minimized as the result of the use of these drugs. Detailed data in these areas are included in our Research Report No. 23 which we are sending you In regards to the cost, we have a $250,000 appropriation for this fiscal year and it is already apparent that this will not be sufficient to fully meet the needs in all of our institutions. I do not think we can make any accurate prediction as to the ultimate cost of these drugs for at least two more years. Because of the difficulty in budgeting for them, we are requesting a special drug fund in the central office from which we then allocate amounts to the individual hospitals. We hope that by the Fiscal Year 1958-59 we will have enough information so that the individual hospitals can include the cost of the drugs in their budgets.

We have had such little experience with the use of drugs in the out-patient clinics that I can make no statement concerning its efficacy there, insofar as the Michigan program is concerned. From my own experience, however, and talking with physicians throughout the country who are directing out-patient clinic programs, it appears that the drugs are a most helpful adjunct to them in treatment on this level.

Manhattan State Hospital, Herman C. B. Denber, M.D., Director of Psychiatric Research, September 11, 1956

The following is a brief outline of the current situation at Manhattan State Hospital with regard to the use of new chemotherapeutic agents in psychiatry:

Drugs were first put into use in September, 1954, and within two months a large scale project was begun. This continued on an investigational basis until December, 1955. There was an average number of approximately 950 patients on treatment daily with as many as 1,000 patients at any given time. We were successful in treating most of our patients with lower doses (300 mg. daily) of chlorpromazine. As a result of the mass application of this drug at the hospital, a most unusual transformation has taken place. Back wards have disappeared. Some patients who were unresponsive to electroshock, insulin shock or lobotomy, have improved and been discharged from the hospital. Psychosurgical procedures are no longer in use in this hospital Electroshock and insulin coma treatment have been markedly reduced. As a result of the increased availability of patients for psychotherapy, a special staff of seven psychiatrists has been assigned solely to see patients for this type of treatment. The occupational, recreational and music therapies have been markedly increased. Destruction of materials, clothing, accidents have all shown sharp falls. The number of patients in restraint has fallen to one per thousand. It is most unusual now to see a patient in a camisole.

Our present experience indicated that chemotherapy will eventually become the accepted means of treatment in psychiatric hospitals. Tentative experience indicates that long term intensive follow-up will be necessary to keep these discharged patients from returning to the hospital.

Rochester State Hospital, C. F. Terrence, M.D., Director, July 24, 1956

We have experimentally used a number of (ataraxic drugs) but found that chlorpromazine and reserpine continue to produce the best results. We have used about six or seven times more chlorpromazine than reserpine since this drug appears to produce much more rapid results.

Our original program began in early 1954, but large numbers were not treated until towards the end of the year. The obvious effect of the drug treatment when combined with all psychotherapeutic facilities available is shown dramatically in the following table:

Date	*Admissions*	*Patients in hospital*	*Patients on convalescent care*	*Patients on family care*
3/31/52	883	3,476	443	69
3/31/53	1,057	3,574	434	75
3/31/54	1,219	3,639	448	80
3/31/55	1,155	3,752	523	89
3/31/56	1,129	3,681	679	98
(7/23/56	--	3,624	721	110)

We began to early realize the potentialities of these drugs, and particularly chlorpromazine, in preventing a relapse of patients on convalescent care and also in the treatment of patients prior to hospitali-

zation in the hope that this could be prevented. At this hospital we average over one thousand patients on drug treatment in the hospital and approximately 400 convalescent care patients who are seen regularly by an augmented social service staff and additional psychiatrists.

Our follow-up studies would indicate a reduction in the relapse rate to that of one-third to one-sixth of the usual or expected rate of non-treated patients. At the present time out of the 721 patients on convalescent care, 372 have continued to take chlorpromazine and 119 have been discontinued for various reasons. It has been found difficult in many of the latter group to maintain such patients on such treatment, particularly when they are symptom free Our feeling is that such patients should receive drug treatment for a period of at least one year after release, particularly in those patients who have had a chronic psychosis or one which has shown frequent relapes.

New York Department of Mental Hygiene, Henry Brill, M.D., Assistant Commissioner, December 14, 1956

Tranquilizing drugs have been used on a large scale in the Department of Mental Hygiene in New York State since January 1, 1955, but in the preceding year about 4,000 patients were treated, most of these with chlorpromazine, and there was some small pilot work which began toward the end of 1953.

At the present time, in the state hospitals tranquilizing drugs are being used in approximately 25,000 of a total of 92,000 patients.

The cost of drugs during the Fiscal Year 1956-57 will be $1,500,000; this is out of a total operating budget of about $163,000,000.

The cost per patient day varies so enormously that a figure is meaningless but it may be calculated at about 25 cents per day on chlorpromazine and in the case of reserpine it is somewhat higher during the heavy injection period and becomes lighter later in the course of treatment. If injection chlorpromazine is used, the cost becomes higher.

Since the use of large-scale drug therapy the release rate increased slightly over 20 percent and has maintained the new level ever since. Because of the new level of releases, the number of patients on convalescent care from the state hospitals stands today at 13,048 which may be compared with 9,071 on March 31, 1954. The rate of return to the hospital, expressed as a proportion of the number of patients released, remains approximately the same as it was originally, although for a number of months it was definitely lower This figure describes the total population and is not limited to the group of patients who receive treatment.

The outpatient program, that is the program for patients who were released from the hospital on convalescent care, is operated by the Department of Mental Hygiene in aftercare clinics and here the system of supervision is being developed continually We are not entirely satisfied with it as yet and it will probably be some time before it is fully effective but we have already seen, in those locations where the organization is now operating, what seems to be an improvement with regard to return to the hospital This is not at all statistically verifiable at the present time.

The Department's research program for the current year has a budget of about $2,300,000 but, in addition, there is considerable nonbudgeted expenditure for research and this includes such items as space, certain allocated services and certain part-time activities by personnel who have service functions as their main responsibilities In addition, grant funds account for about $450,000 for the year. We believe that a research unit has a very stimulating effect on the academic aspects of a hospital and, furthermore, at the present time when evaluation of new medications is such an urgent matter, it is a very useful thing to have a number of experienced research groups who can investigate various aspects of this problem. Research units, in the nature of their work, must keep in touch with the latest events in the world of psychiatry, and because of their position in the hospitals they retain a clinical orientation and bring to the hospitals the benefits of their reading and their personal contacts Research is carried out in both the organic and the psychological aspects of mental illness since, at the present time, we have no clear proof of the preponderance of one over the other.

New York Department of Mental Hygiene, Henry Brill, M.D.

(Paper delivered at American Public Health Association, Atlantic City, November 15, 1956. Forwarded to committee on December 14, 1956, by Dr. Brill.)

In 1954 a series of pilot studies with chlorpromazine and reserpine were carried out in the New York State mental hospitals and after a favorable experience with some 3,000 cases it was decided to apply this method of treatment on a wide scale During the next fiscal year, April, 1955, to March, 1956, over 30,000 patients were given a course of chlorpromazine or reserpine and at the end of that period the mental hospital population had been reduced by 500, in contrast to the gain of 2,500 for the previous year and to the average increase of 2,000 per year for the decade before The change was the most abrupt recorded, at least, since 1909 Present indications are that the volume of drug therapy for 1956-57 will somewhat exceed that of 1955-56 and that over-all population figures will continue favorable, although it is still too early to make exact estimates.

To assume that the sudden change in population trend was actually brought about even in part by the drug program is open to the usual objections against post hoc reasoning, but we have as yet been unable to identify any other simultaneous change in conditions which could satisfactorily account for it. Comparing the figures for 1954-55 with those for 1955-56, we were able to establish several facts rather easily:

a There was no significant increase of deaths
b. There was no decrease of total admissions.
c There was no decisive change in the type of admissions. The number of schizophrenic admissions decreased and there was some increase in the senile and arteriosclerotic cases but this was not sufficient to explain the population change Similar fluctuations in admissions of various categories of patients had occurred in the past without affecting the relentless increase of total population.
d There was a 21 percent increase in the number of cases returned to the community and this increase seemed to account for the most of the observed change in population trend.

The next step in the evaluation of results was to determine the distribution of the improvement in releases among various categories of population. Was this more marked in the groups where clinical experience showed the greatest advantage for the drugs? If the improvement was due to some cause affecting releases generally, one would expect that newly admitted patients would be at least as strongly affected as those of longer hospitalization and that certain diagnostic groups, such as the alcoholic patients, would benefit equally with schizophrenics.

Comparing the final population of 1954-55 with that of 1955-56, we found an increase in the number of alcoholics remaining in hospitals and a marked increase in the senile and arteriosclerotic group while, on the other hand, schizophrenics decreased by 832 and among them the gain in releases was far greater among the cases of several years of hospitalization than among the newly admitted cases. While 431 fewer schizophrenic cases were admitted in 1955-56 than in 1954-55 the number released was 1,254 greater, much of the difference being drawn from the less recent admissions. For the previous 10 years the number of schizophrenic, alcoholic, arteriosclerotic and senile patients in hospitals had increased each year.

Examining a very large amount of available statistics shows that in 1955-56 there was a small and somewhat variable degree of improvement in release rates for several diagnostic categories other than dementia praecox, and the increase of each in the hospitals was slower in 1955-56 than in 1954-55. Alcoholics, for example, increased only 51 as compared with 202 the previous year and the senile-arteriosclerotic group gained 441 as compared with 567 but the schizophrenic group showed by far the most striking improvement, losing 832. We cannot rule out drug therapy as a factor in the improvement of the figures for nonschizophrenic cases, since a material number of them received medication, but it is safer to assume that the small improvement in the alcoholic and senile-arteriosclerotic categories was due to the operation of some general factor and that this also probably accounted for a part of the improvement in the schizophrenic category. The bulk of the change, however, is clearly not a general one but confined to certain special classes of patient and after a very careful analysis of all available figures for both years we are of the opinion that a very large share is to be attributed to the drug program. The results in schizophrenics who had two, three and more years of hospital life seem to correlate clearly with the fact that larger numbers of these cases have been able to be kept on long-term somatic therapy than ever before, and the striking responses seen in individual cases of this type tend to support the drug hypothesis.

One of the earliest and most important responses to large-scale drug use has been the tranquilization from which these drugs take their name. In October, 1954, before chlorpromazine and reserpine were being used in any significant number of cases, restraint or seclusion were being used for 23.2 per thousand of our patients. As drug therapy increased, the number diminished, first in those hospitals which first started this work and then in those which followed. By September, 1956, the restraint-seclusion figure had dropped to 6.4 per thousand, a 75 percent reduction of the departmental average for a number of years before.

If experience continues to confirm the type of observations outlined above, it seems that the use of these drugs will have a number of important implications with regard to the future of mental hospitals:

1. In planning for new facilities, a diminishing emphasis will be placed on security functions and disturbed services will be relatively small. Extensive and costly hydrotherapy installations appear to be outmoded since with drugs, electric shock and other forms of somatic therapy, disturbed patients can be treated more effectively and in incomparably larger numbers. The changed atmosphere of the wards has already been reflected in their furnishings, and in the future it will be possible to pay more attention to beauty and comfort and less to indestructibility. Layout of buildings will require less stress on continuous direct observation and the development of closed circuit television will reinforce this tendency.
2. Special arrangements for insulin shock and electric shock therapy still seem to be warranted and indications are that the drugs are an addition to these methods and not a replacement.
3. Laboratory services will have to be enlarged to care for the increased work involved in supervision of treatment with potent pharmaceuticals.
4. Personnel of all grades will have to be increased. The number of patients on somatic therapy in New York State hospitals is now 26,000, about 28 percent of the total population and almost six times what it was early in 1954. This calls for an increase of physicians, nurses and other ward personnel partly for direct supervision of treatment but in even larger measure to supply the various types of psychotherapy and activity therapy for which many patients are now made eligible. An expansion of the staff of occupational and recreational therapists as well as other groups involved in patient activities will also be required. The reduction of work resulting from control of disturbed behavior is far more than offset by the increased need for other services.
5. A greatly expanded training program for all categories of personnel will be required since it seems entirely unlikely that the increased number will be recruited directly at this time or in the foreseeable future.
6. As the therapeutic potential of the hospitals increases and as turnover of patients becomes more rapid, these institutions will less and less be considered a place of final disposition and will become more and more a part of a system of community health facilities. This will lead to a freer exchange of consultation and technical services with other community agencies and will require a far larger social service organization than has hitherto been the case.
7. As turnover of patients becomes more rapid, it is increasingly necessary that we secure quicker methods of reporting and analyzing data in order that there may be a feed-back of information in time to be of value in current hospital operations. Optimally

this should be so arranged as to permit comparison of the trend in any given hospital with state and national figures and with past records.

8. It seems that more and more hospitals will require as standard equipment a research unit which will be equipped and staffed to study a variety of problems and to take part in the evaluation of new therapeutic agents now appearing in such profusion.

9. The development of drug therapy has intensified a previous trend toward diminution of patient labor in mental hospitals. This involves chiefly the well-retained, partially-disabled-schizophrenic for whom such work is essential. The hospitals will have to replace them with paid help in kitchens, wards and other hospital locations since the population is coming to be increasingly made up of the fully disabled.

10. The immediate need for new hospital beds has not decreased, although we may now hope eventually to catch up with it. Viewed in total perspective the recent success with drug therapy appears almost trifling since the hospitals remain overcrowded, with obsolescence as a serious problem and with shortages of all types of personnel. If we are to secure the maximum of benefit from treatment methods now available and those likely to develop in the future, the defects will have to be remedied and the hospitals brought up to better standards.

SELECTED DATA OF MOVEMENT OF PATIENTS—NEW YORK CIVIL STATE MENTAL HOSPITALS—ALL PATIENTS

	April 1, 1954-March 31, 1955	*April 1, 1955-March 31, 1956*
Resident patients start of year	90,893	93,314
Admissions	21,459	21,454
Deaths	8,078	8,345
Direct discharges from hospital	3,093	3,958
Placed on convalescent care	11,269	13,102
Returned from convalescent care	3,968	4,280
Net other removals	566	781
Resident patients end of year	93,314	92,862
Gain or loss	Gain 2,421	Loss 452

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ASSEMBLY INTERIM COMMITTEE REPORTS
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REPORT OF SUBCOMMITTEE ON LICENSING OF WATER TREATMENT WORKS OPERATORS AND SEWAGE TREATMENT PLANT OPERATORS

to

ASSEMBLY INTERIM COMMITTEE ON PUBLIC HEALTH

House Resolution No. 174, 1955

MEMBERS OF SUBCOMMITTEE

W. S. GRANT, *Chairman*
BERNARD R BRADY W. BYRON RUMFORD
DIANA CLARKSON, *Executive Secretary*

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LETTER OF TRANSMITTAL

CALIFORNIA LEGISLATURE
ASSEMBLY INTERIM COMMITTEE ON
PUBLIC HEALTH, February 5, 1957

HON. L. H. LINCOLN
Speaker of the Assembly
MEMBERS OF THE ASSEMBLY
Assembly Chambers, Sacramento, California

GENTLEMEN: The Assembly Interim Committee on Public Health submits this report on the licensing of water treatment works operators and sewage treatment plant operators prepared by its subcommittee on that subject in accordance with House Resolution No. 174, 1955.

Respectfully submitted,

W. BYRON RUMFORD, Chairman
Assembly Interim Committee on Public Health

SUBCOMMITTEE LETTER OF TRANSMITTAL

February 5, 1957

HONORABLE W. BYRON RUMFORD, *Chairman*
Assembly Interim Committee on Public Health

DEAR MR. RUMFORD: Enclosed is the report of the Subcommittee on Licensing of Water Treatment Works Operators and Sewage Treatment Plant Operators. The report summarizes the testimony given at one public hearing and other information gathered by the subcommittee during the 1955-57 interim and presents the subcommittee findings and recommendations

Respectfully submitted,

W. S. GRANT, Chairman
BERNARD R. BRADY
W. BYRON RUMFORD

SCOPE OF THE REPORT

This report reviews the question of the need for state licensing or regulation of operators employed in water treatment works plants supplying water to the public and of operators employed in sewage treatment plants; examines the existing statutory provisions and regulations and the extent to which they control operations of water and sewage systems which affect the quality of water distributed to the public; discusses the questions of administration of a licensing program; and presents the findings and recommendations of the committee.

FINDINGS

1. Provisions to regulate operations of water treatment works and sewage treatment plants which affect quality of water distributed to the public are found in the Health and Safety Code. The code provides that anyone furnishing or supplying water for domestic purposes must have a permit from the State Board of Public Health which permit is issued only if the water is found pure, wholesome and potable. The code also provides the State Department of Public Health or a local health officer is empowered to order abated any contamination of water resulting from discharge of sewage or industrial waste. The condition is reported to the proper Regional Water Pollution Control Board for action.

2. Although no state provisions exist for the regulation of those persons entrusted with the operation of either water or sewage treatment works or plants, several local governmental units require that persons employed as operators meet locally determined standards of competence or local civil service requirements; these standards apparently vary from locality to locality depending on the needs of the local area and the wishes of the local governing bodies.

3. Voluntary programs of operator training and certification have been conducted for their own groups by the California Section, American Water Works Association (since 1937) and by the California Sewage and Industrial Wastes Association (since 1935).

4. There is no state-wide education or training program for either water treatment works or sewage treatment plant operators although courses have been given at various times and places in high schools and junior colleges throughout the State; in-service training courses have also been given by several of the larger water and sewage systems.

5. The California Section, American Water Works Association and the California Sewage and Industrial Wastes Association propose compulsory state licensure for each group to be administered by the State Department of Public Health.

The State Department of Public Health has estimated that the annual cost of administering a licensing program for both groups would be $23,905.

6. Six states—Ohio, Michigan, New Jersey, New York, Texas and West Virginia, have adopted regulations for the certification or licensure of water treatment works operators. Seven states, Connecticut, Illinois, Michigan, New Jersey, New York, Ohio and Texas, license or certify sewage treatment plant operators.

7. Only a few cases in recent years where outbreaks of disease could be directly traced to faulty operation of water or sewage treatment plants were reported to the committee. It was reported, however, that the possibilities of distributing improperly treated, contaminated or polluted water would be decreased if there were a means of assuring that only competent persons were employed as operators; that damage

to plant and equipment resulting in financial loss was often attributable to untrained and unqualified operators; and that such operators do not always operate equipment in such a way as to insure maximum economic benefit from existing equipment.

8. The problems associated with faulty plant operation occur most frequently in those areas where there are no civil service requirements and in small community plants.

9. There may well be a need for regulatory provisions over and above those now found in the Health and Safety Code; the committee recognizes that such regulation might be effected by requiring licensure of operators of water treatment works and sewage treatment plants. However, several questions concerning administration of a licensing program need to be resolved before the committee can recommend the granting of licensure.

RECOMMENDATIONS

1. That the qualifications of education, experience and training be defined prior to enactment of licensing legislation since it is believed that such matters should not be left entirely to the discretion of an appointed state agency.

2. That areas of responsibility and authority for the establishment and administration of licensing programs be more carefully evaluated and defined since the creation of two additional professional categories, two additional examining boards and an increased appropriation for the state agency assigned to administer the programs are involved.

3. That the State Department of Education be directed to study the cost and feasibility of providing training for both water treatment works operators and sewage treatment plant operators in the public school system.

INTRODUCTION

The Assembly Interim Committee on Public Health was directed by House Resolution 105, 1955 Regular Session, to study "the need and cost of adopting a law for the licensing and regulation of water treatment works operators." The committee also received a formal request dated October 10, 1956, from the California Sewage and Industrial Wastes Association that it investigate the advisability of compulsory licensing of sewage treatment works operators. Because of their similarity, both subjects were referred to this subcommittee, created by the Chairman of the Public Health Committee following adjournment of the 1955 Session, for consideration

A public hearing was held in the Division of Highways Building, Los Angeles, on November 14, 1956, to consider both questions The following persons, representing organizations as indicated, testified before the committee.

Joseph M. Sanchis, Sanitary Engineer, Los Angeles Department of Water and Power; Chairman, Committee on Operators Schools and Certification, A. W. W. A.

E. A. Reinke, Chief, Bureau of Sanitary Engineering, State Department of Public Health.

Dr. Edward Lee Russell, Health Officer of Orange County, President, California Conference of Local Health Officers

Dr. Rosthen W. Mathiason, Health Officer, Imperial County.

L. J. Alexander, Vice President and Chief Engineer, Southern California Water Company.

Ray L. Derby, Principal Sanitary Engineer, Department of Water and Power, Los Angeles.

Frank T. Higgins, Long Beach Water Department

Robert J. Barletta, Secretary-Treasurer, California Sewage and Industrial Wastes Association.

A. H Koebig, Jr, Koebig and Koebig, Consulting Engineers.

Norman B. Hume, Assistant Director, Bureau of Sanitation, City of Los Angeles.

Vinton Bacon, Executive Officer, State Water Pollution Control Board.

Miss Yvonne Gardner, Sr. Personnel Technician, Los Angeles City Civil Service Department

Arthur Pickett, Past President, California Sewage and Industrial Wastes Association.

R. T. Antrim, California Sewage Works Association.

WATER TREATMENT WORKS OPERATORS

THE PROBLEM

Water works systems throughout the State of California treat and deliver water for domestic use The systems are owned and operated by private organizations or individuals, by municipal corporations or by water districts established for the particular purpose of supplying water. The State Department of Public Health for purposes of administration has defined those systems with more than 200 service connections as "large," and those with less than 200 as "small" systems. The department estimated that approximately 750 "large" and 10,000 "small" systems were in operation as of October, 1956. A water treatment works operator is one who is employed in a system where water treatment facilities or devices are operated for the purpose of disinfecting or of altering the quality of the water distributed to the public. The California Section of the American Water Works Association, composed of representatives of management of California water supply agencies, has indicated that licensure of operators would protect the public health and provide assurance that operators are competent and able to operate water treatment plants in a manner which would provide safe and potable water for the public.

The association has been sponsoring a voluntary program of operator training and certification since 1937. In 1946 the association approved a resolution ordering the preparation and introduction of legislation to make certification mandatory. Such legislation was introduced in the 1947 session but no action was taken on it. In 1955 a legislative proposal to license water works operators was again approved by the association. Although no legislation was enacted, House Resolution No. 105 was passed directing the Public Health Committee to study the entire question of licensing.

PROPOSED LEGISLATION

The California Section of the American Water Works Association has proposed that the Health and Safety Code be amended to empower the Public Health Department to "establish rules and regulations for the determination of competence of water treatment works operators engaged in the control of water quality and * * license those operators found to be qualified. * * *" The regulation would apply to all persons employed by a governmental body or by any group engaged in the production of water for public use who operate water treatment works and would affect only those water systems in which water treatment facilities or devices are operated for the purpose of disinfecting or of altering the quality of the water. The association proposes that provision be made for the automatic licensing of any person holding a position requiring a license when the law goes into effect to prevent personnel procurement problems during the initial stages of the program. (See Appendix A for proposed amendment.)

PRESENT LEGISLATION

Provision for control and regulation of health aspects of water systems is found in the Health and Safety Code, Chapter 7, Sections 4010-4035. The code stipulates that anyone furnishing or supplying water for domestic purposes must have a permit from the State Board of Public Health; the permit is issued only after the board has investigated the plant and the water supply and has determined that the permit is in the public interest. Pertinent sections follow:

4011. No person shall furnish or supply water to a user for domestic purposes from any source of water supply, unless he first files a petition for permission so to do with the board and receives a permit as provided in this chapter.

4014 Upon receipt of a petition filed pursuant to this chapter the board shall make a thorough investigation of the proposed or existing plant, works, system, or water supply, and all other circumstances and conditions which it deems material. * * *

4021. If the board determines that the water being furnished or supplied is such that under all the circumstances and conditions it is pure, wholesome, and potable and does not endanger the lives or health of human beings, it shall grant a permit authorizing the petitioner to furnish or continue to furnish or supply the water.

4022. Any permit issued may be revoked or suspended by the board at any time if it determines that the water being supplied or furnished by the permittee is or may become impure, unwholesome, or unpotable or endangers or will endanger the lives or health of human beings.

The State Board of Public Health normally delegates the responsibility for issuing permits for small plants, defined as those supplying less than 200 service connections, to a local health office. Provision is found in the Health and Safety Code.

4025. The board, or any member of the department designated by the board to act in its behalf, or any local health officer may issue a permit for any water system supplying less than 200 service connections or for any system supplying an industrial camp, hotel, or temporary or permanent resort

The code also states that no modification, addition or change in the source of supply or method of treatment of water can be made without approval by the board (Section 4011.5 and 4011 6), and that the board may order changes in an existing plant or equipment or repairs or alterations in the source to insure a continuing safe water supply (Sections 4016-4019).

Although the State requires that each system supplying water receive a permit from the Public Health Department, no state requirements or regulations for those persons who operate treatment plants in these systems are specified

A number of cities in California require operators to pass a qualifying examination prior to employment. This may either be required under a formally established local civil service system or because the local personnel officer has been authorized to establish qualifications

by the governing body. Some cities have set up their own qualifications and examinations. In Los Angeles, for example, an applicant for the position of operator must pass both a written and an oral examination of the city civil service. The following cities have had examinations prepared for them by the Cooperative Personnel Services of the California State Personnel Board: *

Location	*Job title*
Santa Ana	Water Plant Chief Operator
Santa Ana	Water Plant Operator
Beverly Hills	Water Plant Operator
Beverly Hills	Water Plant Pumper
Fairfield	Water Plant Operator
Alhambra	Water Pump Operator
Compton City	Pump Operator

VOLUNTARY TRAINING AND CERTIFICATION PROGRAM

The California Section, American Water Works Association, initiated a voluntary program of operator training and certification in 1937. It was reported to the committee that courses have been given by junior colleges and high schools at various times and places throughout the State and also that a number of in-service training courses have been offered by the larger water systems and utility districts.

The association gives regular examinations for certification twice a year; once in Northern California and once in Southern California. The association also gives examinations in the other areas where formal operator training courses have been given. Under the voluntary program, operators are certified as either grade one, grade two, or grade three, in accordance with standards set up by the association.

The American Water Works Association offers a voluntary program of certification in a total of 16 states, including California. The association stated that:

> "The voluntary certification program administered by the California Section, American Water Works Association has been well received and has undoubtedly helped to raise the general level of operating personnel in those agencies which have accepted the philosophy of certification. However, the effort made under the voluntary system has been only partly effective due to the fact that certification has extended only to those operators and systems interested in self-improvement. Under the proposed licensing program, all water treatment works operators would be competently qualified."

The American Water Works Association offers a voluntary program of certification in 16 states, including California. Information concerning these programs is compiled in Table 1.

* California State Personnel Board, Cooperative Personnel Services, January 11, 1957

TABLE 1

VOLUNTARY CERTIFICATION PLANS FOR WATER WORKS PERSONNEL

State	Year Started	Grandfather Clause	Revocation	Reciprocity	Fee	Grades Operators Certified	Certificate Grades
Alabama	----	No	No	Yes	No (a)	All	I, II, III, IV
Arkansas	1941	No	Yes	Yes	$1 00	Asst Oper	A, B, C
California	1936	Yes	Yes	No	1 00	All	I, II, III, IV
Florida	1941	No	Yes	Yes	1 00	All	A, B, C, D
Georgia	1936	No	No	No	0 25	All	A, B, C
Illinois	1938	No	No	No	No	All	AA, A, B, C
Kentucky	----	No	Yes	No	2.00	Respon.	1, 2, 3
Louisiana	1941	No	No	No	1.00	Asst Oper	A, B, C
Minnesota	1952	No	Yes	Yes	No	Respon.	A, B, C, D
Missouri	1941	No	Yes	Yes	2.00	Respon	A, B, C, D
North Carolina	1940	No	Yes	No	No	All	A, B, C,
North Dakota	1937	Yes	Yes	No	2 00	All	I, II, III
Oklahoma	1949	No	Yes	No	5 00	All	A, B, C
Pennsylvania	1951	Yes	Yes	No	3 00	Respon.	A, B, C, D
South Carolina	1935	No	No	No	No	--	A, B, C, D
Tennessee	1939	No	Yes	No	No	All	A, B, C, D

SOURCE "Proceedings of the Twenty-fifth Annual Conference," Maryland-Delaware Water and Sewage Association, April 17 and 18, 1952

ARGUMENTS ADVANCED IN SUPPORT OF LICENSURE

The California Section, American Water Works Association, the leading proponent of licensure, in a statement presented to the committee, stated that licensure would:

(1) Insure adequate protection of public health by extending qualification requirements to water treatment works operators who cannot be reached under the voluntary certification program.

(2) Safeguard against the possibility of careless, irresponsible, or ineffective operation of water treatment works which may result in failure to provide safe, wholesome and potable water to the public.

(3) Promote public confidence in the competence of the water treatment works operators, and, as a result, in the service that the water works industry is rendering in every community in our State.

(4) Help the operator create a pride in his work and stimulate a desire for self-improvement.

(5) Provide a fair standard by which water treatment works operators may be judged, selected, and recognized.

Mr. Joseph M. Sanchiz, Chairman of the Committee on Operators' Schools and Certification, AWWA, added that:

> "The major justification for a water treatment works operator licensing program is the need to insure competent operation of all water treatment works in the State in order to safeguard the public health by providing greater protection against the possibility of disseminating disease-producing organisms and toxic substances through water distribution systems * * * The entire control of the quality of water delivered and used in every home and business establishment in a community may rest at times upon individual water treatment works operators and every person in that community is exposed to a product that one man is controlling. A barber may affect a few individuals that come within his place of business, and a cook may affect a number of people in a restaurant. However, the whole community is exposed to this product."

Witnesses at the public hearing reported only a few cases where disease could be directly traced to faulty operations of treatment plants.

Mr. E A. Reinke, Chief of the Bureau of Sanitary Engineering, State Department of Public Health, mentioned a small epidemic of typhoid fever occurring in 1947 in Almaden, Santa Clara County. Partially as a result of this epidemic, legislation was passed requiring that all water works, including those with less than 200 service connections, be required to have a permit. Mr. Reinke also said, "We have had a number of small outbreaks, primarily in the rural areas, and in the resort areas, in the winter sports areas, where the pipes have frozen; rather than using chlorinated water from a well supply or a safe mountain spring, water has been pumped from rivers without a qualified operator supervising, and outbreaks have resulted. I do not recall any of typhoid, but we have had a great many outbreaks of diarrhea and some of infectious hepatitis. * * * "

Dr. Edward Lee Brown, Health Officer of Orange County, stated that: "Last year we had two cases of typhoid fever within our area. One of them, we felt, was the result of an infected water supply coming from an unlicensed water supplier. I do not believe that we proved it * * * but we did feel that that supply was responsible."

It was not found that any major epidemics have resulted from faulty operation of treatment plants nor was it found that those outbreaks of disease which may have been due to faulty operations have occurred frequently. However, proponents for licensure emphasized that the problem of insuring safe water for domestic use will increase rapidly as the population in the State increases and feel that certification would be a valuable tool for preventing possible danger to the public health in the future.

Beyond protecting the public health, proponents stated that compulsory licensure would be of value in preventing economic losses resulting from inefficient use of plant equipment and facilities.

As has been indicated, all water treatment plants must receive a permit from the State Department of Public Health or from a local health department which has been delegated the responsibility for issuing such permit by the State Department. In those cities with civil service requirements, a qualifying examination is required of operators. Aside from these cities, the only type certification is that offered on a voluntary basis by the American Water Works Association.

The American Water Works Association testified that although the competency of operators in certain of these cities is assured by the civil service requirements, the standards required by the cities are not uniform; that only through state regulation could all communities in the State be reached; that the tendency under a voluntary system is to certify the competent and progressive operators only and that the voluntary system has not been effective in small towns where the need is greatest.

Dr. Rosthen W. Mathiason, Health Officer of Imperial County, testified that his county lacks a civil service system and that much of the county is dependent on water supplied by systems with fewer than 200 service connections which receive their permits to supply water from the local health department. He stated:

> We have the problem of individual water purveyors in small units and we have no civil service system in our county at all. Typhoid fever is a recurring thing in our county year after year not in large numbers, but occasional cases. Our water is basically and almost entirely water from the Colorado River distributed through canals, and the quality of that water is entirely dependent upon proper treatment. The operators of the water system give the treatment. * * * We have one town in our community which has had three different treatment operators in the plant over the last year, and there is no assurance from month to month who is going to treat. None of them have had any training whatsoever; this puts a tremendous burden on the local health department and it is an impossibility for us to keep a day-by-day watch on operations * * * We have no control over the operators * * * We enter the

> picture when we find the quality of the water has deteriorated and the danger is already present to the people We feel * * * that licensing and training of these operators would provide protection to the public in those rural counties which do not have civil service protection It is of tremendous interest to us and we are hoping for favorable hearings

Dr Russell, health officer in Orange County, reported that in his county there are about 200 small water suppliers licensed by the local health department, which supply close to 50 percent of the population in the county with water. The department has no control over these suppliers unless they accept department suggestions. He believes that there should be some assurance of the competency of these small systems.

SEWAGE TREATMENT PLANT OPERATORS

THE PROBLEM

Sewage plants are operated by municipalities or by special sewage districts. Provision for the operations and establishment of sewage treatment facilities are found in the Health and Safety Code, Divisions 5 and 6.

The California Sewage and Industrial Wastes Association, the principal proponent of compulsory licensure of operators of domestic sewage treatment plants, defines a sewage treatment works operator as any individual "employed or appointed by any village, town, city, county, state department, or by any person or group of persons engaged in the treatment of sewage as the person in charge of operation of sewage disposal works." While the association has been sponsoring a voluntary program of training and licensure since 1953, it feels that the present system does not assure that the maximum protection of public health and beneficial uses of water are achieved. The association believes that state legislation requiring certification of sewer works operators is necessary to insure competency of these operators.

PROPOSED LEGISLATION

The California Sewage and Industrial Wastes Association presented a proposed amendment to the Health and Safety Code to the committee for its consideration. A copy of this proposal may be seen in Appendix B.

The amendment would require any person operating a sewage treatment plant to be licensed by the State Board of Public Health. Licensure would be required of any person in responsible charge of plant operations within one year after effective date of the law. Thereafter, any person placed in responsible charge would be required to meet the qualifications set up in the law. No requirement is made for certification of "persons exercising general supervision only."

PRESENT LEGISLATION

Although no specific provisions exist for the regulation of sewage treatment plants or the operators thereof, the Health and Safety Code does make provision for the State Department of Public Health or a local health officer to order any contamination that may be found resulting from the discharge of sewage or industrial waste to be abated. The department is directed to work closely with the regional water pollution control board having jurisdiction over the affected area. Section 5410(h) of the Health and Safety Code defines "regional board" as a regional water pollution control board created pursuant to Section 13041 of the Water Code.

Pertinent sections of the Health and Safety Code follow:

5411. No person shall discharge sewage or industrial waste, or the effluent of treated sewage or industrial waste, in any manner which will result in contamination, pollution or a nuisance

5412. Whenever the State Department or any local health officer finds that a contamination exists, the department or officer shall order the contamination abated, as provided in this chapter.

5413. Whenever the State Department finds that a pollution or nuisance does, in fact, exist, such condition shall be immediately referred by the department to the proper regional board for action, together with any recommendations for correction. Upon request of a regional board the State Department shall inspect and report to the board on any technical factors involved in any condition of pollution nuisance.

5414. With respect to any condition of contamination, the State Department may accept the action of any state, county, or municipal officer or agency having jurisdiction over the matter as sufficient.

5460. The State Department or local health officer may issue a peremptory order requiring the abatement of a contamination, and shall immediately furnish to the proper regional board a report of information and date relating thereto.

Coincident with issuing such order the director or local health officer may, or if any order or regulation is not complied with, shall bring and prosecute an action for an injunction in the superior court of the county in which the contamination occurs.

Mr Vinton Bacon, Executive Officer of the State Water Pollution Control Board, in commenting on the effectiveness of the board's survey program in controlling contamination of waters, stated.

> "* * * the State Water Pollution Control Board has embarked upon a monitoring program where we ourselves are checking some one thousand discharges throughout the State in connection with our routine activities, but I think you gentlemen appreciate that that can be done only once or twice a year on most plants, it is a spot check, and you might or might not get the true conditions as they exist day by day.
>
> "Nevertheless, this spot check is a good one as far as it goes. We believe that a licensing program backed up by some kind of a training program would relieve the State of some of the burden of this monitoring or survey program. * * * We believe that if (the plants), day by day, check their own discharge, there is much more certainty that conditions are met * * * and, therefore, we have a better regulatory program. * * *"

Again, as is the case with the water treatment works operators, a number of cities require operators to pass a qualifying examination prior to employment. The Cooperative Personnel Services, California State Personnel Board has prepared examinations for these areas indicated below:

SEWAGE PLANT OPERATION

Location	*Job Title*
Santa Cruz City	Assistant Sewage Plant Operator
Roseville	Chief Sewage Plant Operator
South San Francisco	Sewage Treatment Plant Operator
Grass Valley	Sewage Plant Operator
Modesto	Sewage Plant Operator
Modesto	Sewage Plant Laboratory Technician
San Mateo City	Plant Operator
Sacramento County	Sewage Plant Operator I, II, and III
San Mateo County	Operator, Waste Disposal Plant
Menlo Park Sanitary District	Sewage Treatment Plant Operator
Oro Loma Sanitary District	Sewage Analyst
San Pablo Sanitary District	Chief Plant Operator

VOLUNTARY TRAINING AND CERTIFICATION PROGRAM

The California Sewage and Industrial Wastes Association has conducted a program of voluntary training and certification of sewage treatment plant operators since 1935 similar to the program of the American Water Works Association in the field of water treatment works operators.

The association has a membership of approximately 600 and over 400 of these members have become certified under the voluntary program. It was the estimate of the association that, were a certification program to become compulsory, approximately 2,000 operators would be affected.

The association is composed of 13 local sections scattered throughout the State. These sections, working with the parent organization and the State Department of Public Health, have from time to time worked with junior colleges and high schools in conducting operator training courses.

ARGUMENTS ADVANCED IN SUPPORT OF LICENSURE

Mr. Robert J Barletta, Secretary-Treasurer of the California Sewage and Industrial Wastes Association, made the following statement to the committee to explain the reasons for the position of the association in supporting legislation to require the licensure or certification of operators:

> "Our immediate concern is the quality of sewage collection treatment and disposal with the present emphasis being placed upon treatment and disposal. To this end we wish to make the following statements:
>
> 1. The efficient management of sewage treatment works is an asset of economic importance to the public, and to municipal and state officials.
> 2. Continued population and industrial growth is contingent upon and inexorably tied to maximum efficiency of sewage treatment.
> 3. Effective operation of sewage treatment works is essential to the prevention of pollution of the water supplies of the State and the protection of the public health.

4. Certification or licensing of sewage treatment works operators assures the employment of personnel competent to provide efficient management and to effect the desired degree of maintenance and operation of treatment facilities.

"For these many reasons and in an effort to achieve these results, for the past four years there has been an active program of voluntary certification of municipal sewage treatment plant operators conducted by the California Sewage and Industrial Wastes Association. This program has not been fully successful because there is no basis for requiring cities and districts to employ certified operators. The association and its members are therefore strongly in favor of compulsory certification or licensing under the direction of the proper state agency.

"Since the public health may be seriously endangered and the investment of public funds wasted through careless or inefficient operation of sewage works and since it is desirable to encourage the development of a higher professional and technical status in the field of sewage works operation, to establish a means whereby those charged with the responsibility of selecting and employing sewage works operating personnel can measure the competency of said personnel, and to provide a roster of qualified personnel, the California Sewage and Industrial Wastes Association wishes to go on record in favor of compulsory certification or licensing of domestic sewage treatment works operators and is ready to assist in any way the furtherance of the necessary legislation." Mr. Barletta also stated at the public hearing that:

"We are getting into a period of time now where sewage treatment is no longer a stepchild but has actually reached the field of science. Wastes are becoming more complex; your population is increasing; water supplies are in jeopardy, not only from the increase in population, but from the discharge of wastes. You can't possibly put a man in charge of a treatment plant which is localizing the products that lead to pollution unless you have a man that's completely qualified. For that reason we are very anxious to see qualified, competent, licensed personnel. You would be assured of a uniform standard of basic training and knowledge in hiring this man."

Witnesses testified that, as a result of operations of sewage treatment plants by unqualified persons, water supplies have been contaminated and polluted, serious health hazards and public nuisances have been created

Mr. E. A. Reinke, Chief of the Bureau of Sanitary Engineering, State Department of Public Health, cited a case of sewage overflow occurring in the summer of 1956 on the north shore of Lake Tahoe. Because of resulting contamination of a mile-long strip of beach area, Mr Reinke stated that the state department "issued a peremptory order against the North Tahoe Public Utility District, the local health department, the local health officer, * * * and the Rockaway Water Company which had auxiliary intakes for emergency water supply from the lake in this area not to use the water until the situation was cleaned up."

He went on to state that such a situation "affects both the water and sewage. We feel that the State should not have to issue orders of that kind. We should develop a program in some way so that the operators of that district would have operated in such a way that this was not necessary. At that time the sewer was big enough. Something went wrong with the electrical or pumping equipment that resulted in this overflow. The operators of the district knew that it was not satisfactory, and we feel that there should have been more careful operation."

Witnesses also testified that municipalities and districts have suffered financial loss as the result of entrusting costly treatment plant facilities to unqualified operators.

Mr. Barletta stated in this regard:

> "A city or district may vote many thousands, even many millions of dollars to build a new modern sewage treatment plant. In the absence of licensed personnel sufficiently trained for the job, city officials may hire unskilled, untrained and/or incompetent individuals to operate their facilities The lack of training and experience could result in damaged plant facilities which in these modern times are more than the outmoded septic tanks. Damage could result to the pumps, the motors, sludge digestion chambers and other facilities or even result in their physical destruction. Replacement of the damaged equipment would be of extreme economic importance to the community and to the municipal and state officials under whose control and cognizance these facilities would be The hiring of men trained in the science and management of treatment disposal facilities and men guaranteed to have a basic training and knowledge by a licensing procedure would eliminate to the highest degree the possibility of destruction of an important economic asset to the community, State, and Country."

Mr Bacon of the Water Pollution Control Board indicated that a further economic loss results when existing facilities are not used to the maximum.

> "We know of cases where the plants are not operating to capacity. They are not doing all they can toward producing a better effluent. That does not mean that they are causing pollution; it means that maybe it would serve the city two or three or five years longer before necessary to build expansions and additions. It is just like any other piece of equipment It is no better than its operator. A well designed plant poorly operated will yield an effluent of a lower quality. * * * We strongly feel that some licensing program would save this State and the individual dischargers in the State money."

As with the water treatment works operators, the witnesses indicated that the need for certification of sewage plant operators is less apparent in those cities with civil service requirements, than in those areas where there are no standards of competence required before an operator is hired.

ADMINISTRATION OF A LICENSING PROGRAM

The American Water Works Association and the California Sewage and Industrial Wastes Association have indicated that the licensing programs could be established by amendments to the Health and Safety Code empowering the State Department of Public Health to establish, by board action, rules and regulations for the education, qualifications and licensing of each area. The board would appoint an advisory committee for each group to assist in the formulation and administration of the programs.

Representatives of the State Department of Public Health, the American Water Works Association and the California Sewage and Industrial Wastes Association indicated that the two programs might well be administered by the same bureau or division within the department because of the similarity of the proposed programs and for economy of operation at both the state and local level. However, it is the desire of both groups that the license itself be separate and distinct and that a separate advisory board be established for each profession.

LEGISLATION IN OTHER STATES

Six states, Ohio, Michigan, New Jersey, New York, Texas and West Virginia, have adopted regulations for the certification or licensure of water treatment works operators. Seven states, Connecticut, Illinois, Michigan, New Jersey, New York, Ohio and Texas license or certify sewage treatment plant operators. In all states the administrative agency is the state health department or a division or bureau thereof. In most cases the licensing program is administered by the regular personnel within the department and the cost for administering the program comes out of regularly budgeted health department funds.

The committee directed a letter to each state licensing either or both of the groups. Selected information received in response to the committee letter is compiled in Table 2.

COMPARABLE LEGISLATION IN CALIFORNIA

The California State Department of Public Health was directed by the 1945 Legislature to register sanitarians. (Stats. 1945, Ch. 856, Sec. 540-542.)

A sanitarian as defined in the Health and Safety Code is a "person trained in the field of sanitary science and technology who is qualified to carry out educational and inspectional duties and enforce the law in the field of sanitation." (Sec 540) The Public Health Department registers those sanitarians who meet departmental qualifications and who pass examinations held by the department in various parts of the State.

The administration of this program rests with the Bureau of Sanitary Engineering and according to the chief of that bureau, Mr.

TABLE 2

DATA ON STATES REQUIRING CERTIFICATION OR LICENSURE

State	Water Treatment Works Operators				Sewage Treatment Plant Operators			
	Year present law enacted	No licenses or certificates issued	Fee	No grades established	Year present law enacted	No licenses or certificates issued	Fee	No grades established
Connecticut	1937	[a]	--	--	1933	[a]	--	--
Illinois	--	--	--	--	1951	380	--	5
Michigan	1941	641	--	7	1949	134	--	4
New Jersey	1918	[b]1,100	5 00	5	1918	[b]1,100	5 00	5
New York	1937	1,988	--	3	1937	1,530	--	3
Ohio	1937	2,148	--	3	1937	1,144	--	3
Texas	1945	6,544	--	[c]	1945	2,277	--	[c]
West Virginia	1933	*No response to questionnaire*			--	--	--	--

[a] Formal licenses or permits not issued Rather Department of Health must approve qualifications of operators on basis of education, training and experience
[b] Includes both water treatment works and sewage treatment plant operators
[c] Information not supplied
SOURCE Committee Questionnaire, August, 1956

Reinke, is similar to the program of certification proposed by both the water works operators and the sewage treatment plant operators.

COST OF A LICENSING PROGRAM

The State Department of Public Health estimated the annual cost of administering a licensing program for both the water treatment works and sewage treatment plant operators at $23,905, broken down as follows:*

1 Engineer	$8,000
2 Clerks	7,000
2 Advisory committees	1,000
Examinations	1,000
Operating expense	2,000
Equipment	2,000
Overhead—8 percent	1,680
Retirement	1,225
	$23,905

Mr. Reinke stated that this estimate was based on the department's experience with the program of registration for sanitarians, and like the sanitarians, it was assumed that no fee would be charged to those who would become certified. He added that the Department of Public Health is "not equipped to do business on a collection basis. If there is any attempt to make a certification program self-supporting, it should, in my opinion, be put into Professional and Vocational Standards."

* Letter dated March 8, 1955, from Malcolm H. Merrill, M D., Director of Public Health, addressed to Assemblyman Roy J. Nielsen.

Both the California Section, American Waterworks Association, and the California Sewage and Industrial Wastes Association have suggested that the assessment of an examination fee plus an annual renewal fee would reduce the cost to the State. The associations also indicated that their members who have been active in the administration of the voluntary programs would lend assistance in the establishment and administration of a compulsory system, further reducing the cost to the State. The California Sewage and Industrial Wastes Association stated that, if handled in this way, the program would be self-supporting within a few years.

A fee is assessed in only one state (New Jersey) presently requiring certification or licensure of operators In all other states the funds for administration of the program come out of regularly budgeted health department funds Four states made an estimate of program cost; these estimates may be seen in Table 3.

TABLE 3

ESTIMATED ANNUAL COST OF ADMINISTERING LICENSING PROGRAMS FOR WATER TREATMENT WORKS OPERATORS AND SEWAGE TREATMENT PLANT OPERATORS, STATES REQUIRING LICENSING

State	Estimated annual cost	Comments
Michigan	Under $200	In addition it is estimated that administration of program would require from 600 to 700 staff man hours plus 400 secretarial hours
Ohio	$3,000-$3,500	
Texas	$15,000-$20,000	
New Jersey	$7,800	Program not self-supporting even with the license fee of $5 since income therefrom averages only $4,080.

SOURCE Committee questionnaire, August, 1956

The cost estimate prepared by the Public Health Department included an amount for the cost of a training program which would necessarily accompany a certification program Whether or not the estimated amount would be adequate for setting up necessary training facilities was questioned by the committee. The proponents of legislation suggested that training programs be offered by public educational institutions and no estimate has been made of the cost of such a plan to either the Department of Education or to the local school boards which might become involved.

EDUCATION AND TRAINING

This committee feels that the availability of educational and training facilities is one of the major problems connected with the establishment of a new licensure program. The proponents of licensing legislation felt that mandatory licensing would be the greatest stimulus that could be given to the development of an effective training program. As has been indicated, both the American Water Works Association and the California Sewage and Industrial Wastes Association have

sponsored training programs; courses have been given at various times and in various places in high schools and junior colleges throughout the State; further, in-service training courses have been given by several of the larger water and sewage systems. Both associations have indicated that the necessary education and training might well be provided in a similar manner on a state-wide basis. However, at the present time no state-wide educational program does exist for the training of either group, and the committee feels that further study is needed of the cost and feasibility of establishing training programs, as suggested by the proponents, in the public schools.

STATEMENTS OF INTERESTED ORGANIZATIONS AND INDIVIDUALS

CALIFORNIA MUNICIPAL UTILITIES ASSOCIATION

February 25, 1955

WHEREAS, It is essential that the highest possible standards be maintained in the operation of all public water supplies; and

WHEREAS, The entire control of water quality may at times rest upon individual water treatment works operators; and

WHEREAS, The public health and safety clearly require that only competent operators be in charge of public water supply treatment works; and

WHEREAS, There is now proposed by the California Section of the American Water Works Association a legislative amendment to the State Health and Safety Code which would enable the State Department of Public Health to determine the competency of such operators; and

WHEREAS, Such proposal has been approved by a majority of members of said California Section, and has been recommended by appropriate committees of both the California Section and the American Water Works Association; now, therefore, be it

Resolved, That the California Municipal Utilities Association does hereby approve the legislative proposal as recommended by the California Section of the American Water Works Association, amending the State Health and Safety Code to provide for the licensing of water treatment works operators by the State Department of Public Health; and be it further

Resolved, That the California Municipal Utilities Association hereby urges the support of said legislative proposal by the individual members and by the various committees and representatives before the State Legislature

CALIFORNIA STATE WATER POLLUTION CONTROL BOARD

(Letter to committee from Vinton W. Bacon, Executive Officer)

November 14, 1956

At its meeting on November 7, 1956, the State Water Pollution Control Board considered the question of licensure or certification and regulation of sewage treatment plant operators.

I was directed to advise your honorable body that the state board, as the state water pollution control regulatory agency, strongly advocates enactment of some type of licensing program. The board believes that licensing will improve operation of waste treatment plants, will reduce costs of operation, and will aid water pollution control.

The state board took no position as to which agency should administer a licensing program, believing this is a question which should be answered in conformance with legislative policy.

W. A. SCHNEIDER, DIRECTOR OF THE BUREAU OF SANITATION CITY OF LOS ANGELES

November 14, 1956

The following is the personal opinion of the writer and is not intended to represent the official attitude, if any, of the City of Los Angeles.

Adoption of suitable State Certification for Sewage Plant Operators is expected to result in the following benefits:

(1) Will set up minimum standards for education, training, and experience for qualified operators who assume responsible charge of the various types and sizes of sewage treatment plants.

(2) Will greatly improve the general quality of plant operation and largely insure against contamination or pollution of water supplies, or of recreational waters, creation of serious health hazards, and community nuisances resulting from unqualified or irresponsible direction of plant operation.

(3) It is assumed that cities or districts operating treatment plants will be required to hire properly certified operators to be in responsible charge of such plants, under any adopted program.

(4) Will elevate the operators in a general sanitation field, and will probably result in a generally higher salary level for the required certified personnel. On the other hand, certification would more definitely fix responsibility for a high standard of performance in the individual assignments, and make possible, where circumstances indicate it to be proper, the suspension or revocation of an operator's certificate or license for improper or careless acts in carrying out his assignments.

(5) Small cities could more certainly and easily obtain qualified personnel.

(6) All personnel in the field would have a greater incentive to become more proficient through application and study.

Conclusion

As a result, it is my opinion that the conscientious qualified operator, the potential qualified operator, the employer, and the general public, all would benefit from the adoption of a suitable certification program for sewage plant operators.

CONFERENCE OF LOCAL HEALTH OFFICERS

November, 1956

Resolved, That the California Conference of Local Health Officers endorse the principal involved in the effort being made by the water works operators and sewage works operators to improve the competence of persons working in these fields, and refer any proposed legislation on this subject to committee.

(Note: Committee here refers to the legislative committee of the Conference of Local Health Officers composed of the officers of the Conference and the chairman of the legislative committee.)

CALIFORNIA SANITARY DISTRICTS ASSOCIATION

(Excerpt from letter from John A. Nejedly concerning licensing of sewage treatment plant operators)

January 3, 1957

In reviewing your proposed legislation, I regret that it would be my recommendation that the proposal in its present form be given further review prior to approval by the California Sanitary District Association for the following reasons:

1. The licensing of any personnel and establishment of qualifications for employment may not properly be left to the caprice of an appointed agency. The procedure for qualification may better be established, and placed with all other professional qualifications in the Business and Professions Code. The qualifications of education, experience and training in this profession are certainly susceptible of precise definition and this definition should be made so that any person seeking to establish himself in the field may know his requirements and prepare to meet them rather than vague requirements that are subject to constant amendment.
2. Licensed engineers qualified in sewage treatment should be exempt or qualified collectively.
3. Majority vote under "disciplinary proceedings" does not indicate whether the majority is of those present or the entire board
4. It is difficult to see how "gross incompetence" can be established At least, proceedings for review and a hearing should be provided and a suspension or revocation of the license effected. To this you may wish to add simply that no person shall operate or be in charge of a sewage treatment works without a valid license then in effect.
5. You may experience some real difficulty in small community plants in which the operation is quite simple and a person qualified under your suggestions too expensive.
6. Under the present definition, districts would not be controlled by the legislation and they must be, in order to obtain any real effectiveness.
7. A real difficulty as a matter of practice will be experienced in applying the legislation to "the person in charge of operation of sewage disposal works". You may wish to consider the usual procedure to require that each disposal operation have in charge a licensed operator.
8. No real justification for the year's delay appears.

This legislation, in principle, has been unanimously approved by the Association and it is earnestly desired that a comprehensive program be presented that we can both sponsor in this session of the legislature.

LEAGUE OF CALIFORNIA CITIES

(Letter to committee relative to licensure of water and sewage plant operators)

November 9, 1956

Our board of directors has not yet acted on either measure, but our board did discuss a proposed sewage treatment plant operator measure during the 1955 Session and instructed us to oppose it.

We recognize that it is probably necessary to have registered or licensed civil engineers, architects, doctors and lawyers, but we question registering sewage treatment plant operators. It has been our experience that sewage treatment plant operators are no more important than a city superintendent of streets, a street foreman, a director of planning, a director of finance, a city manager, a personnel officer, a purchasing officer, a park and recreation director, etc. If provision is made for the registration or licensing of the operators who are the subject of your hearing, where is this type of licensing and registration going to end?

Generally speaking, for these types of operators qualified high school graduates trained for the job quickly become qualified plant operators. There are a great many types of machines operated by trained personnel in large municipal business offices that require as much experience and as much training as required to train a qualified plant operator, and I have reference to some of the modern electronic equipment. Will the next suggestion be that these people also be licensed and registered?

I am sure that you are well aware of the tremendous difficulty public agencies are experiencing in employing and retaining qualified personnel. It appears to us that these proposals, rather than assisting cities in obtaining better operators, will make it more difficult for cities to obtain necessary personnel

We recognize the excellent work that has been performed by the California section of the American Water Works Association, and we wonder whether it would be possible, in connection with both their proposal and the proposal of the sewage treatment plant operators, for their standards of the essential professional qualifications of such operators to be placed on file with each public agency, and at the time the public agency employs such an operator, reference could be made to these standards by such employing public agency. This is the method that has been used in connection with airport managers, and I believe you will agree that they, too, must be well qualified to perform their particular tasks.

APPENDIX A

PROPOSED AMENDMENT SUBMITTED BY CALIFORNIA SECTION, AMERICAN WATER WORKS ASSOCIATION

Division 5, Part 1, Chapter 7, of the Health and Safety Code

LICENSING

To insure adequate protection of public health, and to safeguard against the possibility of careless or ineffective operation of water treatment works which may result in failure to provide safe, wholesome and potable water to the public, the State Department of Public Health is empowered to establish by board action rules and regulations for the determination of competence of water treatment works operators engaged in the control of water quality and shall license those operators found to be qualified under said rules and regulations. The board shall appoint an advisory committee to assist in the formulation and administration of said regulations. The members of the advisory committee shall be selected from a roster of qualified personnel submitted by the California Section of the American Water Works Association.

DEFINITIONS

"Water treatment works operator," as used in this chapter, refers to any individual who is employed or appointed by any village, town, city, county, district, or any other political subdivision, or by any person or group of persons engaged in the production of water for public use, as the person in charge of operation of a water treatment works. (Does not refer to persons exercising general supervision only.)

"Water treatment works," as used in this chapter, refers to any facility or device, installed or constructed for the purpose of filtering, disinfecting, or altering by chemical treatment the quality of water furnished or supplied to the public. (Does not include methods used to disinfect new or repaired mains, tanks, etc., before they are placed in service.)

"Furnish or supply" (As defined in Div. 5, Part 1, Chapter 7, Art. 1, Health and Safety Code.)

"Board," as used in this chapter, means the California State Board of Public Health.

One year from the date in which the State Department of Public Health rules and regulations for the licensing of water treatment works operators are adopted, it shall be unlawful for any person to operate water treatment works in this State unless such person is licensed, or is specifically exempt from licensing under the provisions of said rules and regulations. Nothing in this statute nor in the rules and regulations for the licensing of water treatment works operators shall be construed to affect in any way the tenure, term, or status of any person holding a position requiring a license under the provision of said rules and regulations at the time they become effective.

DISCIPLINARY PROCEEDINGS

By majority vote, the board may suspend for a period not to exceed one year, or may revoke the water treatment works operators' license of any licensed person who has been found guilty of gross incompetence in water treatment works operation; any fraud in the procurement of a license under this statute; any violation of any of the provisions of

operate sewage treatment works in the State, unless such person is licensed, or is specifically exempt from licensing under the provisions of said rules and regulations. Nothing in this statute nor in the rules and regulations for the licensing of sewage treatment plant operators shall be construed to affect in any way the tenure, term, or status of any person holding a position requiring a license under the provisions of said rules and regulations at the time they became effective.

DISCIPLINARY PROCEEDINGS

By majority vote, the board may suspend for a period not to exceed one year, or may revoke the sewage treatment works operator's license of any licensed person who has been found guilty of: Gross incompetence in sewage treatment works operation; any fraud in the procurement of a license under this statute; any violation of any of the provisions of this statute.

Every person is guilty of a misdemeanor who, unless exempt from licensing under this statute, operates sewage treatment works in this State without legal authorization; who presents as his own the license of another; who gives false evidence of any kind in obtaining a license; who uses a suspended or revoked license; who violates any provision of this statute.

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AIR POLLUTION
and
THE PUBLIC HEALTH

REPORT OF THE ASSEMBLY INTERIM COMMITTEE
ON PUBLIC HEALTH
SUBCOMMITTEE ON THE HEALTH EFFECTS OF SMOG

House Resolution No. 174, 1955
March 20, 1957

MEMBERS OF THE SUBCOMMITTEE

THOMAS M. REES, *Chairman*

CHARLES WILSON

SETH JOHNSON

Published by the

ASSEMBLY
OF THE STATE OF CALIFORNIA

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Minority Floor Leader

ARTHUR A OHNIMUS
Chief Clerk of the Assembly

LETTER OF TRANSMITTAL

The HONORABLE L. H. LINCOLN, *Speaker and*
Members of the Assembly
Assembly Chamber

GENTLEMEN: In accordance with the provisions of House Resolution No. 174 of the 1955 General Session, the Assembly Interim Committee on Public Health appointed a Subcommittee on the Health Effects of Air Pollution.

The subcommittee held open public meetings as follows:

Los Angeles, September 25, 1956
Los Angeles, September 26, 1956

The report of the subcommittee is transmitted herewith.

Respectfully submitted,

W. BYRON RUMFORD, Chairman
Assembly Interim Committee on Public Health

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I

AIR POLLUTION IN CALIFORNIA

For more than a decade, California has been the scene of one of the most explosive urban expansions ever before witnessed in the Nation. More people reside in the San Francisco, Los Angeles, and San Diego metropolitan areas than are found in 43 of the 48 states of the Union.

Appalling as it may seem, most of these people now have fallen victim to the ravages of air pollution! In California, the eye-stinging, visibility-reducing, and crop-damaging symptoms of polluted air once were confined to the Los Angeles area, alone. Today they blanket an ever-broadening area of the State. Smog-damaged vegetation has been found from San Diego to Ventura and throughout the San Francisco Bay area.

The most populous areas of California now suffer from inadequate supplies of clean, fresh, and unpolluted air . . . and the problem is increasing

Areas already suffering from smog attacks may expect worsened conditions in the future as community growth outstrips our technical capacity to control the problem Areas not yet experiencing the problem will be visited by it within the foreseeable future In the growing cities of the Central Valley and along our coast line, air pollution now is a factor to be reckoned with.

At its best, smog and other forms of air pollution are a nuisance to the community, a source of economic loss through damage to growing crops, property soiling, and lessened worker efficiency. At its worst, air pollution can be a hazard to human health.

Since the infant stirrings of the industrial age, city dwellers have witnessed the consequences of air pollution: new washing, soiled and streaked by the black smoke belching from a passing locomotive; dirty fingers of soot and grime spreading across the face of buildings; and acrid, eye-stinging clouds of smoke boiling down into the streets of coal-burning cities during the winter months

In New York, Chicago, Jacksonville, Florida, and Washington, D. C, ladies have been embarrassed to see their nylon stockings disintegrate on occasions when the air has been polluted with quantities of sulfuric acid.

In Donora, Pennsylvania; London, England; Poza Rico, Mexico, and in Belgium's Meuse Valley, people have died during periods when air pollution has hung heavy over the land.

Severe as these historic problems have been, air pollution problems now haunting California, and other areas of the Nation as well, are even more vexing and complex. They involve the wholesale contamination of vast air parcels covering many square miles of populated area, and result from a broad variety of pollutants emitted by many different sources.

Given the name "smog" by Los Angeles residents, this newest problem is characterized by its ability to cause irritation of the eyes and respiratory tract. Appearing as a visibility-reducing, blueish-gray haze,

it cracks rubber products and leaves a characteristic damage on growing vegetation—a form of injury not caused by any other known combination of pollutants.

Already detected in many California cities and counties—including Los Angeles, San Diego, San Francisco, and others—this newest form of air pollution rapidly is becoming a problem to many urban areas.

It has been estimated that several hundred individual substances are contained in a typical "Los Angeles smog"—many of which are formed through chemical reactions occurring in the atmosphere between man-made pollutants.

The specific causes of eye irritation and the characteristic damage to growing vegetation now has been traced to one of these "chemical reaction systems." When certain organic substances such as gasoline, solvents, and the products of refuse burning, are combined with oxides of nitrogen in the presence of sunlight, a typical "smog" is formed.

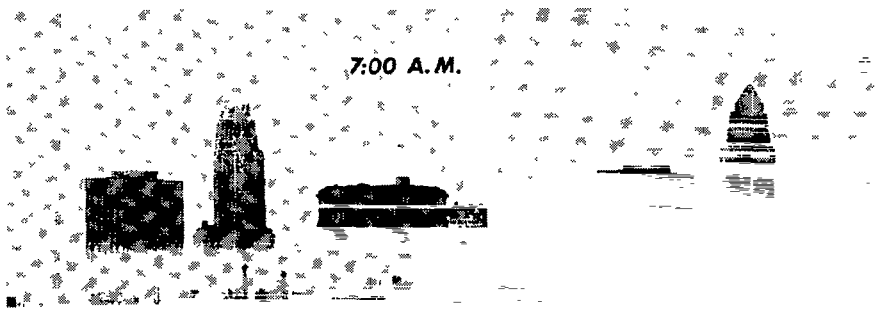
Under ordinary circumstances, the oxygen and nitrogen of the air remain as separate gases, mixed together, somewhat like salt and pepper, but each preserving its own chemical identity. When air is exposed to the high temperatures that take place during combustion, a certain amount of the oxygen and nitrogen combine chemically to form oxides of nitrogen.

In the atmosphere, the oxides of nitrogen and organic materials derived from many sources hang near a critical balance until triggered by sunlight Then, like a brush fire, the reaction spreads through the polluted air mass and forms "smog."

Under normal conditions, waste products can be diluted in the vastness of the atmosphere, purged from the sky by the cleansing action of rain, or carried away and diluted by the action of the wind. But when the air supply is restricted, by faint winds or by a low-lying blanket of warm air that keeps the contaminants close to ground level, concentrations of contaminants increase.

As more and more people, industries, automobiles and other forms of waste-producing activities are crowded into limited geographic areas, the outpouring of pollution increases, and, during these abnormal conditions when air supplies are restricted, the concentrations reach critical levels.

SMOG FORMATION IN LOS ANGELES—Sequence of photos shows the buildup of smog



Many areas of California and the Nation now are threatened by this type of problem: Their air supplies rapidly are being pushed past the smog threshold, a level of contamination at which widespread damage to vegetation, eye irritation, reduced visibility and other problems become apparent.

In 1949, none of the characteristic smog damage to vegetation could be detected in San Francisco. One year later, the damage was observed there by Dr Fritz W. Went, a leading air pollution authority and a scientist at the California Institute of Technology Since then, the problem has increased in magnitude and spread throughout most of the Bay area and into adjoining counties.

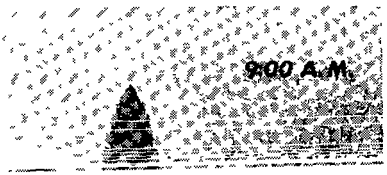
Complicating the present and future air pollution problems of California and the Nation are the almost limitless combinations and reactions possible of man-made pollutants when thrown into the atmosphere and trapped there by faint winds and low-lying temperature inversions.[1]

As technology changes, the types and quantities of polluting substances thrown into the atmosphere will also change. In our highly industrialized urban society, air pollution is destined to be a continuing problem Today, its principal, but not exclusive causes, seem to be the reactions between organic compounds and oxides of nitrogen. Tomorrow, it might be something else.

Nor is air pollution a problem confined only to urban areas. Air masses contaminated at one point by a combination of pollution sources may be carried 40 to 50 miles distant, creating problems in areas comparatively free of significant pollution sources The problem therefore is of equal concern in agricultural as well as urban environments

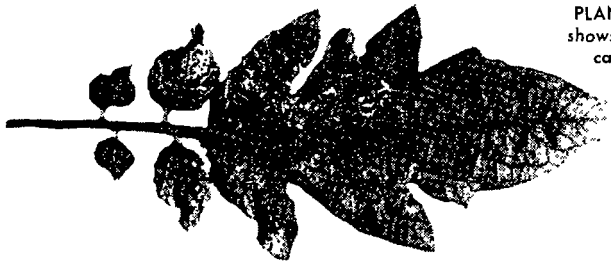
That the contamination of our air resources is a matter of serious concern to the communities affected is obvious. The nuisances created by air pollution justify concentrated efforts to solve the problem

Intensifying concern over the problem, and pointing up the need for increased research, developmental, and enforcement activity is the growing suspicion that air pollution, as experienced in California, may be much more than a mere nuisance Existing and future air pollution episodes experienced here may involve much more than an annoying irritation of the eyes, a characteristic damage to growing vegetation, and an obscuring of visibility. Fear has been expressed both by laymen and medical experts that continuing concentrations of air pollution in



[1] A temperature inversion is a warm layer of air overlying the cooler air at ground level Ranging from several hundred to several thousand feet in thickness, this layer prevents the upward dispersal and dilution of polluted air masses Temperature inversions affect most of the California coastal area

Centering north of the Hawaiian Islands is a high pressure cell from which air swirls down and around in a vast clock-like motion Since air is warmed approximately 5½° F for each 1,000 feet it sinks, air masses moving outward from the high pressure cell and downward toward the Pacific Coast become several degrees warmer than air lying over the cool surface of the ocean and the coastal land area.



PLANT DAMAGE—Tomato leaf shows injury to cellular structure caused by Los Angeles smog

California and other areas of the Nation may be causing cumulative damage to the public health.

It was this concern that prompted the California State Assembly to organize a Subcommittee on the Health Effects of Smog, a committee that held hearings on this subject during September of 1956

This report is the result of those hearings and the evidence gathered by that committee



GROWTH STUNTED—Sister plants grown in filtered and unfiltered air exhibit stunting effect of constant exposure to smog

EFFECTS OF AIR POLLUTION

Nuisance and Economic	*Suspected Effects on Public Health*
Eye irritation	Irritation of the nasopharyngeal mucosa
Reduced visibility	Bronchial and bronchiolar irritation
Damage to vegetation	Contributory induction of lung cancer
Unpleasant odors	Incompletely or totally undefined chronic tissue adaptations to prolonged low level exposure to irritants or toxic substances
Deterioration of rubber	Impairment of vital capacity
Deterioration of surface coatings	Psychosomatic syndromes
Corrosion of metals	Alteration of blood chemistry and cytology
Restraint of tourist and permanent residential immigration	Reduction of capacity to resist infection
Abnormal metropolitan development toward temporarily "unpolluted" areas	
Reduced worker efficiency	

II

EFFECTS OF AIR POLLUTION ON THE PUBLIC HEALTH

The effects of air pollution are as diverse as its causes—ranging from isolated nuisances created by localized sources to the mass contamination of a total air supply serving millions of people—with resulting widespread eye irritation, crop damage, and possible public health disturbances.

The more obvious economic and nuisance effects of air pollution in California already have been the subject of frequent and extensive inquiry and investigation by legislative, lay, and scientific groups.

Serious attention first was given to air pollution problems in California when the Los Angeles area experienced the beginnings of its "smog" problem during the early war years. The occurrence in that area of eye irritation, crop damage, severe reductions in visibility, and the rapid deterioration of rubber products led to intensive investigations of the causes of these phenomena. Not until recently, however, has any appreciable interest or attention been directed toward the possible health effects of air pollution attacks in that or other areas of the State.

With the increasing occurrence and severity of smog attacks in various areas of the state, strong suspicion now has focused on air pollution as a possible contributor to public health disturbances.

In Los Angeles County, this belief is strongly supported by responses from practicing physicians to a questionnaire sent out by the Los Angeles County Medical Association in December of 1956. Of those offering opinions relative to each of several questions:

1. 94.7 percent recognized the existence of a "smog complex" involving eye irritation, irritation of the respiratory tract, chest pain, cough, shortness of breath, nausea, and headache.
2. 56.1 percent "have authenticated cases of individuals leaving this area solely because of smog."
3. 43.3 percent have recommended that patients move from the area on account of the effect of smog on their health.



BLIGHTED AREAS—Map shows areas of the State with acute air pollution problems

4. 86.7 percent have observed that patients with respiratory diseases are more susceptible to smog than healthy adults.
5. 68.0 percent believe that patients with cardiac diseases are more susceptible to smog than healthy adults.
6. 89 6 percent have noticed that patients with allergic states are more susceptible to smog than healthy adults.
7. 81.3 percent believe that smog is a contributing factor in cancer of the lungs and air passages.

Beyond the point of minor health annoyances and possible long range cumulative effects on health, some authorities feel that, under certain atmospheric conditions, public health disasters could result from excessive concentrations of air pollution in the atmosphere above densely populated California urban areas.

In Los Angeles, "the all-too-frequent periods of a few hours of relatively limited air supply have brought home to all who have considered the situation seriously, the potential hazards of full dependence on the fickle midsummer and fall breezes in the face of a predicted population of 12 million or more. Even if the substances causing eye irritation were identified and removed tomorrow, the Los Angeles Basin would still be faced with a long-range and genuinely crucial struggle to maintain its limited air supply reasonably clean and reasonably tolerable to its present and future citizens.

"Eye irritation may well prove to be like the rash in a case of measles; it is perhaps possible to remove it by skinning the patient, but he will still have the measles. Eye irritation, toxic effects on vegetation, and the abrupt formation of mountain-obscuring haze, probably should be regarded as danger signals so far as public health is concerned. General sense of well-being is, of course, among the concerns of guardians of personal and community health, but a deeper obligation lies in accepting the warning signals as such and attempting to determine what will be the consequences of disregarding them." [1]

In recognition of the possible consequences of air pollution on the public health, the Los Angeles County Air Pollution Control District not only has placed in operation the most comprehensive and intensive air pollution abatement program ever before attempted on the face of the globe, but it also has created a special disaster-prevention program to guard against the types of air pollution disasters which have occurred in cities of Europe, Mexico, and the United States.

[1] Testimony of Dr Leslie A. Chambers, Director of Research, Los Angeles County Air Pollution Control District, September 25, 1956

HISTORIC AIR POLLUTION TRAGEDIES



Belgium's Meuse Valley

During a five-day fog in December, 1930, 63 people died, most of the deaths occurring on the fourth and fifth days. Older persons with previously known disease of the heart or lungs accounted for the majority of fatalities. The signs and symptoms were primarily those caused by a respiratory irritant. They included chest pain, cough, shortness of breath, and irritation of the mucous membranes and of the eyes. Sulfur dioxide gas is suspected as the cause of the disaster.

Donora, Pennsylvania

Twenty persons died and approximately 7,000, 50 percent of the population, experienced acute illness during the week of October 25 through 31, 1948, when temperature inversion and air stagnation occurred. Persons of all ages became ill, but those over 55 years were more severely affected. Those with previous heart or respiratory disease, particularly bronchial asthma, suffered most.

Symptoms were primarily respiratory and secondarily gastrointestinal; and included cough, sore throat, chest constriction, shortness of breath, eye irritation, nausea and vomiting. The onset of the illness for most persons occurred on the evening of the third day. Of the 20 who died, 14 had some known heart or lung disease.

London, England

Three episodes during which heavy fogs and air pollution were associated resulted in the death of nearly 5,000 persons—in 1948, 1952, and 1956.

The attack in December of 1952, alone, resulted in at least 3,000 deaths more than expected for that time of year. Although the increase was present in every age group, the greatest increase was in the age group of 45 years and over. More than 80 percent of these deaths occurred among individuals with known heart disease and respiratory disease.

Under unusual atmospheric conditions, air pollution episodes have caused widespread illness and death. It happened in London in 1948, 1952, and 1956. It happened in Belgium's Meuse Valley in 1930, and it happened in Donora, Pennsylvania, in 1948.

In total, approximately 5,000 deaths resulted from these smog attacks, thousands were made ill, and countless cattle, poultry and other farm stock were lost.

During each incident, comparable conditions were present: limited air supplies as a result of low-lying temperature inversions and faint winds, and a continuing heavy output of air pollution from multiple sources.

Heavy fogs, a stagnant air mass becoming rapidly saturated with a variety of pollutants—these were the critical factors inducing the disasters.

In none of the incidents was science prepared with proper air monitoring and contaminant-measuring methods. Diagnosis of the specific causes of the illnesses and deaths attending the attacks were based on limited evidence gathered *after* the attacks had passed.

This much is known: the heightened concentrations of contaminants carried in the atmosphere so increased the burden of normal life processes that the weak, the old, the infirm, the pulmonary and cardiac cripples, the very young—those who already were in physically weakened conditions—were pushed over the bridge

In London, the deaths occurred in an area of substantial population and were dispersed throughout the entire community with the result that a considerable period of time elapsed before the community even was aware that a serious health problem was occurring. In this respect a "thousand excess deaths could occur in a week in a city the size of Los Angeles without having any awareness of it generated at any level, unless someone were paying attention to the accumulating of statistics and looking at them as a whole. The addition of an added death per week to 1 out of every 10 doctor's records in this city would not be impressive to any one of those doctors. It wasn't in London." [2]

Since analysis of these episodes was made after their occurrence, no completely accurate or definitive interpretation can be made as to the specific contaminants or sources responsible for the health disturbances. Suspicion has focused, however, on the contaminant, sulfur dioxide and its derivative, sulfur trioxide. These are substances emitted through the burning of coal, fuel oil, and other sulfur-bearing materials.

In the Donora incident, public health officials concluded that "no specific substance was present in sufficiently high concentration to have been the cause of death, by itself

"The conjecture was advanced that the deaths may have been caused by a synergistic [3] action of a group of these substances, all of which were present in too low a concentration to have acted individually." [4]

MORTALITY AND ILLNESS IN LOS ANGELES

In view of the intensity and frequency of smog attacks in Los Angeles County, the question arises as to whether or not deaths or illness have yet resulted from excessive concentrations of air pollution in that area.

Statistical studies of Los Angeles County deaths in relationship to smog intensities in that area have been made both by Dr. Clarence A. Mills,[5] and by the California Department of Public Health.[6]

The findings resulting from these studies are in disagreement, Dr. Mills maintaining that "excess deaths" have occurred in Los Angeles

[2] Testimony of Dr Leslie A Chambers, *ibid*
[3] The term *synergistic* implies an interaction between substances
[4] Testimony of Dr. Leslie A Chambers, *ibid*
[5] Professor of Experimental Medicine, University of Cincinnati
[6] Results of these studies are indicated in the reports issued by the California State Department of Public Health in 1955, 1956, and 1957, entitled 'Clean Air for California"

County as a result of smog attacks and the California State Department of Public Health holding that statistical information collected to date fails to demonstrate any relationship between mortality rates and air pollution attacks.

Findings of Dr. Mills

According to Dr. Mills "there no longer exists a reasonable doubt that Los Angeles smogs are indeed related to very considerable increases in respiratory and cardiac deaths. In *no* adequate test period were these deaths *less* frequent on smoggy days than on nonsmoggy days—always the mean numbers of such deaths were found to be greater on smoggy days of every test period Nor are such excess deaths limited to elderly people—younger age groups also share significantly in the smog periods."[7]

Dr. Mills reports that the occurrence of smog episodes in Los Angeles County have resulted in more than 800 excess deaths in the years 1949, 1953 and 1954:

Year	*Number of excess deaths*
1949	230
1953	281
1954	344
Total	845

Findings of California Department of Public Health

Since November of 1954 the California Department of Public Health has maintained surveillance over limited population groups throughout the State with particular emphasis being placed on such polluted areas as Los Angeles County.

To determine the relationship between mortality and the occurrence of smog, this program has involved studies of the mortality of persons 65 years of age and over, the observation of some 4,000 aged and infirm patients who respond quickly to changes in their environment, in addition to the observation of a more limited number of patients with severe respiratory ailments. The department also has conducted surveys of the total population to determine the relationship between sickness and smog episodes.

Based both on data developed by the department, and on an analysis of Dr. Mill's work and methods, Dr. Lester Breslow, chief of the department's Bureau of Chronic Diseases, has reported that "as yet, we find no convincing evidence that people are dying in Los Angeles because of air pollution."[8] He emphasizes, however, that "the data are as yet really too incomplete to draw any kind of firm conclusions. * * * This is not to say * * * that air pollution is not a factor in the mortality and morbidity of people * * * (but) that, as yet, we find no convincing evidence that this is the case. It may be that our methods are still too crude."[9]

[7] Testimony of Dr. Clarence A. Mills.
[8] Testimony of Dr Breslow, September 26, 1956
[9] *Ibid.*

The department nevertheless regards the occurrence of air pollution as a health problem, for the following reasons as summarized by Dr. Breslow:

1. Because of the immediate and obvious interference of air pollution with the well-being of people, particularly in the Los Angeles Basin.
2. Because of the inherent disaster potential associated with heavy concentrations of air pollution during periods when air supplies are limited, as they frequently are in many areas of California because of weak wind movements and low temperature inversions
3 Because of the possible, but as yet undetermined, long-term and cumulative effects of air pollution on public health.

POSSIBLE LONG-TERM EFFECTS OF AIR POLLUTION

Many medical authorities express the view that increasing air pollution concentrations in urban areas are producing cumulative or long-term effects on the public health.

According to Dr. Breslow, there is recent evidence that environmental factors—such as air pollution—not only are important contributors in the development of lung cancer, but also in the increasing incidence of coronory disease and resultant mortality.

Coronary diseases now account for approximately one-third of all deaths in California, and, during the past 30 years, the mortality rate of lung cancer has doubled every 10 years.

The latter health disturbance has been referred to as "the major modern epidemic." In California, the mortality rate from lung cancer is higher than elsewhere in the Nation, and there is a greater mortality rate from this disease in urban as compared with rural California areas.

Although many factors may contribute to this disturbing situation, Dr. Breslow indicates that "there is increasing evidence throughout the world that urban air pollution may be a factor in the development of lung cancer."

CLINICAL AND CONTROLLED EXPERIMENTAL FINDINGS

Obviously, there is sharp disagreement between some medical authorities as to the validity of assertions that air pollution in California urban areas has been demonstrated, beyond doubt, as a prime causative factor or as a contributor to "excess deaths" during smog episodes. The few official attempts conducted thus far to establish direct correlations involving mortality and morbidity with smog occurrences have failed to produce significant evidence

In the studies conducted by the California Department of Public Health, apparently no clear association of a mortality or morbidity index with smog has been established on the basis of objective evidence.

While studies of this sort have thus far not confirmed the professional and lay conviction that smog constitutes a health hazard, a substantial—if incomplete—body of experimental evidence strongly indicates the capability of some identified constituents of smog to produce

(1) physiological impairments; (2) tissue damage; (3) death in experimental animals and in isolated biological preparations; and (4) alterations in the human pulmonary function as well as reductions in the normal defense mechanisms of the respiratory system.

Countless substances can be found as contaminating substances in the air of urban areas. In Los Angeles, official control attention has focused principally on such materials as hydrocarbons (such as gasoline vapors), sulfur oxides, oxides of nitrogen, ozone, and particulate matter. Some experimental evidence now is available regarding the effects of these substances on human functionings.

Inhalation of irritating substances may result in deposits of contaminants along linings of the respiratory tract and in the lung itself. At best, these deposits can produce transient effects—reducing the natural defensive mechanisms of the respiratory system and heightening the problems already existent in individuals suffering from such respiratory difficulties as asthma and bronchitis.

As indicated by Dr. Paul Kotin,[10] normally the lung has a very efficient method of cleansing itself so that any foreign matter that is breathed in settles out on the linings—the layers of cells that line the bronchial tubes—there to be disposed of harmlessly by natural defense mechanisms. Certain properties of smog, such as oxidants, produce transient interferences with these defensive mechanisms, permitting the pollutant deposits on the linings of the respiratory system to produce varying forms of damage.

According to Dr. Kotin, the irritants in smog "interfere with the ability of the lung lining to clear itself or to move the particles along the lining of the bronchial tubes until they reach the throat, or are swallowed or spit out."

It is Kotin's belief that these interferences with natural pulmonary defense mechanisms are a contributor to the formation of cancer, in that the interference permits the suspected cancer-producing pollutants to deposit themselves on the linings and remain there to do their damage. "Cancers of the lung * * * occur at sites where we have demonstrated that these materials—these cancer producers—settle out and where smog has its major effect on the resistance of the defensive powers of the lung."[11]

Laboratory experiments conducted by Dr. Kotin and his associates at the University of Southern California Medical School indicate strongly also that certain materials contained in Los Angeles smog are capable of inducing lung cancer in experimental animals. The collection of certain partially oxidized aliphatic hydrocarbons (one of the properties of motor vehicle exhausts) along the linings of the respiratory system in laboratory animals is reported by Kotin to result in cell damage leading to the occurrence of multiple cancers capable of spreading to other areas of the body.

Thus, certain properties of air pollution in urban areas—not merely Los Angeles—are capable of reducing the defensive mechanisms of the respiratory system, permitting other pollutants to do possible permanent damage to the system.

[10] Dr. Paul Kotin, University of Southern California Medical School
[11] Testimony of Dr. Kotin, September 25, 1956

Experimentation by the United States Public Health Service and other agencies and researchers also has established that high concentrations of ozone are capable of producing permanent damage to the lung.

An indication of the temporary effect that can be brought about by breathing ozone in a concentration of two parts per million of air for a period of two hours was demonstrated in an experiment conducted on Los Angeles County Air Pollution Control Officer S. Smith Griswold. After spending two hours in a chamber containing such a concentration, Mr. Griswold showed a measurable decrease in his lung volume—a decrease that if experienced by a less healthy or older person might have been capable of causing death or serious discomfort.

Other experiments have demonstrated that the toxicity of ozone may be enhanced by interaction with other materials. This points up a major difficulty in the establishment of safe levels of concentrations for isolated substances. In association with other materials which may, by themselves, be nontoxic, the capability of the first material for producing physiological imbalance may be multiplied. Unfortunately, smog is an association of many susbtances interacting vigorously with one another.

Many substances found in polluted atmospheres, such as those witnessed in many areas of California, have been demonstrated to possess toxic properties. Sulfur oxides, oxides of nitrogen, ozone, carbon monoxide—these and many other materials are toxic and capable of producing damage to human beings, *assuming an exposure to a given concentration of the substance for a given period of time.*

Both the concentration and duration required for a substance to yield a toxic effect may vary as the substance interacts with other materials with which it is associated.

The function of laboratory experiments in this field therefore has been to determine the substances which have toxic properties, and the variable conditions under which the toxicity may be expressed.

AREAS OF INSUFFICIENT KNOWLEDGE

Medical authorities appearing before the committee and offering testimony were in agreement that strong suspicion must focus on air pollution as a cause or contributor to health disturbances. They emphasize, however, that so little information has been collected that few positive conclusions can yet be made, nor can effective air pollution control action yet be taken to prevent the occurrence of possible health problems resulting from contaminants or processes now obscured by reason of the insufficiency of information and specific data.

The authorities were unanimous in the view that increased activity should be sponsored along these lines:

1. To determine whether air pollution, as experienced now or in the future, contributes to health disturbances. This can be determined by epidemiological studies involving the close surveillance of substantial groups in the community by statistical methods, and by pathological and clinical experimentation.

2. The substances capable of inducing damage to human beings must be identified. Many materials already have been determined as toxic. These, however, by no means represent a complete coverage of all the pollutants found in an urban atmosphere.
3. The conditions under which any given substance can do damage to human beings must be determined. This involves extended clinical study on laboratory animals to determine the variable concentration/duration factors bearing on the toxicity of the substance, as well as the effects realized when the material enters into reactions with other substances
4. Means must be developed for determining the presence and the concentrations of these substances in urban atmospheres. The science and art of air monitoring and contaminant measurement apparently is yet in its infancy.

A practical example of the manner in which these deficiencies in information have affected a needed public program is found in the Los Angeles County Disaster-Prevention program.

LOS ANGELES COUNTY DISASTER-PREVENTION PROGRAM

The occurrence of prolonged and severe attacks of smog in the Los Angeles Basin over the past several years produced an expression of need for effective preventive measures to forestall the occurrence of such air pollution disasters as occurred in London, Donora, and Belgium's Meuse Valley.

As evolved by Los Angeles County officials in early 1955, the disaster prevention program provides for the declaration of a "smog alert" when the concentrations of any of four specific toxic substances reach a prescribed level, based on a defined standard.

Three alert stages have been established by law—a first alert level primarily for warning purposes, and second and third alert levels during which the Control District is authorized to seek the closure of industrial establishments and the halting of motor vehicle traffic

A master shut-down plan for industrial operations has been prepared by the district and is held in readiness in the event second or third alert levels ever should be reached. If this happens, shut-down instructions will be sent over a special radio communication network directly to the plants affected.

Linking the district with the plants are several hundred selective radio receivers installed in industrial plants and tuned to a special frequency broadcast by the district's central dispatch center. There, a master panel permits the dispatcher to activate selected receiving sets throughout the county, insuring that the proper message is broadcast to the proper sources.

The basis for the entire "alert" program is the air monitoring program.

Four toxic substances, selected by a special scientific committee composed of medical and air pollution experts, are measured by the district on a continuous basis.

The contaminants which can trigger an alert, and the levels at which a "first alert" is called are:

Ozone	0.5 part per million parts of air
Carbon monoxide	100.0 parts per million parts of air
Nitrogen oxides	3.0 parts per million parts of air
Sulfur oxides	3.0 parts per million parts of air

The only contaminant ever to reach an "alert level" in the Los Angeles Basin is ozone.

In 1955, the first year of the "alert" program, 15 first alerts were declared while 10 were called in 1956.

No second alert levels have yet been reached, although on September 13, 1955, ozone values rose in the industrial section of Vernon to a high of 0.9 part per million parts of air—only 0.1 part less than is necessary for the declaration of a second alert

In view of the present concentration standards, most air pollution authorities feel that ozone is the only substance included in the alert program for which alerts ever will be called. The atmospheric concentrations of the other three toxic substances always have measured well below the level required for the declaration of alerts.

The highest concentrations of these four toxic substances ever measured in Los Angeles are:

Ozone	0.9 part per million of air (September 13, 1955)
Carbon monoxide	83.0 parts per million of air (September 26, 1956)
Nitrogen oxides	1.7 parts per million of air (September 17, 1953)
Sulfur oxides	2.5 parts per million of air (June 27, 1957)

District officials emphasize that the single criterion upon which the "alert" program is based is the capacity of *individual* contaminants to cause health disturbances.

Air Pollution Control Officer Smith Griswold cautions that "there is a lot the medical experts don't yet know about the effects of air pollution on the public health. As new knowledge is gained, the alert program will be adjusted and revised to keep pace with scientific advances."

The law establishing the alert program created a 15-member scientific committee composed of medical and air pollution experts. Appointed by the board of supervisors, it is this committee which has the responsibility for naming the contaminants to be used as "triggers" for the alert system, and for determining the concentrations which the contaminants must reach before alerts are actually declared. Their recommendations are enacted into law by the board of supervisors.

Dr. Stafford Warren,[12] who served as chairman of the scientific committee which evolved the alert program, reports that the Los Angeles Disaster Prevention Program was evolved "on the basis of the best educated guesses of a large body of men. * * * It had to be, in a sense, partly experimental, because * * * there was no real data There were some guesses that could be made on some past experience and a few data that the district had collected."

Dr. Warren reports that existing medical knowledge regarding "safe" concentrations of known toxic substances is very limited, and has been derived principally from the field of industrial hygiene—

[12] Dr. Stafford Warren, Dean of the Medical School, U. C. L. A.

which is concerned with the establishment of "safe" contaminant concentration standards in working establishments.

In discussing the problems involved in designing the program, Dr. Warren indicated that the selection of substances to trigger smog alerts was based on their known toxicity at certain concentrations, on the availability of means to measure their concentration in the atmosphere and on the basis of the levels which were known to exist in the Los Angeles atmosphere.

Officials of the APCD report that the disaster prevention program will be subject to revision in the future as new medical and scientific data are developed which provide a basis for improvement. Notable among the weaknesses in the present system are:

1. The prescribed concentration standards necessary for the declaration of alerts do not take into account the possible toxic effects realized through the interaction and combination of many different contaminating substances present in smog. Information on toxicity levels presently is confined to the effects of single contaminants.
2. When contaminant concentrations reach alert levels, it is quite possible that the cause of the increased concentration is beyond control—that the material capable of producing health damage already has been emitted into the air and exists in adequate concentrations to cause damage in spite of any source control efforts that may then be undertaken.
3. It is not yet certain that all of the proper and significant substances have been included in the alert program. Some significant materials may not yet have been identified or their toxicity may not yet have been determined.

Air pollution and medical authorities appearing before the committee were in agreement that substantial research was necessary to develop information and data needed to devise realistic and workable disaster prevention programs with a high potential for preventing the occurrence of such wide-spread disturbances as have occurred in London and other metropolitan areas.

III

EXISTING AIR POLLUTION RESEARCH AND CONTROL PROGRAMS

Research or abatement programs concerned with air pollution now exist—at least in rudimentary form—at federal, state, and local levels of government.

The enactment of state enabling legislation in 1947 permitted the creation of a County-wide Air Pollution Control District in Los Angeles County that year, and the later creation of similar districts in other counties of the State.

Faced with a local problem of some import early in their program—Los Angeles County officials launched research programs to determine the causes of the most obvious problems associated with air pollution attacks In the years that have passed since the beginning of this program, the work begun—and largely completed—through the efforts of that agency have led to significant determinations as to the causes of eye irritation, plant damage, reductions in visibility, rubber cracking, and other nuisance problems associated with smog attacks.

Continued increases in the scope and severity of smog episodes throughout the Los Angeles metropolitan area, and the occurrence of similar problems in other areas of the State led to a preliminary statewide survey of air pollution problems by the State Department of Public Health in October, 1954. At the same time, the interest of the Federal Government officially was drawn to air pollution problems throughout the Nation, and in particular, to those occurring in the metropolitan areas of California.

The following year both the California State Legislature and the U. S Congress enacted legislation authorizing the conduct of air pollution programs within their respective departments of public health. Not until this action was taken had serious state or federal attention been focused on the public health aspects of air pollution episodes

Local, county, and municipal jurisdictions traditionally have been concerned with the more obvious nuisance problems posed by air pollution attacks, and, as in Los Angeles, have organized research, development, and abatement programs aimed at reducing or eliminating the occurrence of these phenomena.

Currently, there are several programs concerned with the effects of air pollution on human beings. The research is divided into two main categories:

1. Laboratory and clinical experimentation to determine the specific effect(s) of individual contaminants or groups of contaminants on animal or human tissues.

2. Epidemiological studies involving the analysis and interpretation of mortality and morbidity statistics in relationship to the occurrence of air pollution episodes—both on a short term and a long range basis. These studies can be termed an environmental approach to the problem and are concerned with the study of substantial population groups through scientific analysis and individual interviews.

PROGRAM OF THE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH

The projects and programs undertaken by the California Department of Public Health are confined to epidemiological studies and involve no clinical experimentation. This work was begun in November, 1954, through the allocation of emergency funds from the Governor's Budget, and was continued through specific legislative authorization that extended the program the following year. Appropriations for these studies have averaged approximately $80,000 per year.

The projects sponsored by the department are as follows:

1. Study of mortality statistics in relation to air pollution episodes: This project involves the study of mortality rates in relationship to air pollution episodes, particularly in Los Angeles County Particular emphasis has been placed on statistics regarding the aged and the infirm—individuals who are particularly susceptible to changes in their environment.
2. A study of morbidity, involving the relationship between sickness and the occurrence of air pollution. This project has included two surveys of the total California population—the California Health Survey of 1954-55 and another completed in 1955-56.
3. A long term study of mortality among a substantial segment of the California population in which an attempt is being made to compare mortality rates of persons living in California for more than 10 years with the mortality of persons living here shorter periods of time. This study is particularly concerned with mortality resulting from lung cancer, and therefore is partially supported by financial assistance from the American Cancer Society.

PROGRAM OF U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE

It was the inauguration of the federal program on air pollution-related medical research in 1955 that provided the first substantial emphasis to this important field. For all purposes, the program has involved expenditures averaging in excess of 2 million dollars per annum since the Fiscal Year 1956, a portion of which is devoted to public health research.

Financial support from the Federal Government and from such national health organizations as the American Cancer Society has been

responsible for the research work accomplished in determining the effects of specific contaminants on human and animal tissues.

The work of Dr. Paul Kotin, involving the carcenogenic effects of certain pollutants on animal tissues in the lung and respiratory system, and the activity of Dr. Hurley Motley, regarding the cellular disturbances resulting from exposure to air pollution, are supported by the Federal Government. In addition, the Public Health Service has sponsored or supported research projects to determine the toxicity of ozone, oxides of nitrogen, and other substances.

PROGRAMS OF LOCAL CONTROL AND RESEARCH AGENCIES

Air pollution control districts now have been organized in Los Angeles County, the San Francisco Bay area, and in San Bernardino, Riverside, Orange, San Diego, and other Counties Air Pollution Research Projects in nonmedical fields are conducted by the Los Angeles County Air Pollution Control District, the Stanford Research Institute, the Air Pollution Foundation, private industrial associations and various agencies of the State of California

The Los Angeles County Air Pollution Control District currently expends nearly $4,000,000 per year on its total program. Of this amount, slightly less than $1,000,000 is devoted to research projects centering principally on the development of control remedies for motor vehicle exhausts and on the evolution of a land-use planning and zoning program aimed at minimizing the effects of air pollution from specific source areas.

The Air Pollution Foundation, Stanford Research Institute, and industrial associations are estimated to spend nearly $2,000,000 per year on air pollution research—virtually none of which is related to medical or public health considerations.

The University of California operated on a total budget of approximately $820,000 during the Fiscal Year 1956-57 (reduced to $693,219 the next year). These funds provided necessary financial support for engineering studies and for research projects concerned with the effects of air pollution on vegetation.

Studies which have been conducted to determine the response of plants to air pollution episodes are looked on as a model which might be followed in public health research activities. Many of the cellular reactions of plants to specific contaminants are believed to correspond closely to the response of animal and human tissues.

Permanent damage to plant cells has been demonstrated to result from a variety of contaminants found in "smog" and in the air of many California areas. Indeed, much of the progress made in determining the causes of the nuisance properties of smog resulted from plant research—which also laid the groundwork for many of the intensive air pollution control regulations now in effect in Los Angeles County and elsewhere.

EVALUATION OF EXISTING RESEARCH

All authorities testifying before the committee expressed strong dissatisfaction and dissapointment in the lack of progress made to determine the effects of air pollution on the public health.

Principal among the reasons for the discouraging progress has been the lack of official interest in the problem as reflected in financial support for needed projects.

According to Dr. Lester Breslow . "The principal defect in our work up to the present time has been its fragmentary nature. We have many little pieces. What we have done, essentially, is to make a quick scanning of the situation, and the need is for comprehensive and continuous data collection "

The quality of urban atmospheres may be considered by two extremes At one end of the scale is absolute air purity, a standard completely unattainable in a modern industrial society At the other end of the scale is completely unbreathable and useless air—contaminated to a degree where its use results in hazards to health, in economic loss, and in substantial community-wide nuisances In between these two extremes is the "grey zone," where lack of adequate scientific information prevents the establishment of acceptable standards of air quality. An acceptable standard implies a level of air quality where no nuisances, no economic losses, and no health hazards would be present. It represents the *attainable* goal of air pollution control.

To date, air pollution research efforts have focused primarily on determining the causes of the nuisance properties of smog, such as reduced visibility, eye irritation, plant damage, deterioration of rubber products, and damage to various other types of property Research to identify the human health responses to air pollution represent the "stepchild," the forgotten or ignored area of this total field.

Testimony before the committee implied strongly that air pollution will be a continuing problem in industrialized urban areas—if not in its present form, then in another. In this sense, continuing air pollution-related health problems will be unavoidable unless the harmful contaminants are identified, means of determining their presence and concentration in the atmosphere developed, and suitable source controls instituted.

Not only are there critical needs for the inauguration of new and more comprehensive medical research projects, but there also is great demand that there be an active partnership between the medical phases of air pollution and the engineering or control phases. This indicates a need for closer organizational and program co-ordination at a level where information in both areas can be tunneled to the proper organizations and individuals so as to contribute to the maximal benefit of the community.

Ultimately, the objective of medical research is the establishment of atmospheric toxicity standards for whole groups of contaminants so that engineering and control officials can then establish the necessary source emission rates which will maintain atmospheric concentrations at less than toxic or nuisance levels.

Since there are substantial time lags necessary to activate medical research projects—even after the provision of adequate financial support, future progress in this area will be slow, if continued on the present basis.

Several steps appear necessary to assure maximal progress:

(1) Improved organization at the state level to assure proper planning, direction and evaluation of research work and to guarantee the communication of medical and other air pollution data to proper engineering and control agencies.

(2) Increased financial support on a constant and continuing basis. Many medical research programs will require a period of years to complete, thus necessitating an assured and continuing source of financial support.

When asked what success could be expected from medical research projects in the field of air pollution, Dr. Clinton Thienes, a member of the Los Angeles County Air Pollution Control District's Scientific Committee, responded as follows:

> We have no guarantee, except past experience with other types of research. There are a number of medical problems which, when I was in medical school, had no solution. We knew very little about them, and today they are either solved or close to being solved.
>
> For instance, about all we knew about poliomyelitis when I was a medical student was that it was caused by a virus which attacked certain parts of the central nervous system, period! Today we know more about the virus. It isn't a single virus, but at least three strains. Not only that, but we have been able to make a vaccine.
>
> Now, most of this knowledge has developed since the Foundation for Infantile Paralysis was organized, not very many years ago. It has cost quite a number of millions of dollars, and many people working, but something really worth while has been accomplished in the field of poliomyelitis.
>
> The congenital heart disease, the valvular and other structural defects in the heart, when I was a medical student were just interesting things from the medical point of view, and something to arouse your sympathy for the child and the families, but you could do nothing about it. You just waited for the child to die Today we can operate upon many of these defects, correct them, and give the child a chance for a normal life.
>
> This has come about through research in my day, in my professional day.
>
> The matter of vitamins and their relation to nutritional disease, almost all of it developed since I was a medical student.
>
> And the same with most of the hormones. Insulin was discovered while I was in medical school. People worked on diabetes and efforts of treatment for many, many years. Its chemical characteristics were the development of the previous century, but it took 25 years of the present century before insulin was actually brought to any state of perfection, and it is still being improved, and now we are making new studies in the field of diabetes because of certain compounds related to the sulfonamides, which can be given by mouth, and relieve certain types of diabetic cases.

The point is that there are numerous instances in recent medical history where conditions that were not understood or not responsive to therapy a few years ago, are now under control, or actually being eliminated Many infectious diseases are almost a thing of the past.

The medical student today rarely sees typhoid or diphtheria or smallpox. These all have disappeared in this century.

So I am just as confident as I can be of anything in the future, that the type of research that is being initiated recently, the type that is being initiated in the air pollution control district here, and similar studies elsewhere, the type of thing Dr. Kotin, Dr. Motley, Dr. Bryan, and many others, are doing in the biological field, will within a very few years bring us results which will make it possible for us to protect the citizenry against this thing which we now call smog.

IV

COMMITTEE CONCLUSIONS AND RECOMMENDATIONS

FINDINGS

Health Factors of Smog

1. There is at present insufficient data on what constitutes our California smog, on the specific components of smog, and the interaction between these components. Because of this lack of knowledge it is impossible to establish specific criteria concerning the effect of air pollution on health.
2. There is an immediate disaster potential in California smog which could, if given the right conditions, be as serious as the London, England, and Donora, Pennsylvania, deaths.
3. There is a long-range health problem with California smog The effect of ozone on the lungs and bentzpyrene as a cargenogenic factor represent what could easily be a long-term health problem.
4. There is no coordinated research program in the field of air pollution between federal, state and local government and private research groups.
   (a) While the engineering program is by far the most active, it is still, in terms of the total problem, inadequate, and there is a need for the coordination of efforts at some level.
   (b) The medical research program is very weak, strikingly so when one considers what the medical effects of air pollution could be.
5. There is no regular research program with continuing funds. There is no coordination of effort at any level.

RECOMMENDATIONS

The Health Effects of Air Pollution

1. That there be some definite statewide policy concerning the overall problem of air pollution in California
2. That the primary purpose of state policy be not to usurp local jurisdiction but to aid local jurisdiction in the establishment of air pollution districts, and in the co-ordination of efforts through the pooling of information.
3. That the statewide efforts in the field of air pollution be channeled through the State Department of Public Health.
4. That the State co-ordinate, on a volunteer basis, federal, state, local and private efforts in the field of air pollution, both in terms of active programs and cataloging all present available information
5. That the state act in a voluntary capacity in collecting funds for air pollution research and the dispersing of funds for air pollution research.

   And last,
6. That the State immediately expand its activities in the development of a sound health program in the field of air pollution.

RECOMMENDED LEGISLATION

AMENDED IN ASSEMBLY MAY 29, 1957

AMENDED IN ASSEMBLY MAY 24, 1957

AMENDED IN ASSEMBLY APRIL 23, 1957

AMENDED IN ASSEMBLY APRIL 12, 1957

CALIFORNIA LEGISLATURE—1957 REGULAR SESSION

ASSEMBLY BILL No. 1772

Introduced by Messrs. Rees, Johnson, Wilson, Grant, Cunningham, Dills, and Rumford

January 18, 1957

REFERRED TO COMMITTEE ON GOVERNMENTAL EFFICIENCY AND ECONOMY

An act to add Article 8.5 (commencing with Section 421) to Chapter 2 of Part 1 of Division 1 of the Health and Safety Code, relating to air pollution research, and making an appropriation.

The people of the State of California do enact as follows:

SECTION 1. Article 8.5 (commencing with Section 421) is added to Chapter 2 of Part 1 of Division 1 of the Health and Safety Code, to read:

Article 8.5 Air Pollution Research

421. The Legislature endorses the action of the Congress of the United States in enacting legislation (69 Stats. 322, 42 U. S. C. Sec. 1857 and following) authorizing the Secretary of Health, Education, and Welfare and the Surgeon General of the Public Health Service to encourage cooperative activities by state and local governments for the prevention and abatement of air pollution; to collect and disseminate information relating to air pollution and the prevention and

abatement thereof; to conduct, and support and aid the conduct of by state and local government air pollution control agencies and private research agencies, technical research to devise and develop methods of preventing and abating air pollution; and to make available to such state, local, and private agencies the results of surveys, studies, investigations, research, and experiments relating to air pollution and the prevention and abatement thereof.

421 1. The Legislature finds and declares that it is necessary to the health, safety, and welfare of the people of this State to provide means for initiating, conducting, and coordinating programs of research into the sources, causes, effects, prevention, and abatement of air pollution.

421 2. "Council," as used in this chapter, means the Air Pollution Research Council.

421 3 "Air pollution," as used in this chapter, means the presence in the outdoor atmosphere of substances in quantities which are injurious to human, plant, or animal life, or which unreasonably interfere with the comfortable enjoyment of life and property throughout the State and in such portions of the State as shall be affected thereby, and excludes all aspects of employer-employee relationship as to health and safety hazards.

422. There is hereby created in the State Department of Public Health the Air Pollution Research Advisory Council.

422 1. The council shall consist of the Director of Public Health, who shall act as chairman, and 11 other members appointed by the Governor, who preferably are skilled and experienced in the field of air pollution, of whom one shall be a scientist in the field of air pollution, one a physician and surgeon licensed as such under the laws of this State, one a representative of California industry, one a representative of California labor, one a scientist in the field of agriculture, one a representative of the counties in this State, one a representative of the cities in this State, two representatives of the air pollution control districts in this State, one a representative of the University of California, and one a representative of a private institution of higher learning in the State. The members appointed by the Governor from representatives of the air pollution control districts shall be so appointed as to afford representation from districts encompassing the two largest urban areas of the State.

422.2. In addition to the members of the committee provided for in Section 422.1, a representative of the United States Department of Health, Education, and Welfare, when designated by the secretary of that department, may serve thereon in an advisory capacity, without compensation

422.3. The terms of the first appointed members shall expire as follows: three on September 1, 1958, three on September 1, 1959, three on September 1, 1960, and two on September 1, 1961. Every member appointed thereafter shall serve for a term of four years

An appointed member shall serve for the term for which he is appointed and until the appointment and qualification of his successor.

A vacancy in the term of an appointed member shall be filled immediately by the Governor for the balance of the term in which it occurs.

422.4. The members of the council, other than the director, shall receive no compensation for their services, but shall be allowed their actual necessary traveling expenses incurred in the discharge of their duties.

422.5. A majority of the members of the council constitutes a quorum for the transaction of business and may act for the council.

422.6. The department, after consultation with the council, may appoint such professional, secretarial, and other employees as it determines necessary to carry out the provisions of this article.

422.7. The department, upon recommendation of the council, shall appoint such study committees and technical consultants as it determines to be necessary. The members of such committees and such consultants shall receive no compensation for their services, but shall be allowed their actual necessary traveling expenses incurred in the discharge of their duties.

422.8. The council shall meet at least once every three months and at such other times as they are called by the chairman.

423. The department, upon recommendation of the council·

(a) Shall initiate, conduct, and develop a program of research, surveys, and studies into the causes, effects, prevention, and abatement of air pollution within this State; and shall aid and coordinate the activities in those regards of all State and local agencies and of private agencies.

(b) Shall prepare and publish from time to time reports of research, surveys and studies together with its recommendations in regard to needed research in air pollution.

(c) Shall, at least once every two years, submit a report to the Governor and the Legislature on its activities under this article together with its recommendations in regard to needed research in air pollution.

(d) May cooperate and contract with any federal, state or local governmental agency or any private agency or individual, to the extent that it may be necessary or proper for it to do so in the accomplishment of the purposes of this article.

(e) May receive and accept grants-in-aid or other contributions in the form of money or other property, from any federal, state or local governmental agency or from any private agency or individual in order to carry out the purposes of this article.

SEC. 2. There is hereby appropriated from the General Fund in the State Treasury, to the Department of Public Health, in augmentation of Item 200 of the Budget Act of 1957, the sum of one hundred fifteen thousand dollars ($115,000), of which not more than the sum of forty thousand dollars ($40,000) shall be expended *for administration* and not more than seventy-five thousand dollars ($75,000) for research contracts with other agencies.

APPENDIX

Exhibit 1—List of approved projects by the Department of Health, Education and Welfare, United States Government for year 1955-1956

Exhibit 2—Legislative Counsel's opinion concerning activities of State in conducting and financing research in the field of air pollution.

Exhibit 3—Legislative Counsel's open summary of powers of Governor

Exhibit 4—Paper by Dr. Clarence Mills "Respiratory and Cardiac Deaths in Los Angeles Smog"

Exhibit 5—Critique by Department of Public Health, State of California.

Exhibit 6—Letter from Dr. Mills dated October 31, 1956, concerning additional data regarding Los Angeles smog.

EXHIBIT 1

LIST OF APPROVED PROJECTS BY THE U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE, 1955-1956

Grant No	Title	Investigator	Institution	Amount
S-1	"The Design and Organization of a Study to Relate the Incidence, Prevalence, and Prognosis of Human Disease to Air Pollution in an Urban Area"	Dorst, Stanley E	University of Cincinnati	$69,209
S-2	"A Comprehensive Study of the Effects of Air Pollution on Health"	Molner, Joseph G	Detroit Department of Health	20,000
S-3	"Determination of Acute and Subacute Biologic Effects of Air Pollutants"	Kotin, Paul	University of Southern California	10,982
S-4	"The Effect of Atmospheric Contaminants on Man"	Call, Richard H , Greenwood, Delbert A	Utah State Agricultural College	43,107
S-5	"Classified Bibliography on Atmospheric Pollution with Particular Reference to its Effects on Man"	Thomson, Maurice L , Campbell, Irene	University of Cincinnati	11,730
S-6	"Particulate Air Pollutants Resulting from Combustion"	Tebbens, Bernard D	University of California, Berkeley	14,375
S-7	"Absorption Routes of Inhaled Air Contaminants Intestinal vs Pulmonary Deposition"	Brieger, Heinrich	Jefferson Medical College of Philadelphia	11,126
S-8	"The Physiologic Response of Animals and Human Subjects to Atmospheric Pollutants"	Amdur, Mary O	Harvard College	14,634
S-9	"Investigation of the Effect of Breathing Smog Air on Pulmonary Function in Man"	Motley, Hurley L	University of Southern California	36,784
S-10	"Atmospheric Pollution by Aeroallergens"	Hewson, E Wendell, Sheldon, John M.	University of Michigan	63,420
S-12	"Chemical Identification of Sub-micron Particles"	Byers, Horace R.	University of Chicago	17,013
S-13	"Critical Investigation of Air Pollution Sampling Procedures R-Dispersion and Effects of Airborne Industrial Wastes"	Hendrickson, E R	University of Florida	24,815
S-14	"Dimensions of Eye Irritation"	Merrifield, Philip R	University of Southern California	17,217
S-16	"Characterization of Sulfur-containing Compounds in the Atmosphere near Kraft Pulp Mills"	Reynolds, William E ; Kusian, Ross N.	University of Washington, Seattle	15,329
S-17	"A Plant Bio-Assay Method for Identifying the Chemical Components of Smog"	Bobrov, Ruth Ann	Los Angeles County Air Pollution Control District	6,340
S-18	"Design of Referee Method for the Determination of Trace Concentrations of Ozone in Air"	Reynolds, William E.	University of Washington, Seattle	4,994
S-20	"A Study of the Possible Predisposition to Pulmonary Infection by the Irritative Action of Smog"	Bryan, Fred A , Carpenter, Charles M	University of California at Los Angeles	32,563
S-21	"The Effect of Air Pollutants Singly and in Combination on Rapidly Growing Tissues with Animal Species with and without Virus Infection"	Quilligan, James J , Kotin, Paul	College of Medical Evangelists	20,579
S-23	"A Basic Study of Air Cleaning Engineering and Evaluation"	Jordan, R C , Algren, A B	University of Minnesota	21,589
S-27	"Influence of Air Pollutants on Cardiorespiratory Performance"	Hatch, Theodore F	University of Pittsburgh	28,112

EXHIBIT 2

LEGISLATIVE COUNSEL'S OPINION CONCERNING ACTIVITIES OF STATE IN CONDUCTING AND FINANCING RESEARCH IN THE FIELD OF AIR POLLUTION

STATE OF CALIFORNIA
OFFICE OF LEGISLATIVE COUNSEL

SACRAMENTO, CALIFORNIA

November 16, 1955

HONORABLE THOMAS M. REES
1135 S. Beverly Drive
Los Angeles 35, California

Air Pollution—#634

DEAR MR. REES: You have asked us to outline the activities of the State in conducting or financing research with respect to the medical and health aspects of air pollution, including appropriations to state agencies, grants to universities, and any such research activities by state agencies.

Section 425 of the Health and Safety Code (as added by Stats. 1955, Ch. 1312) provides:

> "The State Department of Public Health shall maintain a program of air sanitation, including, but not limited to:
>
> "(a) The conduct of studies to determine the health effects of air pollution;
>
> "(b) The determination of the physiological effects of air pollution upon plant and animal life;
>
> "(c) The determination of factors responsible for air pollution;
>
> "(d) The monitoring of air pollutants;
>
> "(e) The development of administrative means of control of air pollution in emergencies;
>
> "(f) Assistance to local agencies in effectuating all of the subdivisions of this section."

In order to carry out its duties regarding air sanitation, the department is authorized to enter into agreements with public or private organizations or individuals (Sec. 426, H and S. C., as added by Stats 1955, Ch 1312).

It is to be noted that an appropriation of $250,000 has been made in the Budget Act of 1955 to the department for air pollution investigations (Item 195 of the Budget Act of 1955; see State of California Budget for the Fiscal Year July 1, 1955 to June 30, 1956, Submitted by the Governor to the Legislature, page 738, line 49). With regard to this expenditure for air pollution investigations, the analysis in the Budget submitted by the Governor stated (State of California Budget for the Fiscal Year July 1, 1955 to June 30, 1956, Submitted by the Governor to the Legislature, at page 762, lines 46 to 51, incl.):

> "This program includes investigation of the health effects of air pollution in California and assistance to local agencies in the measurement and control of air pollution and its effects. Epidemiologic studies are conducted to determine the extent to which

mortality, illness, and health impairment result from air pollution. Assistance is provided local agencies in procedures for measuring the extent, distribution and sources of air pollution, and in procedure for achieving control. Assistance is also provided to local agencies in establishing systems for the surveillance of illness from air pollution as the basis for emergency and long-range measures."

We might point out that the Department of Public Health commenced studies and investigations in the field of air pollution during the 1954-1955 Fiscal Year through an allocation of $100,000 from the Emergency Fund.

The Legislature has also appropriated a total of $304,200 from the General Fund to the University of California for air pollution research (Stats 1955, Ch. 507; Item 103 of the Budget Act of 1955).

Further, the Assembly Interim Committee on Public Health has been directed to continue its study of air pollution and report thereon to the Assembly not later than the fifteenth day of the 1957 General Session (H R 185, 1955 Assembly Journal p. 5812).

We are aware of no other activities of the State in conducting or financing research on the medical or health aspects of air pollution.

Very truly yours,

RALPH N. KLEPS
Legislative Counsel
BY /S/ MALCOLM R. HERSKO
MALCOLM R. HERSKO
Deputy

EXHIBIT 3

LEGISLATIVE COUNSEL'S OPEN SUMMARY OF POWERS OF GOVERNOR

STATE OF CALIFORNIA
OFFICE OF LEGISLATIVE COUNSEL

SACRAMENTO, CALIFORNIA
November 16, 1955

Summary of Powers of Governor Under California Disaster Act re Emergencies Resulting From Air Pollution—#634

In 1955 the provisions of the California Disaster Act (Secs. 1500 to 1601 *) were extended to disasters and states of extreme emergency resulting from air pollution (Secs 1500 and 1505, as amended by Stats. 1955, Ch. 845).

1. General Provisions

Under this act the Governor is empowered to proclaim a state of extreme emergency in a region affected or likely to be affected when (a) disaster conditions described in Section 1505 exist, and either (b) he is requested to do so by local authority or (c) he finds that the local authority is inadequate to cope with the peril. The proclamation must be in writing and publicized (Sec. 1580). With regard to air pollution the conditions described in Section 1505 are those which, by reason of their magnitude, are or are likely to be beyond the control of the protective services, personnel, equipment and facilities of any single local authority and require the combined forces of a mutual aid region to combat.

During the state of extreme emergency the Governor has complete authority over all agencies of State Government and the right to exercise within the designated area all police power vested in the State. He is authorized to issue and enforce rules, regulations and orders necessary to protect life and property. The rules may be prepared in advance but shall not become operative until the Governor proclaims a state of extreme emergency (Sec. 1581).

The Governor may assign any activity of disaster preparedness to any state agency with related powers and duties (Sec. 1540).

The Governor may cooperate with officials of other states and of the United States in preparing plans to preserve life and property and enter into plans for mutual aid during any state of extreme emergency. The Governor may assign activities of an interstate nature to agencies which have related powers and duties (Sec. 1582).

During such state of extreme emergency the Governor is authorized to commandeer or utilize any private property or personnel deemed by him necessary to carry out his responsibility. The Governor may not commandeer newspaper facilities (Sec. 1585).

The Governor, acting for the State, may accept from the Federal Government or any person, firm, or corporation any services, equipment, supplies or funds by way of gift, grant or loan for purposes of civil defense; the Governor may authorize any officer of the State or

* All section references are to the Military and Veterans Code

of the political subdivision to receive such services equipment, supplies, or funds and subject to the terms of the offer (Sec. 1508).

The Governor is to enter into cooperative agreements with cities and counties for the housing and return of transient minors (Sec. 1509.5).

In carrying out the provisions of the California Disaster Act the Governor may:

(a) Procure and maintain offices where necessary and convenient,

(b) Acquire real or personal property,

(c) Cooperate and contract with public and private agencies for such acts, services and facilities as may be necessary and proper,

(d) Do such other acts and things as may be necessary and incidental to the exercise of powers and discharge of duties under this act (Sec 1509.6).

The Governor is empowered to make expenditures from any appropriation for support of the California Disaster Act or Civil Defense Act of 1950 (Sec. 1509.9).

The provisions of the California Disaster Act do not modify the Governor's power to proclaim a state of insurrection or the existence of martial law as otherwise provided (Sec. 1588).

The Governor's powers with respect to a state of extreme emergency terminate when:

(1) The Governor has failed to call a meeting of the Disaster Council within seven days of the proclamation, or

(2) The Governor has not convened the Legislature within 30 days after proclaiming the state of extreme emergency (Sec. 1589).

The state of extreme emergency is ended by the proclamation of the Governor or the concurrent resolution of both houses of the State Legislature (Sec. 1506).

2. *State Disaster Council*

The Governor is a member of the Disaster Council (Sec. 1510) and ex officio chairman (Sec. 1512). The Governor appoints five of the 10 Disaster Council members from bodies specified in Section 1510.

The Disaster Council meets at the call of the Governor (Sec. 1513).

The Governor may establish a committee of the heads of state departments or agencies to aid him or the Disaster Council in accomplishing the purposes of the California Disaster Act (Sec. 1514).

3. *Office of Civil Defense*

The Governor may assign part or all of his duties to personnel in his office whom he shall designate as the office of civil defense (Sec. 1518). The Governor appoints and fixes the salaries of these employees (Sec. 1518.1).

The Governor designates the person to be the Director of Civil Defense and may delegate any of his powers to the director (Sec. 1518.2)

4. *Advisory Committees*

The Governor may create advisory committees for civilian protection, war services and disaster preparedness. The committees are wholly advisory and shall receive no compensation (Sec. 1520).

5. Mutual Aid Regions

The Governor may, with the advice of the Disaster Council, divide the State into mutual aid areas (Sec. 1560). During a state of extreme emergency the Governor may exercise authority over the use of state personnel and equipment as he sees fit (Sec. 1563).

6. Powers of the Governor Granted by the Civil Defense Act of 1950

The powers granted by the Civil Defense Act are in addition to those granted by the Disaster Act (Sec. 1535).

The Governor may make, amend, or rescind necessary orders, rules and regulations to carry out the provisions of the Disaster Act and Civil Defense Act. The Governor may conduct test exercises (Sec. 1535.1).

The Governor may coordinate the civil defense plans of the State and integrate them into the civil defense plans of the Federal Government (Sec. 1535.2).

In accordance with the civil defense plan the Governor may:

(a) Ascertain requirements for food and clothing and other necessities of life in case of attack

(b) Plan for and procure supplies, medicines, and equipment.

(c) Use any of the property, services, and resources of the State.

(d) Make surveys of the industries, resources, and facilities within the State.

(e) Institute training programs and public information programs.

(f) Plan for the use of private facilities, services and property and to provide for payment when in fact used.

(g) Take preparatory steps, including partial or full mobilization of defense organizations in advance and including the ordering of test exercises.

(h) Provide for mobile support units (Sec. 1535.3).

The Governor may cooperate with the federal authorities in matters pertaining to the civil defense of the State and Nation (Sec. 1535.4).

The Governor shall confer with national defense agencies with respect to standardizing matters of civil defense including such matters as identification cards for defense workers, passes for emergency vehicles, warning signals, and report forms. The Governor may put into effect the necessary rules and regulations (Sec. 1535.4).

The Governor may enter into reciprocal aid agreements or compacts with other states or the Federal Government or a neighboring province of a foreign country The agreements are limited to the furnishing or exchange of:

(a) Food, clothing, medicine, or other supplies.

(b) Engineering services

(c) Emergency housing

(d) Police services.

(e) National Guard, while under state control, or state militia

(f) Health and medical services.

(g) Fire fighting, rescue, transportation, and construction services and equipment.

(h) Personnel necessary to provide or conduct these services.

(i) Any other supplies, equipment, facilities, personnel and services as may be needed (Sec. 1535.5).

At any time the Disaster Council is not meeting, the Governor may

(a) Consider and approve mutual aid plans and agreements;
(b) Certify, as accredited, disaster councils.

At each meeting of the Disaster Council, the Governor shall report any action taken under either (a) or (b) above (Sec. 1535.6).

7. Succession of the Governor to Certain Powers and Duties

The Governor is the successor of the State Director of Civilian Defense, the State Director of Civilian Protection, the State Director of Civilian War Services and the Director of the California State War Council (Sec. 1530).

The Governor has the duties and powers of the State Council of Defense (Sec. 1509.8).

RALPH N. KLEPS
Legislative Counsel
By MALCOLM R. HERSKO
Deputy

EXHIBIT 4

RESPIRATORY AND CARDIAC DEATHS IN LOS ANGELES SMOG

By C. A. Mills, M D., PH.D., Professor of Experimental Medicine,
University of Cincinnati

In order to be doubly certain that Los Angeles smogs carry a significant hazard to community life, we have given careful reappraisal to the 1947-49 data treated briefly in a former publication (1).* Also these older findings have been strongly reinforced and broadened by the addition of data from more recent years (1953-55). It now seems clear that residents of the Los Angeles area are facing very considerable and serious respiratory hazards in breathing their smoggy air at its present levels of pollution. These hazards seem to arise mainly from the presence within their atmospheric "mixing bowl" of ozone or total oxident concentrations now recognized as dangerously irritative to the human air passages.

It is obvious that maximal allowable pollution of community atmospheres should be kept below the exposed population's sickness and death threshold. Such threshold limits have been carefully worked out for industrial in-plant workers,—workmen's compensation laws have made this almost mandatory by holding management liable for any such worker's health damage. Such limits have never been determined for outside community populations, however, nor can the limits established for eight-hour daily in-plant exposure of healthy workers be transposed safely to the 24-hour day, day-after-day, exposure of community residents. Discussion of this point at one symposium (2) brought out hints that the in-plant limits are probably 4 to 20 times higher than those to be considered safe for continuous community exposure. This is especially true where the polluting materials possess irritational effects in the air passages which lead to progressive and accumulative damage.

Table I presents a general month-by-month summary of the 1947-49 data on day-by-day respiratory and cardiac deaths in Los Angeles County as related to the Stanford Research Institute's smog index. The data on deaths were supplied by the State Health Department and the smog index information was supplied by the Stanford Research Institute in the form of a continuous graph.

In order that the 1947-49 death data of Table I might be subjected to unified correlation with the smog index, such correction was applied to all daily death numbers in each month as would bring that month's average for its nonsmoggy days to 42. Such correction to uniform base for the whole three-year period erases seasonal and temporal changes unrelated to smog episodes while leaving undisturbed all day-to-day variations associated with smoggy periods

Preliminary examination of the corrected death data indicated insignificant changes in daily numbers of deaths so long as the smog index did not rise above five, hence we classified as nonsmoggy all days with an index of five or less, as moderately smoggy those with an index of six to nine, and as severely smoggy those with an index of 10 or greater.

In Table II it is shown that moderately smoggy days had slightly more respiratory and cardiac deaths than did the nonsmoggy, but this

* All numbers in parentheses refer to references, p. 48

increase in smog deaths reached truly significant proportions when the smog index passed the 10 level.

Table II also presents results of a similar correlation study for the period from August 17, 1953, to December 31, 1954. In this period the day-to-day data included deaths from influenza, pneumonia, bronchitis, asthma, and cardiac conditions (code numbers 480-502, 5271, 241, 410-422, 434, 440-7). Correlation here was made with daily maximum values for "total oxident" as supplied by Professor A. J. Haagen-Smit of California Institute of Technology. Since preliminary examination indicated a rise in daily deaths at "oxident" values above 0.2 ppm. in the Los Angeles atmosphere, correlation of "oxident" values greater than 0.2 ppm. and 0.2 or less was made with day-by-day cardiac and respiratory deaths (handled as described above for the 1947-49 period). Adjustment was made to a nonsmoggy mean of 50 for the "all ages" correlation, to 12 for the "all ages below 65" and to 36 for the "65 and over."

Difficulty was encountered in applying such equalizing corrections to the 1953-55 data, for the general worsening of the smog situation had left several of the worst smog months with few or no smog-free days to serve as nonsmoggy controls. Proper correction for such months was obtained by anchoring them to the nearest month with a stable number of smog-free days. Table 3 indicates the derivation of the proper correction factors for use in such cases, such derivation being based upon five-year average values (death data available for 1955 covered only ages 65 and over).

It has been suggested that the frequent association of smogs with excessive heat may give an erroneous high smog-death correlation, since the excess deaths may have been brought about by heat. It must be pointed out, therefore, that days with a maximum temperature above 96 degrees F. numbered 0 in 1947, one in 1948, four in 1949, four in 1953, and 0 in 1954. Of the five days in 1948-49 one was nonsmoggy and with six excess deaths, while the other four had a high average SRI smog index of 18 and an average of 12 excess deaths per day. Of the four in 1953, one fell in July and outside our period of correlation, while the other three had only borderline smog and an average of only six excess deaths per day. It is known that severe heat can kill, but severe heat in association with severe smog is still more deadly. The extreme heat period of September 1-4, 1955, has been omitted entirely from our correlations.

It is evident from examination of Table 2 that respiratory and cardiac deaths in Los Angeles County are positively and significantly associated with prevailing atmospheric smogginess above SRI index values of five or "total oxident" values above 0.2 ppm. It seems obvious, therefore, that these limits should represent the maximal degree of pollution allowable from the community health viewpoint. From Table 2 it is seen that this smog hazard applies just as significantly for people below age 65 as for the more elderly.

It is unfortunate that failure to make proper correction for seasonal trends led the State Department of Public Health to state that in their nursing home deaths "* * * the data do not substantiate any such effect * * *" on this "* * * type of patient that would be adversely and immediately affected by air pollution." We have extended our above-described technique for the elimination of normal seasonal trends

from the day-by-day nursing home deaths listed in their Appendix Table I, leaving the July death numbers undisturbed, adding 1/42 to those of August, 3/42 to those of September, subtracting 3/42 from those of October and 15/42 from those of November. These corrections are in accordance with our Table 3 extended on to include October and November. Correlation of the seasonally corrected nursing home deaths with Haagen-Smit's total oxident values from July 3 to November 21, 1955 (but omitting the period of excessive heat from August 31 to September 8) gave the following results:

13 days, oxident values under .2 ppm., averaged 4.72 deaths.
23 days, oxident values .2 to .39 ppm., averaged 4.95 deaths.
38 days, oxident values of .4 to .59 ppm., averaged 5.22 deaths.
41 days, oxident values of .6 to .79 ppm., averaged 5.86 deaths.
17 days, oxident values of .8 ppm. and over, averaged 6.23 deaths.

Although the number of days in the series are inadequate for worthwhile application of significance tests (with our present oxident data ending November 21), it certainly cannot be said that "* * * the data do not substantiate any such effect * * *." Indeed, the strong trend toward a positive and graded association between nursing home deaths and daily oxident maxima here demonstrated, renders it most probable that further extension of the survey period would provide correlation values well beyond the realm of reasonable chance occurrence.

Since the 1949 association was between deaths and the Stanford Research Institute's smog index, and since the smog index is based upon meteorological factors predisposing to smog formation rather than upon actual air analysis of polluting materials, it seems advisable to relate the SRI index directly with actual air analysis. Fortunately, Mr. Bartel of the U. S. Rubber Company has supplied us with ozone maxima for 148 days of 1949 (4). Table 4 indicates the highly significant relationship existing between these ozone values and the SRI smog index values.

Recent emphasis (5) has been given to evidences of ozone toxicity for bacteria, molds, experimental animals and human beings, with the result that maximal allowable concentrations considered safe for industrial in-plant workers were lowered in 1954 (6) from the former 1.0 ppm. to 0.1 ppm. (barely detectable by those with a keen sense of smell). Levels of 0.2 ppm. definitely increase guinea pig death rates over seven to eight months of exposure, while these animals also seem slightly harmed even by 0.1 ppm concentrations over many months of continuous exposure (7). Bacterial and mold growth is inhibited by 0.2 ppm. ozone concentrations.

Ozone toxicity manifests itself in animals and people primarily by irritation and swelling in the cells lining the air passages. Such swelling in the smallest air passages next to the lung's air sacs interferes seriously with their proper ventilation and is the direct cause of death. Other toxic materials such as sulfuric acid mists or the oxides of nitrogen may act similarly in the air passages. Just what connection there may be between such cellular irritation and the generation of lung cancer is not known, but it is significant that such toxicity in most cases means direct interference or blockage of many of the intracellular enzymatic and catalytic systems that form the basis of the vital cellular processes.

The evidence of slow respiratory tract damage in healthy animals continuously exposed for months to ozone concentrations as low as 0.2 ppm. (or even 0.1 ppm.) makes it imperative that respiratory and cardiac sicknesses and deaths be closely examined for the recent years of steadily worsening smogs in the Los Angeles area. Even without any further evidences than is here presented, there seems ample justification for the imposition of a firm smog-control program aimed at the prevention of atmospheric ozone concentrations above 0.2 ppm (and perhaps even lower) when the area shall have reached complete development.

There no longer exists a reasonable doubt that Los Angeles smogs are indeed related to very considerable increases in respiratory and cardiac deaths. In *no* adequate test period were these deaths *less* frequent on smoggy days than on nonsmoggy days; always the mean numbers of such deaths were found to be greater on smoggy days of every test period. Nor are such excess deaths limited to elderly people; younger age groups also share significantly in the smog periods.

In sum total, this Los Angeles smog hazard is represented by 230 excess respiratory and cardiac deaths in the year 1949, by 281 in the last 137 days of 1953, and by 334 in the year 1954. It should be borne clearly in mind that this is merely one measurable index of smog damage, that its total of nonfatal ill-health and chronic damage in the respiratory tract must far outweigh these deaths in community importance.

If we add to these Los Angeles findings the Cincinnati survey results clearly relating lung cancer incidence to exposure to urban motor exhaust fumes and general air pollution, we begin to see the outlines of a community health hazard calling for the most effective remedial measures available. The Los Angeles situation is indeed so severe and so fraught with health hazards to the area's residents, that any pollution control program should be put on the compulsory health basis that alone can provide it with the necessary overriding authority.

TABLE I

RESPIRATORY AND CARDIAC DEATHS IN LOS ANGELES SMOGS

Year and month	Nonsmoggy (SRI index, 0-5)		Moderately smoggy (SRI index, 6-9)			Severely smoggy (SRI index, 10 or over)		
	No of days	Daily deaths	No of days	Daily deaths	Total excess	No of days	Daily deaths	Total excess
1947								
Jan	29	43 8	0	0	0	2	50 5	+13 4
Feb	26	47 7	1	58 0	+10 3	1	44 0	−3 7
Mar	31	43 7	0	0	0	0	0	0
Apr	29	41 6	0	0	0	1	63 0	+21 4
May	29	40 0	0	0	0	2	47 0	+14 0
June	30	36 8	0	0	0	0	0	0
July	26	38 3	1	34 0	64 3	4	42 8	+18 0
Aug	31	38 6	0	0	0	0	0	0
Sept	22	38 6	5	35 4	−16 0	3	40 7	+16 3
Oct	29	38 6	0	0	0	2	35 0	−7 2
Nov	28	44 2	0	0	0	2	58 0	+27 6
Dec	31	52 7	0	0	0	0	0	0
Year	341	42 1	7		−10 0	17		+89 8
1948								
Jan	29	61 5	1	32 0	+20 5	1	80 0	+18 5
Feb	29	50 5	0	0	0	0	0	0
Mar	31	47 5	0	0	0	0	0	0
Apr	30	44 0	0	0	0	0	0	0
May	30	40 0	0	0	0	1	48 0	+8 0
June	30	39 2	0	0	0	0	0	0
July	26	37 4	5	34 2	−16 0	0	0	0
Aug	24	37 2	5	36 0	−6 0	2	41 0	+7 8
Sept	15	34 1	4	39 0	+19 6	11	39 2	+56 1
Oct	23	37 6	6	35 2	−14 4	2	43 0	+10.0
Nov	26	42 6	3	35 7	−20 7	1	42 0	−0 6
Dec	31	50 6	0	0	0	0	0	0
Year	324	43 2	24		−17 0	18		+100 6
1949								
Jan	31	56 7	0	0	0	0	0	0
Feb	25	54 6	3	57 3	+8 1	0	0	0
Mar	30	31 0	1	68 0	+17 0	0	0	0
Apr	20	45 6	9	40 9	+11 7	1	53 0	+7.4
May	27	44 3	1	52.0	+7 7	1	52 0	+7 7
June	27	43 0	3	45 7	+8 1	0	0	0
July	26	42 1	2	44 5	−4 8	1	40 0	−2 1
Aug	16	40 7	13	43 8	+14 3	2	39 0	−6 4
Sept	14	40 3	7	44 3	+24 5	9	49 1	+74 7
Oct	22	44 3	5	46 2	+9 5	4	53 5	+38.8
Nov	17	50 7	5	45 8	+0 5	8	52 6	+55.2
Dec	26	50 4	3	56 3	−17 7	2	50 5	+0 2
Year	235	47.9	52		+123 9	28		+123.5

(See References 1 and 3 for details)

TABLE II

STATISTICAL ANALYSIS OF SMOG-DEATH RELATIONSHIP

	Smog index	Mean No da deaths	S D of mean	Days	Smog index	Mean No da deaths	S D of mean	Days	Diff of means	Diff S E Dif.	X^2
1947-9, all ages, smog index	SR20-5	42 09	7 32	950	SRI, 6-9	13 33	7 61	83	1 24	1 4	1 5
	SR20-5	42 09	7 32	950	SRI, 10+	16 13	7 10	63	4 04	4 1	10 7
	SR20-5	42 09	7 32	950	SRI, 6+	14 53	7 52	146	2 45	3 7	8 8
Aug 17, 1953 to Dec 31, 1954, all ages "total oxidant" basis	0-0 2 ppm	50 02	9 64	229	0 2 ppm	52 29	7 89	273	2 27	2 9	4 8
Same Period, All ages below 65 years	0-0 2 ppm	12 22	1 87	229	0 2 ppm	13 43	4 56	273	1 21	2 9	5 5
Same Period, All ages 65 and over	0-0 2 ppm	36 21	6 38	229	0 2 ppm	37 57	6 57	273	1 35	2 34	6.0
Jan 1 to Sept 30, 1955 (Omitting Sept 1-4), Age 65 years and over	0-0 2 ppm	36 11	6.89	129	0 2 ppm	38 21	7 95	140	2.10	2 3	1 6
Aug. 17, 1953 to Sept 30, 1955 (Omitting Sept 1-4, 1955), Age 65 yrs and over	0-0 2 ppm	36 15	6 70	358	0 2 ppm	37 79	7 07	413	1 64	3 3	7.3

TABLE III

CORRECTION FACTORS FOR DAILY DEATHS OF SMOG SEASON

	1947		1948		1949		1947-9	1953		1954		5 year	Correction
June													
Clear	36 8	(30)	39 2	(30)	43 0	(27)	39 7			51 9	(10)	42 7	—1
Smoggy	--		--		45 7	(3)				54 1	(20)		
July													
Clear	38 3	(26)	37 1	(26)	42 1	(26)	39 3			--		42 3	
Smoggy	41 0	(5)	34 2	(5)	43 0	(3)				53 8	(31)	estimated	0
August													
Clear	38 6	(31)	37 2	(24)	42 7	(16)	39 5	45 0	(3)	44 3	(8)	41 4	+1
Smoggy	37 4	(8)	37 6	(15)	43 2	(15)		30 0	(12)	48 7	(23)		
September													
Clear	38 6	(22)	34 1	(15)	40 8	(14)	37 8	43 0	(1)	36 5	(2)	38 6	+3
Smoggy	37.4	(8)	39 1	(15)	47 0	(16)		50 2	(29)	51 3	(28)		

(Figures in parentheses indicate number of days)

TABLE IV

RELATION OF SMOG INDEX [3] TO OZONE CONCENTRATION IN AIR [4]

SRI smog index	Number of test days	Ozone parts per 100 million of air			Diff Mean	X^2 values
		Aver	Mean	S D Mean	S E Diff	
0	23	9 7				
1	21	16 0	13 00	8 21		
2	26	22 8			5 91	22 5
3	12	22 3				
4	15	23 3				
5	5	28 2	23 36	9 64		
6 7	16	35 5			8 98	19.6
8 9	10	37 1				
10+	18	41 6	39 27	10 08		
All	146					

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(2) "Air Pollution": Proceedings of the U. S. Technical Conference on Air Pollution, pp 470-3, Published by McGraw-Hill Book Co., Inc, New York, 1952.

(3) Stanford Research Institute's Interim Report on the Smog Problem in Los Angeles County, pub. by the Committee on Smoke and Fumes of the Western Oil and Gas Association, Los Angeles, 1945, 49, 50

(4) Personal communication from A. W. Bartel of the U. S Rubber Co., for Los Angeles individual maximum ozone values in 1949, published in summary form by A W. Bartel and J. W. Temple, Industrial and Engineering Chemistry, *44*, 857, 1952 (April).

(5) Stokinger, Herbert E., "Ozone Toxicity" "_____," A M A, Arch. Indust. Hyg. and Occup Med., *2*, 366-383, 1954 (June).

(6) "Threshold Limit Values for 1954," ibid., *9*, 530, 1954 (June)

(7) Wilska, S., "Ozone: Its Physiological Effects, etc," Acts Chem. Scandinav., *5*, 1359, 1950.

(8) Thorp, C. M., "Toxicity of Ozone," Indust. Med., *19*, 49, 1950.

EXHIBIT 5

A CRITIQUE OF "RESPIRATORY AND CARDIAC DEATHS IN LOS ANGELES SMOGS"—BY DR. C. A. MILLS, M.D., Ph.D., PROFESSOR OF EXPERIMENTAL MEDICINE, UNIVERSITY OF CINCINNATI

Prepared by the State of California
Department of Public Health

As requested by the California Assembly Legislative Subcommittee on Public Health, chaired by Mr. Thomas M. Rees, the Department of Public Health reviewed Dr. C. A. Mills' paper, "Respiratory and Cardiac Deaths in Los Angeles Smogs" which was submitted to this committee at their September hearing in Los Angeles

Review of Dr. Mills' Paper

The thesis presented in Dr Mills' most recent paper is that there is a significant association between "smog" and increases in respiratory and cardiac deaths in Los Angeles County His evidence is presented in two forms First, the association is illustrated through tables in which he purports to show that "smoggy" days produce more respiratory and cardiac deaths than the average for the "nonsmoggy" days in the same months for the years 1947-49 and August 17, 1953, to September 30, 1955 In an attempt to remove the effects on seasonal and temporal variations in deaths, Dr. Mills corrected each daily number of deaths so that each month's average for "nonsmoggy" days was 42 in 1947-49 and 50 for 1953-55. He did not control on temperature, but did remove the September 1-4, 1955, data because of the very high temperature during this period.

Second, the association between deaths and oxidant readings is expressed quantitatively by presenting several correlation coefficients for selected periods. Dr. Mills' table is presented below.

TABLE 1

Group	Number days	Correlation coefficient	Probability (by chance alone)
Nursing home deaths	133	206	01 (1 in 100 times)
Nursing home deaths (Sept only)	22	437	04 (4 in 100 times)
Oxidant vs respiratory and cardiac deaths (All ages)			
Aug 17, 1953 to Dec 31, 1954	502	08	03 (3 in 100 times)
Sept only, 1949	30	949	0
Sept only, 1953	30	837	0
Sept only, 1954	30	434	016 (1 6 in 100 times)

These coefficients are important because they are all significant, i e., they express a relationship that cannot be assumed to have arisen by chance alone.

Dr. Mills' definition of "smoggy" days for the years 1947-49 is based on the distribution of "corrected" deaths and the Stanford Research Institute's 1948 Predictive Index. He has justified the use of the SRI index by presenting a table showing that this index is associated with ozone concentrations. For 1953-55, his definition of "smoggy" days is based on the distribution of the "corrected" death data and the Haagen-Smit oxidant readings, taken in Pasadena.

Critical Analysis

Dr. Mills has analyzed and interpreted the association between increases in mortality and rises in maximum oxidant readings and the SRI index. It is an interesting contribution to the field of air pollution, but is subject to the following criticisms.

1. *The Method in Which Smog Is Defined*

Dr Mills' paper does not differentiate among "smog," ozone and oxidant readings For example, when interpreting results, Dr. Mills seems to assume that an ozone concentration means the same thing as a maximum oxidant reading.

Oxidant measurements are readings of all agents present in the atmosphere causing oxidation. Not all of these oxidizing components are known. Ozone is suspected of being a major constituent of the oxidant measurements. The degree to which nitrogen oxides and possibly other unknown contaminants contribute to the oxidant reading still needs to be studied. The degree of association obtained between oxidant readings and measurements of ozone concentrations does not warrant the use of these terms interchangeably.

Furthermore the relationship between ozone and "smog" is not consistent. "Because all the alerts to date have been declared due to ozone reaching a concentration of 0.50 parts per million, or higher, the public unfortunately, has gained the impression that eye irritation and other discomforts from smog are directly related to or caused by the concentration of ozone. Such is not the case. The district has definitely established that ozone is not necessarily an index of intensity of smog." *

The degree of association between meteorological conditions as represented by the SRI index and ozone readings (his Table 4) does not warrant their use interchangeably. This SRI index, developed to predict "smog", has even been dropped by its originators because of the lack of high association between predicted smog days and actual smog days.

In addition it is not meaningful to use Haagen-Smit's maximum oxidant readings (taken in Pasadena) as a measure of "smog" for the entire county

> "* * * since it is not yet known how large an area can be represented by the concentrations measured at any one location. The optimum location for a sampling station has not been defined, though it is known that relatively small changes in similar intake locations can result in marked changes in measured concentrations." *

2. *The Arithmetic*

Again, as in Dr. Mills' previous papers, frequent errors in arithmetic are in evidence. Generally these errors are in the direction tending to support his hypothesis. As an example, the recalculated correlation coefficients between respiratory and cardiac deaths (all ages) and the maximum oxidant readings for September, 1949, September, 1953,

* S. Smith Griswold, Air Pollution Control Officer, September 27, 1956—Letter to Dr Merrill

and September, 1954 are presented in Table 2. There are no maximum oxidant readings available for September, 1949. Consequently, correlation coefficients for both ozone and SRI index measurements are entered in Table 2, since it was not clear which measure he had used. Ozone concentrations were recorded on only 19 days, therefore the coefficients between ozone and deaths for 1949 is based on 19 rather than 30 days

Note that there is gross disagreement between Dr. Mills' correlations and the recalculated correlation coefficients.

TABLE 2

RECOMPUTED VALUES OF SELECTED CORRELATION COEFFICIENTS OXIDANT READINGS vs. RESPIRATORY AND CARDIAC DEATHS (ALL AGES)

	Sept., 1949	Sept., 1953	Sept., 1954
Recomputed values			
Ozone concentrations	+ 005		
SRI index	+ 501		
Maximum oxidant readings		+ 694	+ 354
Dr Mills' coefficients	+ 949	+ 837	+ 434

3 *Interpretation of Dr. Mills' Tables 1 and 2*

In order to interpret Dr. Mills' tables on excessive deaths due to "smog", it must be assumed that the differences in daily deaths on "smoggy" and "nonsmoggy" days will be affected by three types of factors:

Type (1). Certain common factors (seasonal variation in deaths, prevalence of respiratory disease, etc.). An epidemic of respiratory disease will increase deaths in a given period, on both "smoggy" and "nonsmoggy" days, for example. Therefore, there will be dependence between the variation in deaths on both kinds of days, to some extent Dr. Mills has concentrated on Type (1) factors His corrections seem to be an attempt to reduce their effect on the assumption that these factors vary from month to month but do not vary much within each month. Even if this assumption were true, Dr. Mills' analysis in his Table 2 would still be invalid, for his corrections do not remove the dependence caused by Type (1) factors, and the mathematical theory underlying his critical ratios requires that the two samples involved be independent.

Type (2). Lethal factors associated with "smog" (climatic factors, perhaps others.). As an example, if extreme heat kills, and if "smoggy" days tend to be warm days, a disproportionate number of deaths from heat will occur on "smoggy" days.

Type (3). The hypothetical lethal effect of "smog" itself The effect of (3) tends to be hidden by the variation arising from (1) and tends to be exaggerated by the factors in (2). The purpose of a sound statistical analysis should be to remove the effects of Type (1) and Type (2) factors as much as possible, so that the effect of "smog" itself can be assessed.

Assuming that the SRI index were acceptable as a true measure of "smog" and all computations were correct, Dr. Mills' Table 1 would be one way to present a picture of excess deaths on "smoggy days." However, such a table cannot be used to determine the effect of "smog" independently of other factors of Types (1) and (2).

4. *Interpretation of Dr. Mills' Correlation Coefficients*

Dr. Mills correctly points out that there is an association between deaths from selected causes and the SRI index or maximum oxidant readings as presented in his paper. Although these correlation coefficients are positive, the question must be raised as to how to interpret correlation coefficients of this kind. There is clearly an association between these deaths and a complex of conditions which often occur together. One of these is oxidants. Others are temperature, humidity, seasonal factors, other air pollutants, etc However, his analysis fails to take account of such other factors, which are also present on high oxidant days and which might explain as well or better than oxidants the excess of deaths on those days When deaths are correlated with two of these factors as shown in Table 3, the correlations are about the same as those between oxidants and deaths Which single cause is then, the culprit? Possibly, other factors not considered here are similarly correlated with deaths.

TABLE 3

	Sept, 1953	Sept, 1954
Correlation between respiratory and cardiac deaths and		
Maximum daily temperature	+ 746	+ 245
Minimum-maximum temperature difference	+ 539	+ 186
Relative humidity	— 508*	—.182*

* These negative correlations indicate that the lower the relative humidity the higher the number of deaths

The highest correlation coefficient in either Table 2 or Table 3, + .746, is that between deaths and maximum daily temperature for September, 1953. Temperature and maximum oxidant readings are also associated, the correlation coefficients being +.680 for September, 1953, and +.189 for September, 1954.

Since temperature is one of the factors associated with both oxidants and deaths, the question may be asked: What would the association between maximum oxidant readings and deaths be if the effects of temperature were removed?

As an example of the statistical technique which is applicable in such a case, partial correlations were computed between oxidants and deaths with the effects of temperature removed for September, 1953, and September, 1954. The values were +.383 and +.323 for September, 1953, and September, 1954, respectively We would conclude from this that there was still some association between maximum oxidant readings and deaths when the effects of temperature alone were removed. However, the nature of the data does not justify such computations. The oxidant readings are from Pasadena, the temperatures are from the Los Angeles Post Office Building and the deaths are based on figures from all of Los Angeles County.

It should be noted that his partial correlation in turn does not imply a causal relationship. If the effect of some fourth variable such as humidity were removed, the remaining correlation might not be significant.

When is a correlation indicative of a causal relationship? Suppose that by using the above techniques, all factors which can reasonably be assumed to be associated with oxidants and deaths are removed Then a remaining positive correlation (if significantly large) may be interpreted as indicating a causal relationship.

High correlations which do not imply a cause and effect relationship are fairly common Karl Pearson claimed to have found a significant correlation between deaths from cancer among women and per capita consumption of apples. A more recent example is the correlation coefficient of +.91 between number of radios and number of mental defectives, computed for England and Wales for the period 1935-1946 (Brookes and Dick; Introduction to Statistical Method, William Heinemann Ltd , London, p. 224).

In this discussion, we have omitted any reference to the Nursing Home Data and to the correlations for the period August 17, 1953, to December 31, 1954. Since these again are simple correlations between oxidants and deaths, they are subject to the same comments as are made above.

Summary

Steps Necessary for Analysis

Table 3 points up the importance of dealing with Type (2) factors before concluding that "smog" causes deaths Eliminating the effect of these correlated factors is a difficult procedure, calling for much more subtle analysis than has heretofore been applied to this problem, plus more detailed observation on factors which may be associated with "smog."

Much attention has been given to three air pollutants: sulphur dioxide, particulate matter and ozone. In the past, both sulphur dioxide and particulate matter were considered to be the major constituents of "smog." However, though the concentrations of both elements in Los Angeles atmosphere were reduced, "smog" has continued

Before the association between measures of various air pollutants and deaths can be studied, the following steps must be taken.

1. Geographic areas must be designated which have a smog problem or which are relatively "smog" free
2. Routine, systematic measurements of all contaminants at designated sampling stations must be established The sampling stations must be located so that all sections of the areas to be studied are covered. These systematic measurements must be taken continuously for a period of a year at the minimum. Some of the atmospheric contaminants suspected of being harmful to man which should be measured are: selected hydrocarbons including benzpyrene, sulphur dioxide, carbon monoxide, oxidants, ozone nitrogen oxides and lead

3 Measurements of such climatological factors as temperature and humidity should be taken at the stations making the measurements of air pollutants in order to insure comparability of the data.

4 Mortality data available through death certificates must be reclassified as either the place in which death occurred or by the place in which the decedent usually lived, into the areas designated for study.

5 Seasonal variations found in readings of various air pollutants, meteorological conditions and deaths must be dealt with, as well as variations in deaths due to population changes.

6. All of the air pollutant and meteorological elements are involved in *interacting processes* and the effects of these elements in combinations are unknown. Therefore, each of the variables will need to be examined independently and in all possible combinations.

The effects of air pollutants on deaths may not be immediate Therefore, this time lag in deaths should be taken into consideration in the analysis.

Many of the basic data mentioned above are not available in sufficient detail at this time to permit analysis of the relationship of air pollutants to mortality.

EXHIBIT 6

LETTER FROM DR. MILLS CONCERNING ADDITIONAL DATA REGARDING LOS ANGELES SMOG

UNIVERSITY OF CINCINNATI
LABORATORY FOR EXPERIMENTAL MEDICINE
COLLEGE OF MEDICINE

Mailing Address:
Cincinnati General Hospital
Cincinnati 29, Ohio

October 31, 1956

THOMAS M. REES
Assembly California Legislature
Public Health Subcommittee
Los Angeles 35, California

DEAR MR. REES: Immediately upon my return home from your Los Angeles Committee Hearings in September, I got together all my data on the relation of cardiac and respiratory deaths to smogs in Los Angeles and sent it along to Dr. Breslow as you had requested at the hearings Dr Breslow acknowledged its receipt but has so far rendered no report on their evaluation of my findings.

I am therefore taking the liberty of submitting to you for inclusion in the Hearings report the following additional significance tests on various parts of my data:

Group	*No. Days*	*Correlation Coefficient*	*Probability (by chance alone)*
Nursing Home deaths	133	.206	.01 (1 in 100 times)
Nursing Home deaths (Sept. only)	22	.437	.04 (4 in 100 times)
Oxidant vs. Resp. & Cardiac Deaths (All Ages)			
Aug. 17, 1953 to Dec. 31, 1954	502	.08	.03 (3 in 100 times)
Sept. only, 1949	30	.949	0
Sept. only, 1953	30	.837	0
Sept. only, 1954	30	.434	.016 (1.6 in 100 times)

It now seems fully obvious that "there no longer exists a reasonable doubt that Los Angeles smogs *are* significantly related to increases in respiratory and cardiac deaths", every type of significance test properly applied to the smog and death data verify this conclusion. I have consulted on this matter with professionally trained statisticians since my return home in late September, and they approve of my statistical methods and findings.

Sincerely yours,

(Signed) C. A MILLS, M.D.
Professor of Experimental Medicine

The committee wishes to thank those witnesses whose co-operation and testimony were of such great help.

The committee is especially grateful to Mr. Smith Griswold and the Air Pollution Control District of Los Angeles County. Their aid was very valuable in the basic research needed to prepare both the committee agenda and this report

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ASSEMBLY INTERIM COMMITTEE REPORTS
1955-1957
VOLUME 9 NUMBER 12

FINAL REPORT OF THE

ASSEMBLY INTERIM COMMITTEE ON PUBLIC HEALTH

House Resolution No. 174, 1955

March 20, 1957

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W. S. GRANT, *Vice Chairman*

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Chief Clerk

LETTER OF TRANSMITTAL

ASSEMBLY INTERIM COMMITTEE ON PUBLIC HEALTH
SACRAMENTO, CALIFORNIA, March 8, 1957

HONORABLE L. H. LINCOLN, *Speaker, and*
Members of the Assembly

GENTLEMEN: Your Assembly Interim Committee on Public Health, created by House Resolution No. 174 (Assembly Journal, June 6, 1955), presents the attached report entitled "1957 Final Report."

This, together with reports of the Subcommittees on District Hospitals, Drugs for the Mentally Ill, Licensing of Naturopaths, Licensing of Water Treatment Works and Sewage Treatment Plant Operators, and Health Effects of Air Pollution, printed under separate cover, constitutes a summary of the committee activities during the 1955-57 interim. Included herein are reports of the Subcommittees on Air Pollution, Campground Sanitation, Hot Plates and Unvented Heaters, Narcotics and Dangerous Drugs, Schools of Practical Nursing, and Transportation and Handling of Explosives. They contain recommendations for legislation and for further investigation of certain subjects deemed necessary by the committee.

Respectfully submitted,

W. BYRON RUMFORD, Chairman
GLENN E. COOLIDGE
REX M. CUNNINGHAM
CLAYTON A. DILLS
W. S. GRANT
SETH J. JOHNSON
PATRICK D. McGEE
THOMAS M. REES
CHARLES H. WILSON

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HOUSE RESOLUTION No. 174
(Assembly Journal, June 6, 1955)

Relative to constituting the Assembly Standing Committee on Public Health an interim committee

Resolved by the Assembly of the State of California, As follows:

1. The Assembly Standing Committee on Public Health of the 1955 Regular Session is hereby constituted an interim committee and is authorized and directed to ascertain, study and analyze all facts relating to public health, including, but not limited to, the practice of the healing arts and the practice of other occupations which may affect the health of the public, all matters concerning sanitation, in living accommodations and elsewhere, facilities for care and treatment of the sick or injured, all matters relating to the use, furnishing, or treatment of substances which may affect the health of the public, coroners and the coroner system, methods of training and treatment directed toward the correction and rehabilitation of young persons found guilty of public offenses, and including but not limited to the operation, effect, administration, enforcement and needed revision of any and all laws in any way bearing upon or relating to the subject of this resolution, and to report thereon to the Assembly, including in the reports its recommendations for appropriate legislation.

2. The committee shall consist of the members of the Assembly Standing Committee on Public Health for the 1955 Regular Session. The chairman and vice chairman shall be the chairman and vice chairman of the standing committee. Vacancies occurring in the membership of the committee shall be filled by the appointing power.

3. The committee is authorized to act during this session of the Legislature, including any recess, and after final adjournment until the *commencement of the 1957 Regular Session*, with authority to file its final report not later than the fifth legislative day after the constitutional recess during such session.

4 The committee and its members shall have and exercise all of the rights, duties and powers conferred upon investigating committees and their members by the provisions of the Joint Rules of the Senate and Assembly and of the Standing Rules of the Assembly as they are adopted and amended from time to time at this session, which provisions are incorporated herein and made applicable to this committee and its members.

5. The committee has the following additional powers and duties:

(a) To contract with such other agencies, public or private, as it deems necessary for the rendition and affording of such services, facilities, studies and reports to the committee as will best assist it to carry out the purposes for which it is created.

(b) To cooperate with and secure the cooperation of county, city, city and county, and other local law enforcement agencies in investigating any matter within the scope of this resolution and to direct the sheriff of any county to serve subpenas, orders and other process issued by the committee.

(c) To report its findings and recommendations to the Legislature and to the people from time to time and at any time, not later than herein provided.

(d) To travel, or appoint a subcommittee or committee employee to travel, within or outside of this State and the United States in pursuing the investigation committed to it.

(e) To do any and all other things necessary or convenient to enable it fully and adequately to exercise its powers, perform its duties, and accomplish the objects and purposes of this resolution.

6. The sum of sixteen thousand dollars ($16,000) or so much thereof as may be necessary is hereby made available from the Contingent Fund of the Assembly for the expenses of the committee and its members and for any charges, expenses or claims it may incur under this resolution, to be paid from the said Contingent Fund and disbursed, after certification by the chairman of the committee, upon warrants drawn by the State Controller upon the State Treasurer.

The funds of the Assembly Interim Committee on Public Health were augmented by House Resolution No. 33 of the 1956 Session.

INTRODUCTION

The Assembly Interim Committee on Public Health, authorized by House Resolution No. 174, 1955, organized into working subcommittees during the 1955-57 interim to study the variety of subjects referred to it by the 1955 Legislature. The subcommittees, their members and the public hearings held by each subcommittee are listed here:

Subcommittees and Members	*Dates of Hearings*	*Location*
Air Pollution		
(Full Public Health Committee)	September 28, 1955	Los Angeles
	February 29, 1956	Oakland
Health Effects of Smog		
Thomas M. Rees, Chairman Seth J. Johnson Charles H. Wilson	September 25 and 26, 1956	Los Angeles
Campground Sanitation		
Seth J. Johnson, Chairman Clayton A. Dills Thomas M. Rees	January 3, 1957 (Joint hearing with Subcommittee on Public Lands, Grazing and Forest Practices, Assembly Interim Committee on Agriculture)	Los Angeles
District Hospitals		
Rex M. Cunningham, Chairman	November 13, 1956	Hayward
Glenn E. Coolidge	December 18, 1956	Hayward
Clayton A. Dills		
Drugs for the Mentally Ill		
W. Byron Rumford, Chairman Glenn E. Coolidge Rex M. Cunningham Seth J. Johnson Charles H. Wilson		
Hot Plates and Unvented Heaters		
W. S. Grant, Chairman Clayton A. Dills Seth J. Johnson Thomas M. Rees H. Allen Smith Charles H. Wilson	September 23, 1955	Los Angeles
Licensing of Naturopaths		
Charles H. Wilson, Chairman	August 19, 1955	Los Angeles
W. S Grant	October 7, 1955	Sacramento
Seth J. Johnson	December 7, 1955	Los Angeles
Thomas M. Rees		
H. Allen Smith		
W. Byron Rumford		
Licensing of Water Treatment Works and Sewage Treatment Plant Operators		
W. S. Grant, Chairman Bernard R. Brady W. Byron Rumford	November 14, 1956	Los Angeles

Subcommittees and Members	*Dates of Hearings*	*Location*
Narcotics and Dangerous Drugs		
Rex M. Cunningham, Chairman	September 28, 1956	Sacramento
Patrick D. McGee	(Joint hearing with Senate	
W. Byron Rumford	Public Health Committee)	
	November 27, 1956	Los Angeles
Schools of Practical Nursing		
Patrick D. McGee, Chairman	October 14, 1955	Los Angeles
Rex M. Cunningham		
Clayton A. Dills		
Seth J. Johnson		
W. Byron Rumford		
Transportation and Handling of Explosives		
Seth J. Johnson, Chairman	January 20, 1956	Los Angeles
Bernard R. Brady		
Rex M. Cunningham		
Patrick D. McGee		
Thomas M. Rees		
H. Allen Smith		
W. S. Grant		

The committee chairman appointed a member to tour the areas which suffered the greatest damage during the 1955-56 winter floods. On January 26, 27, and 28, 1956, he visited the cities of Marysville, Yuba City, Colusa, Williams, Calistoga, Santa Rosa, Guerneville, Rio Dell, Fulton, Healdsburg, St. Helena, and Napa, and reported that, in large part because of the support and assistance given the local health departments by the State Department of Public Health and the U. S. Public Health Service, no additional health legislation was required.

This final report contains the reports of all but five of the above indicated subcommittees. These five have been printed under separate cover as follows:

Subcommittee	*Assembly interim committee reports*
Licensing of Naturopaths	Volume 9, Number 7
District Hospitals	Volume 9, Number 8
Drugs for the Mentally Ill	Volume 9, Number 9
Licensing of Water Treatment Works and Sewage Treatment Plant Operators	Volume 9, Number 10
Health Effects of Air Pollution	Volume 9, Number 11

REPORT OF SUBCOMMITTEE ON AIR POLLUTION

SCOPE OF REPORT

The report reviews the activities of governmental agencies charged with the responsibility for the control, regulation and abatement of air pollution; presents a summary of research projects being conducted by governmental and nongovernmental agencies; and examines the need for effective state-wide coordination of research into the causes, effects and control of air pollution.

FINDINGS

1. Air pollution continues to be a serious problem in California; areas affected by air pollution in the past are continuing to increase in size and there is definite evidence of air pollution in new areas.

2. Air pollution control districts have been activated in Los Angeles County and the San Francisco Bay area and in Orange, San Bernardino, San Diego and Riverside Counties to investigate causes of air pollution, to establish rules and regulations for its control and to carry out enforcement at the local level.

3. The local air pollution control districts, the U. S. Public Health Service, the State Department of Public Health, universities throughout the State and a number of private nongovernmental agencies have been and are engaging in air pollution research. Coordination among these agencies is achieved primarily through voluntary interagency cooperation.

4. Many basic questions as to the causes or components of air pollution, effective methods of control and the extent of the health hazard created by air pollution remain unanswered.

5. Continued and increasing research is needed to provide answers to these and other questions. Similarly there is need for continued effort to coordinate the activities of the many agencies now engaged in research.

Recommended:

That legislation be enacted at the 1957 Session creating a state-wide research agency to initiate, conduct and coordinate programs of research into the causes, effects, prevention and abatement of air pollution.

INTRODUCTION

The Assembly Interim Committee on Public Health, as directed by House Resolution No. 185, 1955 Regular Session, has continued to study the air pollution problem in California. Public hearings to review the activities of those agencies concerned with air pollution control and research on the federal, state, regional and local levels were held by the committee on September 28, 1955, in Los Angeles and February 29, 1956, in Oakland. A special subcommittee to study the effect of air pollution on health was appointed by the chairman of the Public Health Committee. The subcommittee held a two-day hearing in Los Angeles on September 25 and 26, 1956.[1]

[1] For report of this subcommittee, see Assembly Interim Committee Reports, Volume 9, Number 11, *Report of Subcommittee on the Health Effects of Air Pollution*, March 20, 1957.

Air pollution, a potential problem in all industrialized and urbanized areas, has in the post-war years become an increasingly serious problem in California. In the urbanized areas, the operations of industry, the production, refining and marketing of petroleum products, the operation of motor vehicles and the incineration of industrial, commercial and residential waste materials all contribute to pollution. Further, smog from major metropolitan areas is known to travel into the rural areas and smaller cities and towns at a considerable distance from the major smog-producing areas in the State. Those areas where smog has been a problem in the past are continuing to increase in size, and there is definite evidence of air pollution in new areas.

What is known of the basic elements of air pollution and the geographical and meteorological factors affecting its concentration and dispersion, and methods of abatement and control have been outlined in other reports.[1] This report will summarize the activities of the agencies concerned with the control and regulation of air pollution and the research being done by these and other agencies.

THE STATE

The State's policy in regard to air pollution control was formalized in 1947 when the Legislature enacted a measure enabling the establishment of Air Pollution Control Districts (Division 20, Chapter 2, Health and Safety Code), which states in part that "The Legislature finds and declares that the people of the State of California have a primary interest in atmospheric purity and freedom of the air from any air contaminants and that there is pollution of the atmosphere in many portions of the State, which is detrimental to the public peace, health, safety, and welfare of the people of the State." (Section 24198)

This act specifically and generally prohibits air pollution, provides for local control districts which may be activated by any county that determines control to be necessary and provides for the establishment of local rules and regulations by each control district. Six districts have been formed to date.

AIR POLLUTION CONTROL DISTRICTS—YEARS OF ORGANIZATION AND 1956-57 BUDGETS

District	*Year organized*	*1956-1957 Budget*
Los Angeles County Air Pollution Control District	1947	$4,000,000
San Francisco Bay Area Air Pollution Control District	1956	155,850
Orange County Air Pollution Control District	1950	96,350
San Bernardino County Air Pollution Control District	1956	36,000
San Diego County Air Pollution Control District	1955	26,000
Riverside County Air Pollution Control District	1955	16,530
Total		$4,330,550

SOURCE Bureau of Air Sanitation, State Department of Public Health, February, 1957

[1] See for example Assembly Interim Committee Reports, 1953-1955, Volume 13, Number 3. *Air Pollution Control*, Joint Subcommittee on Air Pollution of the Assembly Interim Committees on Conservation, Planning, and Public Works, and Public Health, January, 1955

LOS ANGELES COUNTY AIR POLLUTION CONTROL DISTRICT

The activities of the district are directed chiefly at reduction of pollutants in the atmosphere. Through its inspection and enforcement division, the district conducts plant inspections and surveys to identify sources of contamination or violations of the laws and regulations. The enforcement program was enhanced with the adoption in June, 1955, of "Regulation 7" and an emergency alert system permitting the district to take various steps to alleviate the pollution problem after an alert has been called.

The engineering division reviews applicants for permits to construct or operate any equipment which may cause emission of air contaminants. Detailed plans and specifications must be filed before permits are granted for either new construction or modernization.

The district also has a research division with work being conducted in source testing of air, air sampling at 14 air monitoring stations throughout the Los Angeles basin, and compiling information from the network of air stations regarding patterns of air flow throughout the basin. The division also maintains an automobile combustion laboratory and conducts plant pathology research in connection with the air monitoring stations.

Their evaluation and planning staff is engaged in transforming research data into regulations and other phases of the control program. A public information division conducts an educational program in air pollution.

SAN FRANCISCO BAY AREA AIR POLLUTION CONTROL DISTRICT

The district, established in September, 1955, by special act of the Legislature, is the only district so far to be organized as a multicounty unit The district outlined by the enabling act encompassed nine counties However, only six—Alameda, Contra Costa, Marin, San Francisco, San Mateo, and Santa Clara—are participating. Three—Sonoma, Solano, and Napa—are exempted from joining until such time as they specifically request inclusion. The district went into active operation in October, 1956, and at a public hearing on December 12, 1956, air pollution in the six-county area was legally declared a problem sufficiently severe to require regulation. During the months of January and February, 1957, the district has been considering the establishment of controlling regulations over open burning throughout the area

SANTA CLARA COUNTY AIR POLLUTION CONTROL DISTRICT

The activities of this district were taken over by the San Francisco Bay Area Air Pollution Control District when it became active in October, 1956.

ORANGE COUNTY AIR POLLUTION CONTROL DISTRICT

This district was activated in 1950 Originally established to control excessive smoke from orchard burners, the district now has regulations covering all sources of air contamination It reviews the plans for air pollution control devices installed by various industrial plants and included in its 1956-57 Budget are funds for the purchase of air sampling instruments.

SAN BERNARDINO COUNTY AIR POLLUTION CONTROL DISTRICT

The district, established in 1956, plans to survey the area, identify and measure known contaminants and sources of contamination, and establish a preliminary air monitoring program.

SAN DIEGO COUNTY AIR POLLUTION CONTROL DISTRICT

The State Department of Public Health reported to the committee in January, 1957, that this district, established in 1955, is currently monitoring for oxidants and nitrogen oxides with continuous recorders and is operating high volume particulate matter samplers in the Cities of San Diego and National City, that a county-wide subjective observation study is being conducted, and that county agricultural personnel are making observations of crop damage.

RIVERSIDE COUNTY AIR POLLUTION CONTROL DISTRICT

Although the district was activated in 1955, it is still in the planning stage.

In other regions in the State, notably Sacramento County and the San Joaquin Valley, the need for activating additional control districts is being investigated.

THE STATE DEPARTMENT OF PUBLIC HEALTH

While these various districts were created to take the responsibility for investigating the causes of air pollution, setting up rules and regulations, and carrying out enforcement at the local level, the State Department of Public Health has been assigned a number of responsibilities on a state-wide level.

In 1955 the Legislature authorized the establishment of an air sanitation program in the State Department of Public Health. Subsequently, a Bureau of Air Sanitation was established within the Department's Division of Environmental Sanitation, and an Air Sanitation Laboratory Section was established within the Division of Laboratories to provide technical analysis and experimentation in conjunction with the bureau's activities. The bureau also works with the Bureau of Chronic Diseases, which is active in the study of the medical aspects of air pollution. The department, whose responsibilities are in the field of investigation, training, consultation, coordination, public education, and, in a limited degree, research, summarized its activities in the air pollution field in the March, 1956, issue of *Clean Air for California:*

> To carry out the responsibility assigned by the 1955 Legislature, this department has undertaken environmental and medical investigations. These projects are to evaluate the effects of air pollution on health; determine the factors responsible for air pollution; survey air pollution throughout the State; monitor pollutants, and assist local agencies concerned with air pollution. Efforts are made to coordinate the activities of other governmental agencies and to assure that necessary research is undertaken and effective control programs planned.

THE FEDERAL GOVERNMENT

The Federal Air Pollution Control Act, Public Law 159—Eighty-fourth Congress, was approved by the President in July, 1955. It stated that it was the policy of Congress

> "to preserve and protect the primary responsibilities and rights of the state and local governments in controlling air pollution, to support and aid technical research to devise and develop methods of abating such pollution, and to provide federal technical services and financial aid to state and local government air pollution control agencies and other public and private agencies and institutions in the formulation and execution of their air pollution abatement research programs."

The act provides for a five-year 25 million dollar federal aid program to be administered by the U. S. Public Health Service of the Department of Health, Education and Welfare. Since the Public Health Service has no law enforcement authority, it has been directed to conduct a broad program to provide technical service and financial aid to state and local agencies in their air pollution research programs.

The U. S. Public Health Service works with the State Department of Public Health in order to coordinate its activities with those of the State and the various local control districts. The State Department reported to this committee in February, 1957, that the Public Health Service had assigned technical personnel in the fields of engineering, meteorology and medicine to the State Department in 1956. A statistician will be assigned sometime in 1957. Three engineers and an instrument scientist, assigned through the State Department to the Los Angeles County Air Pollution Control District, are working on projects concerned with the air measurement network in Los Angeles and the determination of emissions from oil refineries. These studies are being conducted jointly by the U. S. Public Health Service, the Los Angeles County Air Pollution Control District and the State Department of Public Health. Additionally, grants have been made for research to the University of Southern California and the University of California.

The U. S. Public Health Service has reported that their Division of Special Health Services is concerned with medical research and technical aspects while their Division of Sanitary Engineering Services is concerned with the engineering and physical sciences problems related to air pollution. Their direct research activities include a sampling network involving the collection of particulate matter and its subsequent analysis (in January, 1956, the network was operating in 45 cities across the country) and several projects in their research laboratory in Cincinnati. The service has also entered into contract arrangements with the U. S. Weather Bureau, which is conducting studies on the meteorological variables and their relation to prediction of air pollution episodes and factors governing the dispersion and dilution of pollutants into the atmosphere; with the Bureau of Mines, which is undertaking studies relating to the incineration of combustible wastes, particularly in the case of municipal incinerators; and with the Bureau of Standards, which is sampling and analyzing various air pollutants.

RESEARCH

Basic research and investigation is being conducted by many groups and agencies in the State. The activities of the U. S. Public Health Service were summarized in the previous section.

While the air pollution control districts established under state law have as their principal purpose the control, regulation, and abatement of air pollution, they have, through studies of causes and effects on the local level made valuable contributions to the present knowledge of the problem. The Los Angeles Air Pollution Control District, activated in 1947, has conducted the most extensive program, in terms of both control and research of any community in the Nation. When first formed little was known about air pollution in California, and the research done by the Los Angeles District has served as a basis for many of the subsequent studies conducted in other areas of the State.

It was also noted earlier in the report that the State Department of Public Health, especially through its Bureau of Air Sanitation, is actively engaged in studying the environmental and medical aspects of air pollution. The following specific studies have been or are being conducted by the department:

A. Medical Investigation Program

1. A study in 92 nursing homes with 4,000 patients in Los Angeles to determine whether or not there is a relationship between days of air pollution and the deaths occurring in these homes.

2. A survey in industrial plants in Los Angeles County to compare employee visits to secure medical service at the health facility in the plant with the physical measure of the smog index on that same day.

3. A study of the health conditions and experiences of a selected group of persons with respiratory impairment in the Los Angeles area in relation to incidence of smog.

4. The department reported in February, 1957, that it was then analyzing the results of a study conducted during 1956 to determine whether attacks of asthma occurred on the same days that there was heavy concentration of smog. The study was done with the cooperation of five physicians in the Los Angeles area and involved data on 137 patients.

5. The department also reported in February, 1957, that it had conducted a general population survey of persons in their own homes to ascertain the occurrence of sickness and other disturbances attributed to air pollution.

6. In 1956 the American Cancer Society granted $31,946 to the State Department of Public Health for a study of air pollution as a possible factor in lung cancer. The department has assembled data on more than 50,000 persons which will be used in the study to determine whether the lung cancer rate among persons who have lived under conditions of air pollution for many years differs from that among persons living under such conditions for a short time or not at all.

B. Environmental Investigation Program

1. A study of emissions from refining processes in the Los Angeles District.

2. A study and evaluation of the air monitoring network being maintained by the district.

Both of these projects are on a partnership basis with two men from the State Department and two from the U. S. Public Health Service working with the Los Angeles County Air Pollution Control District.

3. An investigation, in partnership with the U. S. Public Health Service, of background levels of air contaminants including a study of air quality prior to the time it reaches metropolitan areas has been completed and is being evaluated.

4. A program of assistance to local agencies and health departments in the establishment of a pollution monitoring program in all metropolitan areas of this State. Under this program the department, in cooperation with local health departments, completed a two-year study in 1956 in Alameda, Contra Costa, San Francisco, San Mateo, and Santa Clara Counties to discover geographical distribution of oxidants, seasonal variation, and the Bay area oxidant level. The department has also assisted the San Diego Air Pollution Control District initiate its air sampling program.

Frank M. Stead, Chief of the department's Division of Air Sanitation, reported at an air pollution meeting held by the department on February 2 and 3, 1956, that two-thirds of the department's funds for air pollution study were devoted to environmental surveillance and one-third to medical surveillance.

In addition to the work in the various fields of research being done by these governmental agencies are the many studies being done by the universities, especially the University of California, and several nongovernmental groups. The California Department of Public Health compiled the following list of these agencies, summarizing the projects being undertaken by each, in the March, 1956, issue of *Clean Air for California:*

"*University of California* [1]

"The University of California at Los Angeles, Riverside and Berkeley are engaged in air pollution research. The following projects are under way at the Los Angeles campus:

"1. Microwave methods as a means of studying air pollution in the Los Angeles area.

"2. Exhaust control devices and investigation of noncatalytic afterburning for motor vehicles

"3. Investigation of systems for removing irritants from polluted air.

"4. Incineration studies, control aspects of refuse incineration.

"5. Preliminary design of an air resource test facility.

"6. Convection from heated surfaces in the inversion layer.

"At the Riverside Agricultural Experiment Station investigations are in progress to determine what constituents cause plant damage; the extent and nature of crop damage, and the functioning of plants under air pollution conditions. In addition, the station, together with personnel of the Agricultural Extension

[1] A university-wide committee on research in air pollution coordinates the activities of the university in this area.

Service, is making a state-wide survey of effects of air pollution on plants. At the Berkeley campus, a grant from the U. S. Public Health Service is supporting studies on particulate pollutants which result from combustion.

"California Institute of Technology

"California Institute of Technology scientists have studied air pollution for many years, their interest directed toward understanding the effects of air pollution on plants, and the role of hydrocarbons in forming air contaminants. Fundamental work establishing the presently accepted theory that smog is formed from hydrocarbons and nitrogen dioxide under the influence of sunlight was done at the institute by Professor A. J. Haagen-Smit.

"University of Southern California

"The University of Southern California has been concerned with the effects of smog on humans and animals.

Researchers at the university have found a cancer-producing substance in the Los Angeles air. Materials extracted from the atmosphere were also shown to have caused cancer in small animals. Whether these substances are present in sufficient quantities to produce lung cancer in humans has not been established.

"Stanford Research Institute

"Since 1947, Stanford Research Institute has investigated the Los Angeles problem. Studies have been concerned with all aspects of air pollution, including meteorology. A number of valuable reports have been published by the institute, which has also sponsored symposiums to stimulate interest and discussion of the many facets of air pollution.

"Air Pollution Foundation

"The Air Pollution Foundation, a nonprofit group, is engaged chiefly in research. Most projects are planned by the foundation and carried out by research groups elsewhere in the country. The foundation has sponsored research on the development of instruments, estimation of hydrocarbon emissions to the atmosphere, evaluation of control devices on automobiles, and substitution of new fuels for present automotive fuels, among others. It has issued a number of reports and bulletins and carries on a public educational program.

"Other Organizations

"Industrial associations have played an active role in studying Los Angeles smog. The Western Oil and Gas Association, American Petroleum Institute, and other organizations have provided funds for experimental laboratory research. The air pollution committee of the Los Angeles County Medical Association is interested in the subject, and numerous other scientific and citizens' committees have organized to investigate air pollution."

In spite of the important progress made by these agencies, both governmental and private, in air pollution research, many questions

remain unanswered. It was pointed out to this committee at the public hearings held during the 1955-57 interim that, included among these, were the following basic problems:

1. The chemical components of polluted air which produce eye irritation and plant damage have not been positively identified.
2. Although it is known that smog results from chemical and physical interactions of substances in the atmosphere, no positive identification has been made of the products of this interaction affecting the physiology of man and causing plant damage.
3. The value of the existing control and protective measures and devices, in terms of ultimate alleviation of the unpleasant effects of smog, has not been positively determined.
4. Tolerance levels of air pollution for health remain unknown.
5. Although the physical discomforts caused by smog are well known, there is no precise knowledge of the extent of the health hazard created by smog.

There is a vital need for objective evaluation of the health effects of smog including an identification of those pollutants which cause physical discomfort, a determination of the effect that smog may have on the public health in the long run, and a determination of tolerance levels. Before a detailed analysis of the association between specific air pollutants and health can be made, far more research into the chemistry of the pollutants is needed. There is need for coordinated research to enable the evaluation of the interrelationships among the causes, the distribution or dispersion and the effects of air pollution.

That air pollution is affecting more and larger areas of the State emphasizes the fact that the problem is one which is of state-wide as well as local concern. That the problems faced by one locality are in part paralleled by problems in another is evidence of the need for coordination of the research, to enable one area to benefit from the findings of another and by so doing avoid unnecessary duplication of effort where this effort would better be expended in an area where no research is being done. The voluntary cooperation of the many agencies in this regard is to be commended. The work of the State Department of Public Health in coordinating the activities of these various agencies and in initiating the research projects in which it is presently engaged is extremely valuable.

The committee feels that, because of the increasing seriousness of the problem, continued effort is needed to coordinate the present research activities and to extend the research as rapidly as possible. Control measures cannot be taken with maximum effectiveness until the agents comprising smog and the dangers of smog are known. The committee, therefore, believes that solutions to the many problems could best be achieved by the establishment of a state-wide agency charged with the responsibility for coordinating existing research and expanding research into those areas where knowledge is presently lacking.

REPORT OF SUBCOMMITTEE ON CAMPGROUND SANITATION

The Subcommittee on Campground Sanitation was appointed by the Chairman of the Assembly Interim Committee on Public Health following adjournment of the 1955 Legislative Session. It was directed to study sanitation problems on public lands in California and specifically to study Senate Bill No. 126 introduced in the 1955 Session. This measure, had it passed, would have imposed a $1 camp tax on persons using or maintaining a camp on state, federal or local public lands, the moneys collected to go into a newly created Campground Sanitation Fund for allocation to campground sanitation projects.

The committee found, through talking with representatives of state, federal and local governmental agencies, and others interested in the development and maintenance of campground and recreation areas in California that the problem of sanitation is an integral part of the total development and maintenance problem and that it is one involving a multitude of agencies on the state, federal and local levels.

The chairman of the subcommittee had occasion to visit several camping areas during 1956, including Fort Ross, Paul M. Dimmick Memorial, Van Damme, Edward R. Hickey, Richardson Grove, Stevens Grove, Williams Grove, Burlington, Dyerville, Bull Creek, Rockefeller Redwood Forest, Grizzly Creek, McDonald Park and Morro Bay and camping areas in the Inyo-Mono region of the High Sierra. Although he reported finding the sanitary conditions in the state parks "exceptionally good" and those in the Inyo-Mono region improved over what they had been previous years, he also reported that the need is apparent for expansion of existing facilities and for the development of new areas for recreational use.

Since the Subcommittee on Public Lands, Grazing and Forest Practices, Assembly Interim Committee on Agriculture, was studying the total recreational problem, this committee and the Subcommittee on Campground Sanitation held a joint public hearing on January 3, 1957, in Los Angeles. At this hearing the importance of planning for adequate sanitary facilities in conjunction with the total problem of planning for recreational facilities in California was emphasized by a number of the witnesses.

STATE DEPARTMENT OF PUBLIC HEALTH

Frank M. Stead, Chief, Division of Environmental Sanitation, State Department of Public Health, submitted the following statement to the committees (prior to the January 3 hearing):

"The State Department of Public Health considers that the solution of the problem of campground sanitation in California is a matter of very great urgency and rates a high priority of consideration by the Legislature. The State Board of Public Health has enunciated the principle that outdoor recreation is one positive means of improving the public health, and observations of the staff of the department have

indicated beyond doubt that at present the amount of use of natural recreational areas of the State is limited by the availability of water supply, toilet, food preparation, camping, and refuse disposal facilities. Any substantially increased use of recreational resources of the State depends upon the development of a program to provide such facilities.

"Even with the present level of use, outbreaks of diarrhea and intestinal diseases repeatedly emphasize the result of overloading the present facilities with the peak crowds now gathering in recreational areas at all seasons of the year.

"Senate Bill No 126, introduced at the 1955 Session of the Legislature, had several fundamental defects. First of all, it did not take account of the magnitude of the cost of building and operating a statewide system of campground facilities, and the fact that a large portion of such funds must come from some source other than direct charge to the user. Secondly, the bill did not clearly place on one agency of State Government the central responsibility to plan, construct, and operate campground facilities with an appropriate budget and staff. The State Department of Public Health believes that unless these two defects are remedied, the proposed program could not succeed.

"The problem of conflicting state, local and federal jurisdiction in camping and recreation areas is important but does not constitute a valid argument against a state program in this field. Federal recreational activities are largely confined to national parks and national forests. The national parks are confined to outstanding landmarks or geologically unique places and will never be numerous enough in California to fill more than a small fraction of the recreational demand. National forests are far more widespread, but the present federal policy is to provide only token funds for recreational facilities. Consequently, any real exploitation of the recreational possibilities of national forests awaits the development of some cooperative plan between the State and Federal Government. Cities and counties have largely confined their activities to the development of a few recreational areas in close proximity to metropolitan areas. This has restricted development to those counties which contain or are immediately adjacent to metropolitan areas. The great bulk of the attractive mountain area and much of the seacoast lie in counties remote from metropolitan areas, and development of campground facilities in these areas for use by the general public would seem to depend upon action by the State.

"The State Department of Public Health believes that the appropriate role of public health departments in this field is that of consultation in the planning of campground facilities and inspection and supervision of their operation, but not the assumption of responsibility for either construction or operation. No agency can properly inspect its own activities, and we believe that to some agency other than Public Health should be assigned the responsibility to construct and operate.

"We believe that a pattern of joint state and local financial support should be included in any proposed legislation."

U. S. FOREST SERVICE

A representative of the Regional Forester, U. S. Forest Service, testified at the committee hearing that there are 149 national forests in the United States; 17 of these are located in California. California has, in addition, approximately 1,100 camp and picnic grounds (or about 10,000 family units), several dozen ski areas and other recreation areas of various types. He added that these facilities are "not nearly enough and, at the present time, we are not quite on top of the job of taking care of these now existing We need to do a better job of sanitation and policing on those areas, and we also have a tremendous need for expanding the facilities that already exist." He further stated:

"The Forest Service concurs in an earlier recommendation to the committee that a state-wide inventory be made of public needs for forest and beach recreation opportunities, and that a comprehensive California plan for the utilization of this resource be prepared.

"We will be happy to cooperate in such a project for the attainment of this objective. We already have a good inventory of existing and potential public recreation sites in so far as national forest lands are concerned. The possibility of adequately developing and expanding these sites now looks more promising than it has for over a decade, as federal recreational appropriations for the California Region have increased tenfold in the past four years and Congress continues to maintain a live interest in providing forest recreation for all. We have recently added to our planning staff in order to provide completed new recreation area plans in advance of increased financing.

"We are already cooperating with the State of California in the new roadside rest program and in the program of hiking and riding trails. We consider ourselves fortunate in being in a position to provide developed public recreation areas in the high mountains and forests and feel that our program should be coordinated with the efforts of other agencies to furnish companion sites in the valleys, foothills, and along the coast so as to meet the needs of the expanding population."

STATE WATER POLLUTION CONTROL BOARD

The State Water Pollution Control Board, at the suggestion of this committee, directed a letter to each of the nine regional water pollution control boards requesting them to report on the extent of campground sanitation problems in their regions. The State Board wrote the committee (on December 26, 1956) that the replies received from the North Coastal, Central Coastal, Los Angeles, Central Valley, Colorado River Basin, and Santa Ana Regional Boards "indicated that they have very few campground sanitation problems that are of such a nature as to affect water quality within their regions. It should be emphasized that these boards are referring only to sanitation problems that would result in (or threaten) water pollution. All of the pollution control boards are aware of the fact that there are other types of campground sanitation problems in many areas of the State, but these six boards have stated that, within their regions, there have been very few of these problems which involve water pollution and over which they have jurisdiction."

For example, the Central Valley Region indicated that although "no campground sanitation problems have been officially reported to the Regional Board, our field trips and contacts with local health officers and the U. S. Forest Service indicated that campground sanitation in the Sierra Region is not good due primarily to overcrowding and apparent lack of funds for adequate facilities and maintenance."

The Santa Ana Regional Water Pollution Control Board stated that "There are several highly developed recreational areas in the mountains of this region, both publicly and privately owned, in which sanitation maintenance is a chronic and severe problem. Time does not permit a detailed inventory of these areas nor the many varied problems encountered in sanitation, but it is conservatively estimated that a half million people visit these areas annually for varied recreational reasons and the degree of control of sanitation varies from nothing to fairly adequate depending on many factors."

The Lahontan Region Water Pollution Control Board submitted a detailed report concerning the problems of sanitation in the National Forests of Inyo and Mono Counties. In submitting this report to the committee it was stated that:

"In 1950, when this board was first formed, it was faced with the difficult conditions that existed in the national forests of Inyo and Mono Counties. Extremely unsanitary conditions prevailed at that time. The board immediately started working with the local chambers of commerce of the two counties in an effort to resolve the problem. Many meetings were held with the groups, to discuss various means of solution. One, which did help to some extent, was a voluntary campground sanitation fund which was carried out by the merchants within the area. Voluntary donations of $1 were asked of visitors to the two counties, and approximately $2,000 was raised, which was turned over to the U. S. Forest Service for maintenance of certain critical campgrounds. This method was fairly successful but still did not correct the conditions.

"For several years after the war the Forest Service was experiencing cuts in their budgets rather than increases. * * * It is felt that as a result of our State's Legislative action, Congress released additional funds to the Forest Service, which enabled them to do nominal amounts of cleanup work. Still, not sufficient money was available for any definite program of cleanup, and certainly no funds were available for any long-range planning to expand existing campgrounds and construct new ones to accommodate the tremendous increase in campers to that area.

"Last year, in the 1956-57 Budget, the U. S. Forest Service was given a considerable increase in funds for this purpose, and on many of the campgrounds within Inyo-Mono, these increases have reflected excellent results. Still, there is no assurance these increases will continue.

"It is this board's hope that your committees will be able to bring the problem which exists in California today, before the proper representatives in Congress, and that funds will be made available to the Forest Service to begin a long-range plan for development of better campgrounds, trailer courts, improved sanitary facilities, and better maintenance.

"It is this board's opinion that it is only right and proper that campgrounds within our recreational areas of the State receive sufficient funds to keep pace with the tremendous increase in population. If your committees are unable to bring about a program such as this from the Federal Government level, then it is the opinion of everyone concerned, including local chambers of commerce, local health departments, sportsmen's groups, and conservationists, that California should embark on a program handled possibly through the Division of Beaches and Parks, to establish well maintained, attractive campgrounds in mountain areas where Federal Services are inadequate. It is the feeling of all those concerned that this method could be accomplished either through taxes, direct charges, or both.

"This board * * * feels that campground sanitation, as it relates to water pollution, is critical in many areas, and that although pollution in its strictest sense cannot be measured in a particular stream, the matter of garbage, trash, and rubbish, finding its way into these streams and lakes, is, in effect, of a pollution nature, and that as a pollution control board, has full responsibility for correction. The policing power of the board is extremely limited. Therefore the means of correction must be accomplished by adequate facilities The board further believes that when adequate funds are made available to the Forest Service, or if State Parks are established in critical areas, it will relieve some of those marginal camping areas adjacent to the hundreds of streams throughout the Sierra Nevada Mountains.

"The mountain areas in the southland are rapidly becoming saturated, thus leaving the vast Sierra Nevadas as a tremendous undeveloped potential, which is capable of accommodating many thousands of outdoor enthusiasts. This board is of the opinion that if recreation is worth having, it is worth keeping, and especially worth developing."

The board indicated in its report that the conditions found in the Inyo-Mono area prevail generally througout all other recreational areas of the State. It summarized the problems and the need as follows:

"THIS IS THE PROBLEM

"1. 17,220,000 man-days of recreational use made in California national forests during 1955.

"2. Camping use largely occurs within a 75-day period in summer; thus the national forests of California carry the equivalent of a city the size of Long Beach during the camping period.

"3. Use—at least triple the capacity of recreational facilities.

"4. Facilities deteriorated due to lack of maintenance and age.

* * * * *

"WHAT IS NEEDED

"1. Adequate clean-up and sanitation in existing national forest camps. Estimated annual cost $750,000.

"2. Expansion of existing areas and construction of new recreational areas to accommodate *present* use. Estimated cost $4,500,000.

"3. Additional family sized units will be required by 1961. Estimated cost $5,000,000."

As a result of the studies of the Subcommittee on Campground Sanitation and the Subcommittee on Public Lands, Grazing and Forest Practices, a measure has been proposed (Assembly Bill No. 32, 1957 Session) to create a California Public Outdoor Recreation Plan Act. A technical consultant group and an advisory council would be created and directed to submit a final recreation plan to the Legislature on or before March 1, 1960, with preliminary reports in 1958 and 1959. The Director of the State Department of Public Health and the head of the State Water Pollution Control Board would be included as members of the technical consultant group and members of both the department and the board would be appointed as members of the advisory council to provide consultation and advice in the planning of necessary campground and sanitation facilities in conjunction with the total recreation plan. A second measure has been proposed (Assembly Bill No. 27, 1957 Session) to promote a campaign against the disposal of litter in public places including the adoption of "Parky" the kangaroo as the official state symbol to urge public participation in the campaign.

REPORT OF SUBCOMMITTEE ON HOT PLATES AND UNVENTED HEATERS

HOT PLATES

Findings

1. The present law providing that hot plates may, under certain circumstances be installed in hotel rooms (including rooms in lodging or rooming houses, dormitories, clubs or guest houses) terminates on the ninety-first day following adjournment of the 1957 Legislative Session.

2. Although it is not felt that there is anything inherently unhealthy in cooking in a sleeping room, the State Division of Housing and many city and county health departments oppose adoption of a new measure which would permit their use after the present enabling provision expires, on the grounds that it would encourage overcrowding and lead to slum conditions.

3. Many light-housekeeping units would reportedly be operating illegally if a measure is not enacted by the 1957 Legislature to permit a continuance of the use of hot plates.

4. No measure permitting the use of hot plates in sleeping rooms should be enacted unless it contains clear definition of the term "hot plate," strict limitations and specifications as to the room size in which their use is to be permitted, other facilities required and the number of occupants to be permitted in such a room.

Recommendations

That legislation be enacted which will permit only the restricted use of hot plates in certain types of rooms; that this legislation contain a clear definition of the term "hot plate," restrictions as to the room size, the number of occupants, and the other facilities required in such a room.

Hot Plates and the Law Regulating Their Use

The Health and Safety Code (Section 17708) provides that hot plates may, under certain circumstances, be installed in hotel rooms, lodging or rooming houses, dormitories, clubs or guest houses. The section reads in part as follows:

> "This part does not prevent the installation, maintenance, or use of a hot plate in a room of any hotel which is occupied, or is ready for occupancy, on the effective date of this section, if:
>
> "(a) The hot plate will be, or is, used solely for the cooking or preparation of meals for consumption solely by the occupant of the room;
>
> "(b) The hot plate is of an approved type;
>
> "(c) The installation, maintenance, or use of a hot plate will not be, or is not, hazardous to life or property.

"As used in this section, 'hotel' has the same meaning as defined in Section 15020, except that it may contain less than six guest rooms and it may be occupied, or intended or designed for occupancy, by less than six guests.

"Any city or county may enact an ordinance to prohibit the installation, maintenance, or use of a hot plate in any room of any hotel."

Section 17708 was first enacted by the Legislature at the 1954 Special Session (Chapter 64) and carried a termination date of 91 days following adjournment of the 1955 Regular Session. In 1955 the Legislature enacted Assembly Bill No. 108 (Chapter 863), which continued the provisions of Section 17708 until the ninety-first day after adjournment of the 1957 Session of the Legislature. Since provision was made that the section would terminate unless further action be taken by the 1957 Legislature, this committee was directed to study whether a permanent measure should be enacted and, if so, whether such a measure should contain a more precise definition of hot plates and further regulations regarding their use.

The reason for adding this section to the Health and Safety Code in 1954 was summarized in the statement in the urgency clause of the bill itself. It stated:

"Many people of limited income, including war veterans completing their education, pensioners and others in moderate circumstances, who cannot afford living quarters which include separate rooms for sleeping and cooking, are faced with the necessity of discontinuing cooking in the rooms they occupy for the reason that such cooking is presently contrary to the provisions of the State Housing Act. Such discontinuance would work a great hardship on those persons since in most instances they will thereby be compelled to obtain their meals elsewhere at a cost which they can ill afford. In order to relieve them of such consequences * * * it is necessary that this law go into effect immediately."

The provisions of the State Housing Act to which reference was made are found in present Section 17702 of the State Housing Act. This section, passed in 1923, had been construed to prohibit the use of a cooking appliance in a room used for sleeping purposes. According to Mr. Rollins MacFayden, who testified at the public hearing on behalf of the American Legion, no attempt was made to enforce the provision in the State Housing Act of 1923 until very recently, and "it appears that great hardship will now result if it is strictly enforced. The hardship will not be confined to the tenants, who will be forced to buy their meals outside at increased costs, but it will affect the owners as well, who in many cases have invested their savings in these properties in good faith and without any knowledge that they could not be operated within the law." Mr. Raymond Barry of the State Division of Housing agreed that the provision had not been enforced during the depression or during the housing shortage in the postwar period.

Questions of Interpretation

Since the enactment of this temporary measure several technical questions have arisen as to its interpretation. At the request of the

Honorable Ernest B. Webb, Director of the Department of Industrial Relations, the Attorney General prepared an opinion, dated December 19, 1955, which included, among others, the following points:

1. *Meaning of the term "hot plate."*
   "Since the Legislature has not seen fit to include a definition of this term, it must be taken in its common ordinary meaning. 'Hot plate' is defined in Webster's New International Dictionary as: 'A simple portable gas or electric heater consisting of one or more flat radial or heating elements mounted on a low frame or base.' In our opinion, under this definition the distinguishing features of a 'hot plate' are portability, one or more burners, and mounted on a low frame or base. This definition places no qualifications on the size (other than that it be portable) or on the number of burners. However, it would seem to exclude any cooking appliance that also contains an oven. * * * either gas or electricity may be used."
2. *Number of occupants in room.*
   "In our opinion the use of words 'the occupant' in Section 17708 (a) does not operate to limit occupancy of a room containing a hot plate to one person. * * * The (above-quoted) phrase may be considered to read 'the occupant or occupants'."
3. *Effective date of enactment.* September 7, 1955.
4. *Buildings affected.*
   "* * * the building must be occupied or ready for occupancy on September 7, 1955, in order to come within the provisions of this section. Thus, buildings completed after September 7 do not qualify."

Other points in the opinion related to the meaning of "hotel" and of "apartment" and the effect the section would have on other provisions in the Housing Act.

Mr. Raymond P. Barry of the State Division of Housing brought out another problem in connection with permitting the use of hot plates under the Health and Safety Code. Auto courts and motels located in unincorporated areas are regulated by the State Auto Court Resort and Motel Act. At the present time, although the Health and Safety Code permits the use of hot plates in hotel rooms within city limits, there is no parallel provision in the State Auto Court Resort and Motel Act. Mr. Barry stated that therefore the State Division of Housing is "confronted with the problem of advising motel owners just outside the city limits that they could not install these so-called hot plates or cooking appliances in sleeping rooms but that auto courts and motels inside cities, which are regulated by the State Housing Act, could." A bill which would have removed this discrepancy was introduced at the 1955 Session; however, it failed to pass.

Need for Regulation

The regulations which have been imposed by the State to insure the maintenance of certain minimum housing standards in California are found in the State Housing Act, Division 13 of the Health and Safety

Code. Cities and counties throughout the State have indicated their belief that specific regulation, if not prohibition, of cooking in sleeping rooms is needed. A questionnaire was sent by the Division of Housing to all cities and counties in the spring of 1955 relating to this subject. The following answers were received to the question, "In your opinion should cooking in sleeping rooms be prohibited, regulated, or permitted without control?"

	City		*County*	
	Yes	*No*	*Yes*	*No*
Prohibited	79	8	9	2
Regulated	29	3	4	2
Permitted without control	1	6	–	3

The Division of Housing indicated its opposition to the uncontrolled use of hot plates when it submitted the following arguments in opposition to the enactment of Section 17708 in 1955:

1. It would permit cooking, eating, and sleeping in the same room, which would encourage overcrowding of rooms and buildings.
2. Overcrowding inevitably leads to slum conditions. The huge cost of slums has been documented many times in terms of disease, crime, juvenile delinquency, waste, and erosion of the dignity and character of our fellow citizens Not always as fully appreciated is the fearful economic cost of slums. Forty cents of every budget dollar spent by our communities goes into blighted areas that produce only 6 percent of revenue.
3. This bill would hamper, if not halt, the housing rehabilitation programs under way in many of our communities. Such programs were provided for in the revised 1954 Federal Housing Act, which was enacted by Congress under the leadership of the President.
4. The bill would be a definite long step backward in housing standards of California. For 45 years, prior to last year's special session of the Legislature, which enacted a similar bill, there had been a prohibition of cooking in sleeping rooms. The Assembly Interim Committee on Governmental Efficiency and Economy in a report to the 1955 Session of the Legislature stated that the State Housing Act "has prevented widespread slums from developing in this State to the same degree that they have in many other states."
5. The bill is vague in its terms. It permits the installation and use of hot plates in sleeping rooms but does not define a hot plate.
6. Its definition of a hotel includes all places of human habitation, apartment houses, hotels and dwellings and auto courts and motels within cities.
7. It is discriminatory legislation because cooking in a sleeping room of an auto court, resort and motel which is located in an unincorporated area would continue to be prohibited by the Auto Court, Resort and Motel Act.
8. The bill contains a provision that "it shall supersede any existing provision in this code or elsewhere in the law which is in conflict with it." This would make it most difficult to interpret; enforce-

ment officials would be at a loss to determine what provisions in the Health and Safety Code or elsewhere in the law would be inapplicable in a sleeping room containing a hot plate.

9. The bill contains no provisions for a kitchen sink with hot and cold running water.
10. It does not provide for essential protection against fires.
11. It does not specify a minimum floor area for a sleeping room with an installed cooking appliance. This is a serious defect because the State Housing Act permits a sleeping room in a hotel with a minimum floor area of only 70 square feet. Under the terms of this bill a cooking appliance may be installed in a room of these small dimensions.
12. The provision in subdivision (c) that "the installation, maintenance, or use of a hot plate will not be, or is not, hazardous to life or property" is so vague as to be unenforceable. It leaves to the individual discretion of several hundred city and county enforcement officials of the State Housing Act (the determination of) what is hazardous. Without standards they cannot prosecute for violations.

The views of the City and County of San Francisco were expressed by Ellis D. Sox, M.D., Director of Public Health, in a letter to the committee dated September 22, 1955, which stated in part:

> "We believe * * * that thorough study is indicated in order that the lowering of any of the present requirements will not result in situations dangerous to health or, more specifically, the improper conversion of housing to a lower standard which will in effect produce the slums of tomorrow.
>
> "* * * the California Conference of Local Health Officers has gone on record as opposing the use of hot plates in sleeping rooms. The Health Code of the City and County of San Francisco at the present time prohibits the use of hot plates in sleeping rooms.
>
> "We believe that there is nothing inherently unhealthful in cooking and sleeping in the same room per se. We wish, however, to point out that cooking in a hotel room in which there is inadequate ventilation, inadequate facilities for the storage of food and utensils, inadequate facilities for the proper disposal of garbage and waste with gas heaters, particularly with flexible connections, the matter of cooking and sleeping in the same room becomes dangerous to health. The possibilities of asphyxiation, explosion, and fire, the attraction of rodents and insects, and the possibility of food poisoning due to improper protection or refrigeration of food are factors to consider."

Gilbert E. Morris, Superintendent of Building for the City of Los Angeles, stated, "We do not think that sleeping and eating in the same room is detrimental to health or safety * * * if set up under proper regulations and standards."

Suggested Restrictions on Hot Plate Use

Several organizations have indicated the type regulation or restriction which they feel necessary if the use of hot plates is to be permitted. The recommendations of the Public Health Department of the City and County of San Francisco and of an advisory committee appointed by the State Division of Housing in 1954 (composed of city and county planning, building, fire, and health officers and representatives of gas utility companies from both Northern and Southern California) are almost identical. These recommendations, deemed necessary to protect the public health and safety and to preclude overcrowding of rooms, building and neighborhoods, included:

1. Hot plate be defined as having no more than two burners. The State Division of Housing recommended that a gas burning plate be connected to the gas supply by approved metal piping with an approved shut-off valve readily accessible within the room and within six feet of the appliance. Dr. Ellis D. Sox, Director of Public Health for San Francisco, suggested that it be further restricted to mean an electric hot plate served by proper wiring and fusing to comply with standard electric codes.
2. The hot plate be approved by an approved agency.
3. The area of the room in which a hot plate may be used be a specified minimum size. The Division of Housing Advisory Committee recommended a minimum of 120 square feet in superficial floor area; the San Francisco Public Health Department recommended a minimum of 150 square feet with height not less than eight feet.
4. The room contain an approved sink with hot and cold running water.
5. The plumbing in the room meet minimum standards as found in the Health and Safety Code (Chapter 25).
6. An approved storage cabinet for storing food, dishes, cooking and eating utensils be in the room.
7. The bedding, drapes, curtains, towels or other readily combustible materials be kept at a safe distance from the hot plate.
8. Window area, ventilation and cubic air space comply with provisions in the Health and Safety Code.
9. The hot plate rest on its own legs and be a fixed installation set not closer than six inches from any wall or projection thereof and resting on an impervious surface; the walls behind and adjacent to the hot plate be lined or backflashed with incombustible material equivalent to one-fourth inch asbestos mill board, extending from 12 inches below to 24 inches above the base of the hot plate; there be 36 inches clear and unobstructed space above the surface of the hot plate or oven.
10. An approved method of heating be installed in or for the room and the hot plate not be used for the purpose of heating the room and not installed within an unventilated area such as a closet.

The San Francisco Public Health Department suggested the following additional restrictions:

1. Cooking be restricted for no more than two occupants of a room.
2. Adequate covered metal garbage receptacles be available within the room or immediately adjacent thereto, with provision made for legal collection and disposal thereof.

The Division of Housing advisory committee suggested that in addition toilet and bath facilities be installed and maintained in the building (as prescribed by Articles 2 and 4 of Chapter 25 of the Health and Safety Code for hotels).

The City of Los Angeles passed a local ordinance in 1955 legalizing light housekeeping in guest rooms, rooming houses, apartment houses, and hotels, providing that the cooking facilities met with standards set up in the ordinance. The restrictions placed on the use of hot plates were similar to those suggested by the joint committee established by the Division of Housing and to those recommended by the City of San Francisco.

They differed, however, in that the minimum specified room size is 150 square feet for buildings erected prior to enactment of the ordinance and 180 square feet for buildings erected subsequent to enactment.

The ordinance specifies that the room shall be considered a "guest room" and shall be used for occupancy by not more than two people; that the cooking appliance shall be used solely for the preparation of meals for the two occupants of the room.

The ordinance permits the use of a four- (rather than a two-) burner appliance and it may be either gas or electric as long as it is approved by a nationally recognized testing agency.

It is apparent that the use of hot plates in hotel rooms, guest houses and the like should be permitted only if certain of these restrictions are specifically outlined in the Health and Safety Code. To avoid confusion in interpretation following the passage of Section 17708 in 1955, the type room in which hot plates are to be permitted should be more clearly spelled out.

It was pointed out by several witnesses at the committee hearing that there are many light-housekeeping units (estimated to be in excess of 20,000 in Los Angeles alone) which would be operating illegally if provision for the use of hot plates in such rooms is not continued by the passage of legislation at the 1957 Session of the Legislature. It was also pointed out that the type of restriction needed to regulate the use of hot plates varies from one part of the State to another. The committee feels that definite minimum standards relating to the use of hot plates are needed; and that, if additional restrictions or regulations are needed at the local level, they should be imposed by local city or county ordinance.

UNVENTED HEATERS

Findings

1. The use of unvented gas-burning appliances is specifically prohibited in existing state statutes (Section 16900, Health and Safety Code). The statutes also set forth limitations on those gas appliances

which are affected when it is stated that "no provision of this act shall be construed to require a structural addition, structural alteration, or structural change (Section 41, Statutes 1951).

2. Questions of interpretation of these two sections have arisen since their enactment in 1951. However, it is now clear that Section 41 limits the prohibition in Section 16900 only when the structural alteration, addition or change required for compliance with Section 16900 is a major or substantial one. There are few instances when the substitution of a vented heater for an unvented heater requires such a structural alteration, addition or change.

3. A proposal, sponsored by the California Rental Owners Association during the 1955 Legislative Session would have added, among others, a provision to the present section that "unvented gas-burning heaters designed for unvented use and having the approval of an approved agency" could be used in buildings that were completed on September 22, 1951. The association has stated that an approved unvented heater is not hazardous and that such a measure is necessary to protect property owners who would otherwise be required to make costly and unnecessary alterations on their buildings.

4. The State Division of Housing reported that 135 deaths were caused by "unvented or defective gas appliances" during 1953 and 1954. The California Rental Owners Association stated that the deaths were due to faulty or unapproved heaters and not the approved unvented type.

5. The Division of Housing and many city and county health departments oppose any measure which would permit the use of unvented gas heaters whether approved or disapproved.

Recommendations

1. That no change be made in the existing statutes which would permit the use of unvented gas-burning appliances other than in those few special cases where provision has already been made.

2. That, to clarify the provisions relating to gas-burning appliances, Section 16900 of the Health and Safety Code be amended by incorporating the provisions of Section 41 (Statutes of 1951) and by adding the definition that a structural alteration, addition or change is one of a substantial or major nature.

Unvented Heaters and the Law Regulating Their Use

A vented heater as discussed in this report is a gas burning appliance which discharges the products of combustion to the exterior air by means of a vent pipe or a flue. An unvented heater is one which releases the products of combustion into the room in which the heater is located. The three major products of combustion from these heaters are heat, water, and carbon dioxide; however, it is possible that, under some circumstances, an improperly functioning heater will discharge carbon monoxide rather than carbon dioxide.

The use of unvented gas heaters is specifically prohibited in existing state statutes in Section 16900 of the Health and Safety Code (as amended in 1951, Chapter 1127) which reads:

"16900. Every gas-burning appliance shall be approved by a nationally recognized testing agency. Every gas-burning appliance, except ranges, hot plates, and refrigerators approved by such agencies for unvented use, shall be connected to an effective flue or vent leading to the outside air not less in size than the vent collar on the appliance. Vents or flues for all appliances except those with forced draft or sealed combustion chambers shall extend one (1) foot above the highest portion of any building within fifteen (15) feet horizontally of the vent termination. Every vent or flue extending above the roof line shall terminate in a cap with a vent capacity of not less than that of the flue or vent Appliances with forced draft or sealed combustion chambers shall be vented in accordance with the manufacturers' instructions."

At the time this measure was enacted, Section 41 of Chapter 1127 was added to the Health and Safety Code (Statutes 1951).

"Section 41. No provision of this act shall be construed to require a structural addition, structural alteration, or a structural change in or on an existing building, or the replacement of an existing appliance which requires a structural addition, structural alteration, or structural change in or on an existing building, where such is not required by law prior to the effective date of this act."

Assembly Bill No. 2269 (1955 General Session)

At the 1955 Legislative Session, an amendment to Section 16900 was proposed by the California Rental Owners Association (Assembly Bill 2269). The measure, had it passed, would have added the provision that gas burning heaters designed for unvented use and having the approval of an approved agency could be used in buildings that were completed and existing on or before September 22, 1951. The amended section proposed by the association read:

"Section 1. Section 16900 of the Health and Safety Code is amended to read:

"16900. (a) Every gas burning appliance shall be approved by an approved agency. Every gas burning appliance, except ranges, *gas dryers*, hot plates, and refrigerators approved by such agencies for unvented use, shall be connected to an effective flue or vent leading to the outside air, not less in size than the vent collar on the appliance. Vents or flues for all appliances except those with forced draft or sealed combustion chambers shall extend one (1) foot above the roof. Every vent or flue extending above the roof line shall terminate in a cap with a vent capacity of not less than that of the flue or vent. Appliances with forced draft or sealed combustion chambers shall be vented in accordance with the manufacturer's instructions; provided, however, that unvented gas burning heaters designed for unvented use and having the approval of an approved agency may be used in completed buildings existing on September 22, 1951. Every such approved unvented heater shall be maintained in good repair, and shall be connected

to the gas supply piping in the building by approved metal piping. Gas ranges shall be vented in accordance with the provisions of Section 16903. Every existing unapproved heater whether vented or unvented, and every appliance that becomes hazardous through lack of maintenance, shall be removed.

"(b) It shall be unlawful for any person to sell, display, or offer to sell any unapproved gas burning heater, whether it be designed for vented or unvented use. The housing department, or if there is no housing department the health department, of every city shall enforce within the city the provisions of this subdivision. In every county the officer who is charged with the enforcement or maintenance provisions of this part shall enforce within the county the provisions of this subdivision.

"(c) Every gas heater shall bear the seal of approval of the approved agency."

The association listed the following advantages of the proposed law:

1. It eliminates the sale of old worn out defective heaters to those unsuspecting buyers who are looking for cheap heat. Experience has shown these unapproved heaters to be the major source of trouble.
2. It spells out in detail who is responsible for enforcement.
3. It requires a seal of approval on all heaters.
4. It recognizes that such testing agencies as the American Gas Association would not approve a gas heater that is not safe to use.
5. It carries out the intent of the 1951 Legislature in enacting Section 41 of Chapter 1127 of the 1951 Statutes.
6. It revises an inadequate and unenforceable law into one that would be adequate in the protection it would give, clear and concise in its wording, and fair to everyone concerned.

In requesting a change in the law, the California Rental Owners Association stated in September, 1955, that "We are actually talking about the Los Angeles area only, as there are very few in use in other sections of the State. However, there were an estimated 700,000 unvented heaters in use in Los Angeles in September of 1951, supplying heat to more than 2,000,000 people. The vast majority of these are just as safe as any vented heater, for had they been the death-dealing device some would have us think, there would have been thousands of deaths each year. However, * * * any heater that is not approved, properly installed, and properly maintained should be removed, whether it be vented or unvented."

The association further stated in a letter dated September 23, 1955, that Section 16900 in combination with Section 41 of Chapter 1127, "has resulted in arbitrary enforcement by some state agencies of a law that is neither just nor workable. Unless this is changed, many thousands of property owners in the Los Angeles area will be forced to spend millions of dollars on alterations and replacements of safe, AGA approved gas appliances without giving the public adequate protection."

Referring to Section 41, they stated, "Since there is no clearly defined wording in the law which specifically states what constitutes a structural addition, structural alteration, or structural change, the state enforcement agency has refused to recognize any case as being exempt under Section 41."

Division of Housing

The Division of Housing of the State Department of Industrial Relations is opposed to the passage of any measure which would permit the use of unvented gas heaters whether approved or unapproved. They stated that the bill proposed by the California Rental Owners Association "would afford protection to the occupants of new buildings but would leave the occupants of old buildings unprotected against a highly dangerous and insidious hazard—carbon monoxide poisoning." The division went on to state that the proponents of the measure

> "place complete reliance for protection of health and safety in old buildings on gas heaters being 'approved appliances.' The subject of approved appliances is secondary to the requisite for a vent or flue to carry from a room the products of combustion. A vent provides the mechanics of producing and maintaining a draft which induces a supply of replacement air into a room in which a gas heater is situated. If there is inadequate air for combustion, a gas heater expels carbon monoxide poisoning whether or not the flame is in contact with some metal surface or whether or not there is impingement on the burner. Any gas heater which may have been 'approved' when it was manufactured but which becomes defective in operation may discharge the harmful products of combustion into a room, but if the heater is vented, the vent will discharge carbon monoxide into the outer air. * * *
>
> "During 1951 and 1952, county coroners reported 192 fatalities resulting from unvented or defective gas appliances. Surveys revealed that there were 556 deaths from carbon monoxide in places of human habitation for the years 1945 through 1951. The unvented gas heater became the third largest cause of accidental deaths in California and was exceeded only by automobiles and general home accidents. The total of 135 deaths reported by the coroners for the years 1953 and 1954 represents a reduction of 57 deaths. This reduction in fatalities is attributed to the present venting requirement in the State Housing Act, which was strengthened at the 1951 Legislative Session.
>
> "Legislative action was responsible for the saving of 57 lives during the past biennium. Continuance of the requirement for the venting of gas appliances during the next two years may prevent 100 fatalities. Discontinuance of the venting requirement may save property owners some expense but we fear it will cost the loss of human lives." [1]

[1] Report to the Legislature on Carbon Monoxide Fatalities Attributed to Unvented and Defective Gas Appliances, Division of Housing, April 4, 1955

The Division of Housing submitted the following report to the committee on accidental carbon monoxide fatalities from gas appliances during 1953, 1954, and the first two months of 1955.[1]

ACCIDENTAL CARBON MONOXIDE FATALITIES—GAS APPLIANCES	*1953*	*1954*	*First two months 1955*
Totals	60	75	26
Unvented and defective equipment	45	49	7
Unvented equipment	14	22	16
Defective equipment	1	4	3

Counties Reporting Fatalities	*1953*	*1954*	*First two months 1955*
Alameda	3	6	3
Contra Costa	4	1	2
El Dorado	--	1	--
Fresno	3	--	--
Imperial	--	--	1
Kern	3	1	--
Los Angeles	21 4 *	28	--
Marin	--	--	1
Monterey	--	5	--
Napa	--	--	1
Orange	--	3	--
Riverside	--	3	--
Sacramento	--	--	1
San Benito	3	2	--
San Bernardino	1	3	4
San Diego	1	3	4
San Francisco	5	7	--
San Joaquin	1	--	3
San Luis Obispo	1	3	--
Santa Barbara	2	1	--
Santa Clara	--	3	--
Shasta	4	--	--
Solano	1	--	2
Sonoma	--	1	--
Stanislaus	--	2	2
Tulare	1	--	1
Tuolumne	2	--	--
Ventura	--	2	1

* *Undetermined accident or suicide*

In addition to the above, there were the following suicidal deaths:

1953	16
1954	32
First two months 1955	1

The Division of Housing also submitted the following tabulation of the results of a questionnaire sent to county coroners, dated March 23, 1955.

[1] The Division of Housing will present a current report to the Legislature in April, 1957.

RECAPITULATION OF QUESTIONNAIRE TO COUNTY CORONERS

Accidental Carbon Monoxide Fatalities—Gas Appliances

	1953	*1954*	*First two months 1955*
Total accidental deaths	60	75	26
Total additional suicidal deaths	16	32	1

Counties Reporting Fatalities

	1953			*1954*			*First two months 1955*		
	Unvented equipment	*Defective equipment*	*Both*	*Unvented equipment*	*Defective equipment*	*Both*	*Unvented equipment*	*Defective equipment*	*Both*
Alameda	1	1	1	3	3	--	1	1	1
Contra Costa	4	--	--	1	--	--	--	--	2
El Dorado	--	--	--	1	--	--	--	--	--
Fresno	3	--	--	--	--	--	--	--	--
Imperial	--	--	--	--	--	--	--	--	1
Kern	--	--	3	1	--	--	--	--	--
Los Angeles	--	--	21* 4†	--	--	28*	--	--	--
Marin	--	--	--	--	--	--	--	1	--
Monterey	--	--	--	5	--	--	--	--	--
Napa	--	--	--	--	--	--	--	1	--
Orange	--	--	--	--	--	3*	--	--	--
Riverside	--	--	--	1	1	1	--	--	--
Sacramento	--	--	--	--	--	--	1	--	--
San Benito	2	--	1	1	--	1	--	--	--
San Bernardino	1	--	--	3	--	--	4	--	--
San Diego	1	--	--	--	--	3*	4	--	--
San Francisco	--	--	5*	--	--	7*	--	--	--
San Joaquin	1	--	--	--	--	--	3	--	--
San Luis Obispo	--	--	1*	--	--	3*	--	--	--
Santa Barbara	--	--	2*	--	--	1*	--	--	--
Santa Clara	--	--	--	3	--	--	--	--	--
Shasta	--	--	4	--	--	--	--	--	--
Solano	1	--	--	--	--	--	1	--	1*
Sonoma	--	--	--	1	--	--	--	--	--
Stanislaus	--	--	--	2	--	--	2	--	--
Tulare	--	--	1*	--	--	--	--	--	1
Tuolumne	--	--	2	--	--	--	--	--	--
Ventura	--	--	--	--	--	2*	--	--	1
Totals	14	1	45	22	4	49	16	3	7

* Gas appliance type not recorded
† Undetermined accident or suicide

California Rental Owners Association

The California Rental Owners Association, who sponsored the measure which would have permitted the use of "approved" unvented heaters in buildings existing before September, 1951, in its report to this committee on September 23, 1955, stated:

> "Inaccurate and incomplete figures have been presented in the past by those opposing this change. Therefore, in order to bring you factual information we have searched all available records, covering deaths, where a gas burning appliance was involved in

the counties of Los Angeles, Alameda, and San Francisco, representing 54 percent of the State's population. Here is what the records reveal:

San Francisco (period January 1, 1954 to March 1, 1955)

Case Number	*Report by Health Department Inspector*
128 and 129	Two people in the same room died from an approved type vented heater—improperly vented and defective.
347	Unapproved heater and hot water heater illegally installed and both out of adjustment.
478	Defective gas range improperly installed—there was also an unapproved heater but was in good adjustment.
2375	Closed-type gas range used for heating—defective oven door and burners—badly out of adjustment.
2399 and 2400	Two people in the same room—approved type heater properly installed but badly out of adjustment.
16	Vented heater of approved type—improperly vented and badly in need of adjustment.
71	Vented heater—approved type—improperly vented and badly out of adjustment.
272	Gas range—trash burner type—poorly vented.

Alameda County (period January 1, 1954 through December 31, 1954)

Case Number	*Inspectors report shows*
25690	Heater—type unknown.
25858	Circulating heater—out of adjustment.
27129	Vent pipe not being used.
27130	Vent pipe not being used.
27600	Type heater not shown (this was in a motel).
27601	Type heater not shown (this was in a motel).
27691	Vented heater—out of adjustment.

Los Angeles County

The association stated that the figures available for Los Angeles County were incomplete but that

> "The last 42 cases investigated by the health department during the past four years show the following: 23 known to be *unapproved* types, four *approved* types (whether vented or unvented, not shown), and 15 where the type is unknown. The most interesting thing here is that more than 50 percent of the deaths involved heaters which we recommend that not only be banned from use, but also banned from sale by anyone, whether they be a dealer or an individual."

Questions of Interpretation

The Attorney General supplied an interpretation of Section 41 and Section 16900 and the relationship between the two in Opinion No. 52/42, dated April 3, 1952. In discussing Section 16900, the opinion indicated that:

> "Section 16900 is applicable to gas-burning appliances which were installed prior to September 22, 1951. However, Sections 15159 and 15160 of the Health and Safety Code provide a method whereby appliances not specifically approved by Section 16900 may be approved for use if such appliance is the equivalent of that

prescribed in the Housing Act in quality, strength, effectiveness, fire resistance, durability and safety for the protection of life and health.

"* * * The Legislature used the term 'every' when referring to the gas appliances which must be approved by a national testing agency and also used the term 'every' when referring to the gas-burning appliances which must be vented with the exception of ranges, hot plates and refrigerators approved by national testing agencies for unvented use. * * *

"This use of the word 'every' gives indication that the Legislature intended all gas appliances to be subject to the requirements of Section 16900.[1] * * *

"It is true that the Legislature did not specifically indicate that gas appliances already installed were to be affected by the statute but neither did it specifically exempt such gas appliances from the operation of this statute. Therefore, we should examine further to determine whether there is any indication other than the use of the word 'every' to indicate that all gas appliances including those already installed in existing buildings were to be affected by Section 16900.

"Section 41 of Chapter 1127, Stats. 1951, reads as follows:

> " 'No provision of this act shall be construed to require a structural addition, structural alteration or a structural change in or on an existing building or the replacement of an existing appliance which requires a structural addition, structural alteration or a structural change in or on an existing building where such is not required by law prior to the effective date of this act.'

"This section which appears in the chapter amending Section 16900 indicates the Legislature considered the question whether Section 16900 should affect gas appliances already installed in existing buildings. The Legislature showed that it wished those gas appliances to be affected by Section 16900 within certain limitations as stated in Section 41. The question whether the exempting clauses of Section 41 would prevent the application of Section 16900 in the case of any particular gas appliance is a question of fact which would have to be determined by the enforcement authorities. If to bring a particular gas appliance installed prior to September 22, 1951, into compliance with Section 16900 or to replace such a gas appliance with an appliance which complied with Section 16900 a structural change in the building where such gas appliance was located was required when none was required prior to September 22, 1951, then such gas appliance would not have to comply with the requirements of Section 16900. * * *

"The question of what amounts to a structural addition, structural alteration or structural change as those phrases were used by the Legislature is important to this question.

[1] The Attorney General also stated that: "Enforcement officers under Section 16900 are authorized merely to order the removal of a nonconforming appliance and cannot require the replacement of nonconforming appliance with a conforming appliance."

"* * * The courts have given complete definitions of the phrases and these court decisions are helpful in determining what amounts to a structural alteration, structural change or structural addition.

"The meaning of 'structural alteration' was discussed in *Hardware Mutual Casualty Co.* v. *Hilderbrandt,* 119 Fed. 2d 291. * * *

"On page 300 the court states:

" 'A structural alteration of a building or its equipment is one which affects some portion thereof in a vital and substantial manner, and changes its characteristic appearance. It denotes a change or substitution in a substantial particular. * * *'

"* * * What constituted a 'structural change' was considered in the case of *Press* v. *Excelsior Cleaning and Dyeing Co.,* 179 N. Y. S. 176, 110 Misc. 195. There the court held that a 'structural change' * * * is one that affects a vital and substantial portion of the premises, that changes its characteristic appearance, the fundamental purpose of its erection, the uses contemplated, or one that changes the very realty itself, is extraordinary in scope and effect, or unusual in expenditure."

In discussing the meaning of "structural addition," the Attorney General stated:

"It is very unlikely that the installation of a complying gas-fired appliance to replace a noncomplying one would amount to such an extensive operation (as to constitute a 'structural addition') but if it did undoubtedly the enforcement agencies would have to find that such *was* a 'structural addition' and therefore the noncomplying gas appliance would not be affected by Section 16900. * * *

"Where the enforcement agency determines in a particular case that the gas appliance installed in a building prior to September 22, 1951, does not conform to Section 16900 or its equivalent as set forth in Sections 15159 and 15160, it must then determine whether the work necessary to bring that appliance or a vented one into compliance with Section 16900 constitutes a structural alteration, structural change or structural addition. If such work would amount to a structural alteration, change or addition, the gas appliance then installed could remain. If the work necessary to bring the gas appliance or a vented one into compliance with Section 16900 did not amount to such a structural alteration, structural change or structural addition, the necessary work must be done or the nonconforming gas appliance should be taken out of use.

"In view of the court pronouncements it is difficult to imagine too many instances in which the replacement of a nonconforming gas appliance or the repairs necessary to bring a nonconforming gas appliance into conformance with Section 16900 would require a structural alteration, structural change or structural addition.

"It has come to our attention that there are many unvented gas appliances (approved by national testing agencies for use in accordance with manufacturer's instructions) which would be in violation of amended Section 16900 because of a lack of a vent. However, a large number of these owners will be permitted to use

such unvented gas appliances in accordance with Sections 15159 and 15160 of the Health and Safety Code. These sections are as follows:

"'*Section 15159:* The provisions of this part are not intended to prevent the use of any material, *appliance,* installation, device, arrangement, or method of construction not specifically prescribed by this part, provided any such alternate has been approved.

"'The building department may approve any such alternate if it finds that the proposed design is satisfactory and that the material, *appliance,* installation, device, arrangement, method, or work offered is, for the purpose intended, at least the equivalent of that prescribed in this part in quality, strength, effectiveness, fire resistance, durability, safety and for the protection of life and health.

"'The building department may require that sufficient evidence or proof be submitted to substantiate any claims that may be made regarding its use.' (Italics ours.)

"'*Section 15160:* Whenever there is evidence that any material, *appliance,* installation, device, arrangement, or method of construction does not conform to the requirements of this part, or in order to substantiate claims for alternates, the building department may require tests as proof of compliance to be made at the expense of the owner or his agent by an approved agency.' (Italics ours.)"

Los Angeles City Ordinance

The Board of Building and Safety Commissioners of the City of Los Angeles adopted a resolution on January 17, 1955, relating to gas-burning appliances. It provided that:

1. Every gas-burning appliance already installed, either permanently or seasonally at the time of this resolution should be vented or be replaced with a vented appliance unless "a structural addition, alteration, or change is required by the installation of the vent. Ranges, hot plates, and refrigerators approved for unvented use are exempt from this provision."
2. "A structural addition, alteration or change is determined to be any work required on a wall, floor, ceiling or roof to permit the passage of a vent pipe."
3. "Every unvented gas-burning appliance already installed either permanently or seasonally at the time of this resolution and which need not be vented because of a required structural addition, alteration or change, must then meet the following requirements or be replaced with an appliance that meets the following requirements:
   (a) The appliance must be approved for unvented use by a nationally recognized testing agency.
   (b) The appliance must be connected to the gas outlet with metal pipe or tubing with threaded connection.
   (c) In the case of warm air heaters, the B. T. U. ratings shall be not less than 10 B. T. U. and not more than 20 B. T. U. for each cubic foot of room volume."

At the request of the Division of Housing the Attorney General directed a letter to the City of Los Angeles on March 2, 1955, relating to this ordinance. The letter stated in effect that the Los Angeles ordinance, especially in its definition of what constitutes a structural addition, alteration or change, did not meet the requirements established by the State Legislature in Section 16900 of the Health and Safety Code. It stated:

> "The effect of this part (which defined structural addition, alteration or change) of the resolution is to completely emasculate the provisions of Section 16900 of the California Health and Safety Code which was passed by the Legislature to require venting of gas appliances and to prevent the numerous deaths which occur throughout the State as a result of unvented gas appliances. * * *
>
> "The tenor of opinions 52/42 of the California Attorney General * * * is to the effect that it would have been an extensive operation on the building before the project could be called a structural addition, structural alteration, or structural change within the meaning of Section 41, Chap. 1127, Stats. of Calif. 1951.
>
> "We realize that the City of Los Angeles has adopted a local ordinance governing the housing requirements pursuant to the provisions of Section 19825 of the California Health and Safety Code but it is important to point out that the provisions of that code section specifically require that the local ordinances contain minimum standards equal to or greater than the State Health and Safety Code and also that the city must enforce that local ordinance. The Division of Housing is quite concerned, as we are, with the numerous deaths which occur throughout the State because of improper venting of gas appliances.
>
> "* * * The American Gas Association, enforcement groups generally, and the Division of Housing of the State of California have declined to rate an unvented appliance as being equivalent in safety to a vented appliance."

Both the California Rental Owners Association and the Apartment House Association of Los Angeles support a measure similar to Assembly Bill No. 2269 introduced at the 1955 Session.

Any change in the present law, which now prohibits the use of unvented heaters, was, however, opposed not only by the State Division of Housing but by health officers and other organizations throughout the State. The San Francisco City Health Department, for instance, is "flatly opposed to the heating of rooms with unvented gas heaters." The Sacramento City Planning Commission wrote the committee to "show our unalterable opposition to the use of * * * unvented heaters in rooms" The San Bernardino County Health Department wrote that they "are of the opinion that present regulations should be extended to prohibit the sale of such unvented space heaters in California." They also stated that in the enforcement of present legislation they were criticized "because of their permitted sale and their illegal use." Others opposing a change in the law included such organizations as the Riverside County Health Department, the Los Angeles Building and Construction Trades Council and the California Fire Chiefs Association.

The committee does not feel, in light of the information available to it, that it would be in the interests of public health and safety to amend the present code in such a way that unvented heaters would be permitted in any building constructed prior to September, 1951. The code now permits the use of approved unvented heaters under certain special circumstances outlined in Sections 15159 and 15160 of the Health and Safety Code and when, in the opinion of the local enforcement agency, installation of a vented heater would require a *major* structural addition, alteration or change according to the provisions in Section 41, Chapter 1127, Statutes of 1951.

Because of the existing confusion in interpretation of the pertinent sections in the code, however, the committee does recommend that clarifying legislation be enacted at the 1957 Session of the Legislature.

REPORT OF SUBCOMMITTEE ON NARCOTICS AND DANGEROUS DRUGS

FINDINGS

1. The illegal sale, distribution and use of dangerous drugs (as defined in the Business and Professions Code) appear to be increasing markedly. The drugs may be easily obtained from other states, from Mexico or from a few "renegade" doctors who indiscriminately prescribe or dispense them.

2. The indiscriminate and excessive use of the dangerous drugs constitutes a danger to the public health and safety. Such use is known to have a demoralizing effect on teen-agers and appears to be a contributing factor in narcotics addiction; further, a distinct hazard is created on the public highways by persons driving under the influence of these drugs.

3. Under present laws the enforcement agencies find it difficult to control the sale and possession of the dangerous drugs.

RECOMMENDATION

That the Assembly Interim Committee on Public Health continue its study of the problem to determine what measures might most effectively solve the problem without jeopardizing the rights of citizens.

INTRODUCTION

The Chairman of the Assembly Interim Committee on Public Health, under authority granted him by House Resolution 174, 1955 Regular Session, appointed this subcommittee to study the existing laws relating to narcotics and dangerous drugs. To consider the possible need for changes in legislation relating to the sale, distribution and use of the dangerous drugs, as distinct from narcotics, the subcommittee held a public hearing in Los Angeles on November 27, 1956, at which representatives of the State Board of Pharmacy, the State Bureau of Narcotics Enforcement, the Attorney General's office, the California Pharmaceutical Association, the California Medical Association and various law enforcement agencies throughout the State testified.

DANGEROUS DRUGS AND THE STATE LAW

A dangerous drug, as defined in the Business and Professions Code (Section 4211) is essentially "any drug unsafe for self-medication." Included in the definition is a listing of specific drugs including, in addition to those which under federal law may not be dispersed without prescription, the hypnotics, barbiturates and amphetamines

The principal statutes covering the purchase, sale and distribution of the hypnotic and dangerous drugs are found in the Dangerous Drug

Law, Business and Professions Code (Sections 4210 to 4242). The Board of Pharmacy in the Department of Professional and Vocational Standards is charged with the administration of this law and also with administration of the Pharmacy Law of the State of California.

Enforcement of the provisions of the State Narcotics Act is vested with the Division of Narcotic Enforcement, Department of Justice This division, although it does not enforce any of the provisions of the Dangerous Drug Law, does maintain a close liaison with the Board of Pharmacy. Since the Chief of the Division of Narcotic Enforcement, as well as the inspectors appointed by him, have the powers and duties of peace officers, they, as well as the inspectors employed by the Board of Pharmacy, can and do arrest persons illegally possessing or selling the dangerous drugs.

USE OF THE DRUGS

While the hypnotic and dangerous drugs are not true narcotics, many authorities believe that their improper and excessive use constitutes a problem just as serious as the narcotics problem Dr. Harris Isbell, M D , head of the Research Branch, U. S. Public Health Service Hospital in Lexington, Kentucky, stated, "There has been a marked increase in the consumption of barbiturates in the United States in the past 10 years and, since it is now known that chronic intoxication with these drugs is more damaging physically than is addiction to opiates, all practitioners should be informed concerning the manifestations and treatment of addiction to barbiturates." [1]

At the committee hearing, Captain Kenneth Irving (Los Angeles County Sheriff's Office, Narcotics Detail) emphasized the close relationship between the problem and that of narcotics addiction, particularly in the case of teen-agers He stated that, in his office, which is primarily concerned with narcotic law enforcement, "We find that we simply cannot separate the users of amphetamines and the hypnotic drugs from the users of narcotics. * * * We see strong evidence that * * * the use of the 'bennies',[2] the amphetamines and the hypnotics is the introduction into the way of life which leads to eventual narcotic addiction. We feel that the dangerous drugs, improperly used and improperly handled, play the same part in eventual addiction to the harder narcotics as does marijuana The teen-agers, whom we in narcotics enforcement believe to be the key to any hope for the control of the narcotics problem, for the most part start with the amphetamines, then use the hypnotics to counteract the effects of the amphetamines, eventually begin to mix marijuana with the dangerous drugs and then eventually move into heroin. Boys and girls that have been handled for use or possession of the dangerous drugs are now being handled as narcotics addicts "

That the illegal use of the dangerous drugs by teen-agers is a serious problem was also emphasized by Lieutenant Douglas C. Cook, Juvenile Officer of the Torrance Police Department He expressed concern over the "pill situation" because of the demoralizing effect it has on teen-agers as well as the fact that it presents a serious addiction problem.

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[1] Harris Isbell, M D , *Meeting a Growing Menace—Drug Addiction*, The Merck Report, July, 1951.

[2] "Bennie" is a term frequently used when referring to a type of amphetamine.

Others testifying before the committee pointed out that another major problem exists in the illegal use of dangerous drugs by adults. Captain Tom Thomas of the Imperial County Sheriff's office reported that his office was especially concerned over their use by truck drivers. "Since the fourteenth of last July we have found that 9 or 10 fatalities in the county were due to truck drivers under the influence of amphetamines." He described the accidents as "tailgate" accidents in which the trucks ran up on the vehicles in front of them, because the drivers, under the influence of the amphetamines, were unaware that a vehicle did precede them. Captain Thomas' testimony was substantiated by Mr. Les Tucker of the California Highway Patrol, San Diego, who had investigated a series of such accidents over a several months' period of time.

SOURCES OF SUPPLY

Those persons charged with enforcement of the Dangerous Drug Law on both the state and local level reported that their job was made exceedingly difficult because of the ease with which these drugs could be procured. The problem apparently does not arise with pharmacies, where the drugs can be purchased only on a doctor's prescription. It was reported to the committee, however, that the drugs were easily obtained from unauthorized sellers, whose principal source of supply is either out-of-state drug firms and manufacturers or sellers in Mexico.

The 1955 Legislature amended the Pharmacy Law to provide that no manufacturer or wholesaler shall sell or deliver drugs to any person not authorized by law to handle, sell or deal in them. However, it was pointed out that the law is ineffective in that there is no control over those manufacturers or wholesalers outside of California Mr. Eugene Elson, California Pharmaceutical Association, commented on this, stating that "One of the biggest problems is the shipment of these drugs by out-of-state manufacturers to persons who are not licensed or authorized under the laws of California to deal or traffic in the drugs." Dr. A. G. Hall, a member of the State Board of Pharmacy, reported that "We have found instances where even our inspectors would act as purchasing agents and purchase from some of these out-of-state manufacturers."

It was pointed out that the large drug concerns and manufacturers are not found to be selling to unauthorized or unlicensed persons within the State but, rather, only some of the smaller manufacturers.

Several witnesses indicated that a partial solution to this problem might be achieved through legislation on a federal level. It was suggested that such legislation include provision for the licensing of drug manufacturers and wholesalers by the Federal Food and Drug Administration plus provision that these drugs could be distributed only to persons authorized to make such purchases by the state in which the drugs were to be sold. The federal law now affecting hypnotics and dangerous drugs is found in the Food, Drug and Cosmetic Act, which among other things provides that the misbranding or mislabeling of the drugs in interstate commerce is illegal.

A major source of supply for the users of these drugs in the southern part of the State is Mexico. William F. Robbins, of the San Diego

County Sheriff's Office, stated that the situation in San Diego is unique because of the close proximity to the Mexican border. He added that:

> "Most of our users will go to Mexico, purchase their own drugs or narcotics and return to San Diego, where they are used. * * * The drugs in Mexico, the amphetamines, especially, are very easily obtained. * * * I have no source or connection in Mexico myself, yet I could go into Mexico as a total stranger, taking any one or all of you gentlemen, and within 10 minutes' time from the time we crossed the international border we can return to the border with anywhere from 5 to 5,000 of these amphetamines. Almost any street peddler, any taxicab driver and almost any drug store will supply you with them. All you have to do is have the proper amount of money."

Captain Tom Thomas, of the Imperial County Sheriff's Office, whose major concern was with the truck drivers rather than with the juveniles, indicated that there is a thriving business in the sale, supplying and transportation of the amphetamines for truck drivers. He stated, for example:

> "We have information of truck drivers coming through Imperial County with as many as 50,000 'benzedrine' tablets at a time and know that they are distributed locally, either within the county or to other truck drivers or in Los Angeles. * * * We find that many of these 'bennies' or amphetamine tablets come into our county from down south."

Les Tucker, California Highway Patrol, who is stationed in San Diego, stated that one supplier who is getting his supply of pills from Mexico "was making two trips a week into Mexico to buy benzedrine. We have information that he has as many as 50,000 tablets brought into him from Texas at times by truck drivers who were getting paid for hauling them."

It was also reported that a small number of doctors make a business of selling and dispensing the barbiturates to any one who requests them. Witnesses told of doctors in the Los Angeles area whose sole business seems to be the supply of these drugs to teen-agers. During the course of an investigation carried on by the Board of Pharmacy several teen-agers were interviewed. Inspector H. F. Dowdy of the board reported that the following interview with a 17-year-old girl was typical of many. She stated that she had visited one particular doctor's office on numerous occasions with boys who purchased pills.

> Question asked the girl: "What approach did the boys make when they bought the pills?"
>
> Answer: "They just went in and asked the nurse if the doctor was in, and the nurse said, 'Yes,' and then the doctor came out to the front office and the boys told him that they wanted some benzedrine for reducing. So the doctor went back in the office and came out and handed the boys pills. The boys gave them $5 and then we left."
>
> Question: "What type of build would you say these boys had —slight, heavy or medium?"
>
> Answer: " * * * tall and slender and very thin."

Question: "Did the doctor raise any question about his reducing?"

Answer: "He didn't ever ask him any questions. The doctor gave him pills and he used to go in there maybe two or three times a week."

Question: "Have you ever seen the doctor give any of the boys a physical examination at any time?"

Answer: "No, they have never been back in his office. It was always given to them in the front office."

In answer to a question about the number of boys or other young people who were given pills by the doctor, she replied, "Oh, heavens, there are so many that I don't know."

The girl further indicated that many people know that the doctor sells pills, that he does sell them to teen-agers and that all the teen-agers have to do is tell the doctor the type pills they wish.

The Board of Pharmacy, in conjunction with the Narcotics Detail of the Los Angeles County Sheriff's Office, investigated the ease with which these drugs could be obtained from this particular doctor by sending in their own inspectors and undercover deputies. Captain Kenneth Irving, of the sheriff's office, stated, "We sent in five different undercover officers in to this doctor. We bought both amphetamines and hypnotic drugs without benefit of a physical examination of any kind. We used various and sundry names. No effort was made to get the true identity of the individual who was buying the drugs. It was merely a matter of going in there with $5 for 50 reducers and $3 for 30 sleepers." Their men made a series of some 71 buys of both the amphetamines and hypnotic drugs during the investigation.

Following the investigation, the officers tried to obtain a conviction of the doctor. They found, after conferring with both the Attorney General's Office and the District Attorney of Los Angeles County, that under the present law, even with proof that drugs were dispensed without benefit of medical examination, that they had no basis for prosecution. Captain Irving also reported that the Board of Medical Examiners is unable to take action because "there is no proven violation of the law. The board was working with us on this matter. It was my understanding that if and when we are able to get a conviction they would proceed against the license of the doctor, but without the conviction all they have is the question of morality and it is apparently a rather weak basis for attacking a physician's license."

He emphasized the point, however, that "We know that probably 99 and 99/100 percent of the doctors are legitimately practicing their trade; but we feel there is definite need for remedial legislation for those few who are not."

ADEQUACY OF EXISTING LAWS

A number of witnesses felt that the existing laws needed strengthening in order to provide more adequate control over the illegal use and sale of the dangerous drugs. They felt that, because of the seriousness of the problem, the present penalties were unrealistic; they especially criticized the fact that illegal sale or possession constitutes only a mis-

demeanor. In consequence, apparently, it is difficult to obtain from the courts a sentence or fine severe enough to have a deterring effect on offenders. For example, it was pointed out that, although San Diego has a high conviction record—98 9 percent of those apprehended, the penalties—minimal fines or jail sentences or straight probation—are entirely ineffective. The offenders therefore return to their profitable drug-selling trade.

Secondly, it was brought out that driving while under the influence of these drugs is only a misdemeanor under the Vehicle Code. Professor E. F. Brady, College of Pharmacy, University of Southern California, said in this regard, "The truck driver who is under the influence of these drugs is certainly a dangerous person on the highway. It seems only reasonable that if there is a felony offense for one who will drive under the influence of alcohol, then certainly one who deliberately intoxicates himself with this type of drug is equally guilty of felonious conduct."

On the other hand, some witnesses stressed the need for caution in changing the penalty for illegal sale or possession of these drugs from a misdemeanor to a felony because of the effect that such a change might have on first offenders and teen-agers.

Thirdly, as pointed out earlier in this report, there appear to be no statutory provisions to control the indiscriminate prescription of dangerous drugs by "renegade" doctors; further, it is evidently difficult for the Board of Medical Examiners to aid in effectively curbing this practice by revocation of licenses. The statutes now require that a record be kept not only of all dangerous drugs purchased by a doctor but also of the amount dispensed and the date Carl W. Wynkoop, Deputy Attorney General, stated that the problem would be lessened in part if there were more investigators in the various state agencies so that a proper check of these records could be made. He also observed that a program of education directed toward the judges before whom the cases are tried would result in greater cooperation on their part and a needed increase in convictions and penalties under the present law.

Finally the fact that there is not federal regulation to prevent manufacturers or wholesalers from distributing drugs to unauthorized purchasers in California complicates the problems of control. Mr. Wynkoop felt that it would be of value in this regard to have federal legislation to prohibit the placing in interstate commerce of any of the drugs which are contrary to the laws of the state into which they are shipped

In its investigation the committee was interested in learning whether or not there was need for stricter control over the use and sale of the new so-called "tranquilizing" drugs. The committee found, however, that these drugs are too new a product to have created a problem to the enforcement officers or agencies testifying at the public hearing.

That the illegal sale and use of dangerous drugs is a serious problem was clearly brought out at the committee hearing. The committee believes, however, that additional and extensive study is needed to determine what measures might most effectively solve the problem without jeopardizing the rights of citizens.

REPORT OF SUBCOMMITTEE ON PRACTICAL NURSING SCHOOLS

SCOPE OF REPORT

This report reviews information concerning the nonaccredited commercial schools of practical nursing in California; defines the problem in relation to the two categories of nursing, the professional or registered nurse and the vocational nurse, presently recognized and regulated by the State; and studies the effect of existing statutory provisions upon nonaccredited nursing schools to determine whether or not additional legislation is needed in the interests of public health and safety.

FINDINGS

1. Two categories of nurse are recognized by the State of California; the Board of Nurse Examiners administers the licensing program for the professional or registered nurses and accredits schools meeting state standards; the Board of Vocational Nurse Examiners performs the same functions with respect to the vocational nurse.

2. Many types of nurses and nursing are providing services for the sick. There is considerable conflict and overlapping of functions among the various categories thus complicating the problem of definition and of delineation of authority, duty, and responsibility.

3. Many persons in California today call themselves "practical" nurses; confusion has resulted because the "practical" nurse as defined by many states and by the National Federation of Licensed Practical Nurses corresponds to the "vocational" nurse recognized in California.

4. There are a number of commercial schools of "practical" nursing in California. Although the training and courses offered by some of these schools appear to be adequate to prepare persons for performing some nursing functions, that of others is strikingly inadequate. None of these schools are recognized by the State, they have not been accredited by the Board of Vocational Nurse Examiners, nor are their graduates eligible for licensure by any state agency.

5. Many of the schools are justifiably criticized for making inaccurate and misleading claims as to:

   a. The nature and quality of training offered;
   b. The eligibility for licensure and employment opportunities for their graduates.

6. Commercial schools of nursing evidently are not required to comply with the provisions of the Education Code relating to incorporation. Nor does any state agency exercise control over or review the courses offered by these schools.

7. Some type regulation over the commercial schools of nursing is necessary not only to protect the general public but also to protect prospective nursing students from misrepresentations made by some of the existing schools.

RECOMMENDATIONS

1. That the Vocational Nurses Act be amended to incorporate the recommendations of the American Nurses Association and the National Federation of Licensed Practical Nurses as to the functions, duties and responsibilities of the Licensed Vocational Nurse.

2. That the Education Code be amended to require that all degree or certificate granting commercial schools of nursing be required to comply with the provisions of that code relating to incorporation.

3. The committee, recognizing that the categories of nurse recognized in California should correspond as closely as possible with those recognized in other states, recommends that further study be given both to the feasibility of regulating all nurses through the two existing boards and to the suggestion that a third level of category of nurse be recognized in California.

4. That the Legislature direct the Assembly Interim Committee on Education to carry out a study and investigation designed to ascertain the need, if any, for additional state regulation over all nonaccredited degree and certificate granting institutions and report its findings and recommendations to the 1959 General Legislative Session

REPORT

The field of nursing in California is only partially regulated by the State. While the Board of Nurse Examiners accredits schools and grants licenses for professional or registered nurses and the Board of Vocational Nurse Examiners performs the same functions with regard to vocational nurses, no agency recognizes or regulates other groups providing nursing services for the sick. A number of commercial schools of nursing, often called schools of "practical" nursing, offer training and course work which is not approved by either of the two state agencies presently authorized to survey and approve nursing schools The graduates of these schools are not eligible for licensure by either of the two existing boards.

Assembly Bill No 3408, introduced in the 1955 General Session of the Legislature, provided that "no person shall operate any school of practical nursing unless such school has been accredited." Accreditation would have been contingent upon meeting the requirements of one of the two existing agencies (Business and Professions Code, Sections 2786 and 2880). In effect, since the courses offered by the vocational nursing schools are more nearly comparable to the courses which the commercial practical nursing schools purport to offer, the schools would have been required to meet the standards of accreditation established by the Board of Vocational Nurse Examiners.

The bill was referred by the standing Assembly Committee on Public Health to the interim committee for study, and this subcommittee was appointed upon adjournment of the session to study and make recommendations as to whether this measure or other legislation to regulate practical nursing schools is necessary to protect the public health and safety. On October 13, 1955, the subcommittee visited several of the commercial schools of practical nursing in the Los Angeles area. On

October 14, 1955, a public hearing was held in the State Building, Los Angeles. The following persons representing organizations as indicated testified before the committee.

L Lafe Ludwig, M D ,
California Medical Association
James Ludlum,
California Hospital Association
J E Smits,
California Hospital Association
Ruth Fe der, Executive Secretary,
Board of Nurse Examiners
Barbara Chesler, Executive Secretary,
Board of Vocational Nurse Examiners.
Nina Kraft, Los Angeles County General Hospital, Member
Board of Vocational Nurse Examiners.
Walter R Hoeffin, Administrator,
Methodist Hospital of Southern California
Clyde Pfeiffer, Administrative Dean,
Pasadena City College
Maxine Taylor, Director,
A 1 Nurses Registry, San Francisco and Los Angeles.
Sgt C. B. Clark,
Los Angeles City Police Department.
Bertha Anderson,
Santa Ana Police Department.

Practical Nursing Schools

Helen B. Castle, R N ,
The Pacific Institute of Nursing.
Pearl Eisenberg,
California School of Practical Nursing.
Maxine Craig,
Pasadena Nursing Institute.
Leonard Vanderbee,
Valley Institute of Practical Nursing.

Students or Graduates of Practical Nursing Schools

Maurine Rogers.
Leonor Prieto
Kathryn Holderness.
Eugenia Williams.
Elzora Jane Jones

Licensed Vocational Nurses

Iola Smith.
Anna M. Oswalt.
Edna Epps.
Elsa Roslund.

Definitions of Nursing

There are many types of nurses and nursing engaged in providing services for the sick. In addition to the registered or professional nurse, the vocational nurse and the public health nurse (a registered nurse licensed by the Department of Public Health who performs a specialized function usually for a public agency), there are nurses calling themselves practical nurses, nurses aides, and hospital attendants among others. There is considerable conflict and overlapping of functions among the various categories thus complicating the problem of definition and of delineation of authority, duty, and responsibility.

California recognizes two categories or levels of nursing, the professional and the vocational. The distinction between the two is seen in the following excerpts from the Business and Professions Code.

> "*The Professional or Registered Nurse* (Section 2725). The practice of nursing * * * is the performing of professional services requiring technical skills and specific knowledge based on principles of scientific medicine, such as acquired in an accredited school of nursing * * *, and practiced in conjunction with curative or preventive medicine as prescribed by a licensed physician and the application of such nursing procedures as involve understanding cause and effect in order to safeguard life and health of a patient and others.

"A professional nurse * * * is a person who has met all the legal requirements for licensing as a registered nurse in the State and who for compensation and personal profit engages in nursing as the same is hereinabove defined.

"*The Vocational Nurse* (Section 2859). The practice of vocational nursing * * * is the performance of services requiring those technical, manual skills acquired by means of a course in an accredited school of vocational nursing, or its equivalent, practiced under the direction of a licensed physician, or a registered professional nurse. * * *

"A vocational nurse * * * is a person who has met all the legal requirements for a license as a vocational nurse in this State and who for compensation or personal profit engages in vocational nursing as the same is hereinabove defined."

Limitations to the practice of vocational nurses are found in Section 1860. This chapter confers no authority to practice medicine or surgery or to undertake the prevention, treatment or cure of disease, pain, injury, deformity, or mental or physical condition in violation of any provision of this law.

The question of delineation of the functions to be performed by each of these two groups has recently been the subject of a study by the two national nursing associations. The Attorney General wrote the committee on January 2, 1957, to the effect that "The American Nurses Association, which is the National Association of Registered Nurses, after more than three years of study recently adopted (in January, 1957) and recommended to its state associations the definitions of professional nursing and licensed practical or vocational nursing."

While the California Vocational Nursing Licensing Act makes no mention of "practical" nursing it has been pointed out that the "practical" nurse as defined by many states and by the National Federation of Licensed Practical Nurses corresponds to the "vocational" nurse recognized in California.[1] An explanation of the choice of the term "vocational" nurse in California was made in a report of the Senate Interim Committee on Nurse Problems in 1953:

"* * * since there has been some misunderstanding with regard to the licensed vocational nurse, it is believed desirable to briefly repeat the reasons for the creation of this nurse and the part it is expected she will play in the nursing field.

"With certain exceptions which are designed to license persons who have been in the field of practical nursing for some time, the licensed vocational nurse was intended to be a nurse trained in a one-year period to perform a great many of the more routine functions of nursing. In other states such persons have been called 'licensed practical nurses,' and the curriculum chosen for the licensed vocational nurse in California closely follows the recommended national pattern for a licensed practical nurse. This being true, the committee has been asked upon many occasions as to why the name 'practical nurse' was not used instead of the designation 'vocational nurse.' The reasons for this seem apparent. There

[1] It should be noted that the California Licensed Vocational Nurses Association holds membership in the National Federation of Licensed Practical Nurses

are in California many thousands of persons who call themselves 'practical nurses.' The training and education of these individuals ranges from very little to a great deal, and the committee, therefore, faced the dilemma which for so many years precluded the licensing of persons in this category. It may be simply stated as follows: If all persons calling themselves 'practical nurses' were automatically licensed by a 'grandfather clause,' the public would have no protection and could place no reliance upon the skill of any individual. If, on the other hand, only those believed qualified were licensed through a 'grandfather clause,' those unlicensed would under a mandatory licensure be out of work or under a permissive licensure would have a stigma which might adversely affect their chances of employment. Since all 'hands' with any degree of skill at all are needed to help in varying degrees with the varying problems of the ill, it was believed unsound to attempt to license the 'practical nurse' under any of the alternatives."[1]

William B. Langsdorf, President of the California Junior College Association, wrote the committee on October 12, 1955, that the definition of vocational nursing established by the enactment of the Vocational Nurses Practices Act in 1950 "is identical with practical nursing as this term is used nationally. The standards established for vocational nursing schools by our California act are almost identical with those prescribed for national accreditation by the National League for Practical Nurse Education."

Similarly, Maxime Taylor, Director of the A-1 Nurses Registry, stated to the committee that "a licensed vocational nurse is a licensed practical nurse; whatever fancy name you want to give her, she is one and the same. The state requirements in California are the requirements that are now acceptable in 36 of the 48 states."

However, several persons testified before the committee that a third category of nurse—distinct from either the registered or the vocational nurse—does exist, and that, although not recognized by the State, this third category performs a necessary function in the total nursing field. Some termed this category, "practical nurses"; others, "nursing aides" or "nursing housekeepers."

The following statement by Pearl Eisenberg, Director of Nurses, the California School of Practical Nursing, reflects the thinking of witnesses affiliated with the so-called practical nursing schools:

> "I believe that the practical nurse and the vocational nurse should be separate divisions and I am in favor of a third division or a third level of nursing. The definition that we use in training is that a practical nurse is a person trained to care for the subacute, the convalescent, the chronic patients requiring nursing service in the home or in an institution, who works under the direction of a licensed physician or a registered professional nurse and is prepared to give household assistance when necessary. * * * I feel that with the changing trends in medicine and in nursing service, the need is not yet met for this level of nursing. * * *

[1] Final Report to the Legislature by the Senate Interim Committee on Nurse Problems, Senate Resolution 214, 1953, pp 14-15

> I believe that practical nursing schools should be accredited and the standards of accreditation should be on the level of the type of nursing service to be given by these people."

Dr. J. Lafe Ludwig, a member of the Legislative Committee of the California Medical Association stated:

> "There are two categories of nurses now licensed by the State of California: the registered nurse, a highly trained individual, and the vocational nurse. A third class is the practical nurse, whose services are greatly in demand in rest homes and in private homes. * * * These persons are able to carry out a doctor's orders, work under his supervision, and at the same time assist the family in maintaining the home properly during an illness."

Dr. Ludwig, an internist who has had considerable experience in the treatment of elderly individuals, testified that he frequently uses "practical nurses" in caring for such persons in the homes and providing a minimum amount of nursing care. He also indicated that "the referral of a vocational nurse to the residence is more costly than a practical nurse, and frequently we find that the vocational nurse is not interested in providing food for the patient nor for herself."

Maxime Taylor felt that this group would more properly be termed nursing housekeepers than practical nurses.

The committee found that, in addition to the presently licensed registered nurses and vocational nurses, hospitals throughout the State employ what they call "nurses' aides" to perform certain services not requiring the technical skills of either licensed group. The duties vary from hospital to hospital, and the training these persons receive, most frequently given by the hospital, varies accordingly.

Recognizing that there is this problem of definition, especially that created by the use of the term "vocational" nurse in California and "practical" nurse in other sections of the country, and a problem of conflict and overlap of functions, the committee believes that further study is needed. It believes, however, that a part of the confusion will be reduced by incorporating in the Licensed Vocational Nursing Act the recommendations of the American Nursing Association and the National Federation of Licensed Practical Nurses as to functions, duties and responsibilities of the licensed vocational nurse.

Nursing Schools in California

Forty-six schools for the training of professional or registered nurses, and 39 schools for the training of vocational nurses are presently accredited by the Board of Nurse Examiners and the Board of Vocational Nurse Examiners, respectively.[1]

All 39 of the schools accredited by the Board of Vocational Nurse Examiners are public schools: either high schools, junior colleges, or four-year colleges. (This is not the case with the professional schools of nursing.) One private commercial school, the Southern California Vocational Nurses School of Long Beach, was accredited until 1955,

[1] The term "accredited schools" is used to indicate those schools which offer basic curriculum in nursing as provided by statute and whose graduates are eligible to take the state Professional or Vocational Nursing Licensing Examination.

when it was forced to close for financial reasons. According to the Board, no other private commercial school of practical nursing has been able to meet the standards for accreditation although several have expressed their intention or desire to do so.

Nonaccredited Nursing Schools in California

The committee attempted to determine the number of nonaccredited practical nursing schools operating in California. It first checked the records of the Secretary of State; however, since the majority of the schools have not filed incorporation papers these records are incomplete. Additional information was obtained, therefore, from the Board of Nurse Examiners, the Board of Vocational Nurse Examiners, classified sections of telephone books, newspaper and magazine advertisements and letters to the committee. From these and other sources, the committee compiled a list of commercial schools of nursing, either operating in California or operating out-of-state but distributing correspondence courses in the State. It was found virtually impossible, however, to determine how many schools are operating at any one time since some of them appear to be branches of other schools, while others change their addresses or their names at frequent intervals.

During the 1955-57 interim, the committee investigated many complaints concerning the operations of the nonaccredited schools and corresponded with and interviewed students of these schools, nursing organizations, better business bureaus, law enforcement officers and agencies and others. The complaints about the operations of many of these schools were summarized by Dorothy Deming when she stated that the schools:

"1. Exaggerate—without running foul of the law—the value of instruction given;
2. In many instances employ poorly qualified teachers;
3. Frequently set up artificial and superficial situations for learning;
4. Admit candidates indiscriminately—without education, without a health examination, at any age, with any personal qualifications;
5. Claim to teach the care of the sick by correspondence, usually without having the pupil see sick people;
6. Have limited equipment;
7. Provide poor supervision;
8. Charge the students high rates;
9. Conduct the school for profit rather than for service;
10. Make doubtful claims as to the students' capacities after the course;
11. On completion of the course place students in jobs unsuited to their abilities;
12. Present a certificate which the graduate may, if she wishes, show as her "registration" or "license";
13. Turn out men and women of such limited knowledge and training as to constitute a very grave danger to the public." [1]

One of the principal criticisms of the schools is that they misrepresent what they will offer the student, in terms of the training to be received and the employment opportunities available to graduates. Mr. Harry D. Power, General Manager of the Santa Barbara Better

[1] Deming, Dorothy, *The Practical Nurse,* New York, Commonwealth Fund, 1947.

Business Bureau, wrote the committee on October 11, 1955, that, "It is our observation that the advertising and selling as generally practiced by the practical nursing schools is such that it holds out unrealistic hopes for qualifications, job prospects, earnings and general acceptability of 'graduates' by the medical profession and hospitals. Also to be criticized are the 'earn while you learn' advertising claims where students are sent out on practical nursing cases when they have completed only a portion of their training."

The newspaper advertisements reproduced here are typical of many found in newspapers throughout the State.

ENROLL NOW FOR FALL CLASSES



UNIVERSAL SYSTEM OF

PRACTICAL NURSING

NOW! PRACTICAL NURSES CAN BE TRAINED LOCALLY

75,000 NEW NURSES NEEDED

The Universal System of Practical Nursing program is planned to help relieve this shortage which has become national in scope. YOU are needed NOW.

WOMEN — GIRLS
16-60 (Single or Married)

BE A TRAINED PRACTICAL NURSE IN 4 MONTHS

FREE PLACEMENT SERVICE

DIPLOMA AWARDED

- Registered nurse instructors
- No high school diploma required
- Train in your spare time
- Short 4-month course
- FREE PLACEMENT SERVICE
- FREE UNIFORM, CAP, PIN and DIPLOMA
- Security — good jobs
- Dignified profession
- Pay as you learn

NOW . . . the career you want is available.



Enroll Now! Become a Trained

Practical Nurse

in just 4 months

Never has the need been greater! Communities everywhere are literally crying for the services of practical nurses Join the ranks of this highly admired and loved profession by enrolling NOW. Instruction arranged for your convenience — morning or evening classes.

Earn good wages for the rest of your life! Graduate students are earning $75 to $100 a week . . . work when you wish by choosing your own cases and hours, days or nights.

Check These Advantages of a
PRACTICAL NURSING CAREER

- High Income Career
- Lifetime Security
- Dignified Profession
- Pleasant Work
- Free Diploma — Pin — Cap and Uniform

FREE PLACEMENT SERVICE

Upon graduation, you pay no fee for the service of our Placement Bureau. We find jobs for you.



Our graduates are working in doctor's offices, on private cases, industrial clinics, nursing homes, convalescent institutions and hospitals A trained practical nurse need never be unemployed.

WOMEN Ages 18-55

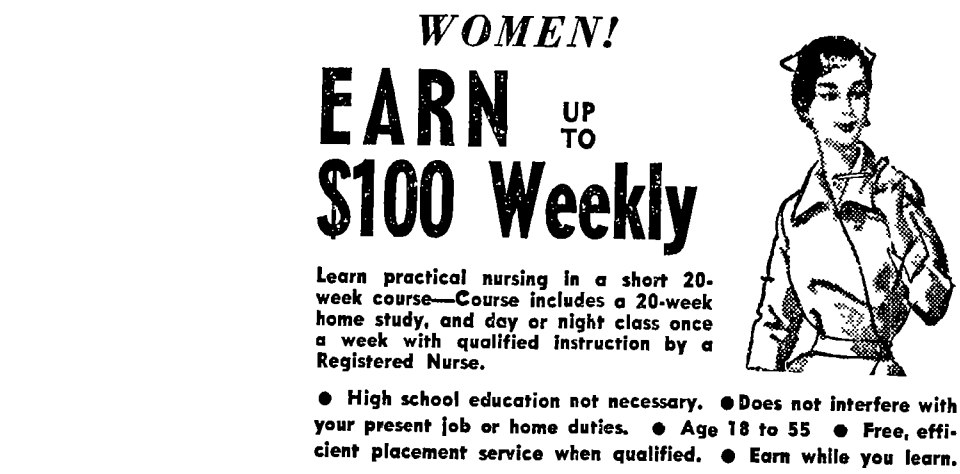
TRAIN FOR

- ☐ Practical Nursing
- ☐ Infant Nursing
- ☐ Medical Secretary

NEW
SHORT COURSES

Training will not interfere with your present job. Earn up to $70-$100 wk. No high school Diploma or experience necessary.

Free Booklet mailed
Write or Phone



Many schools conduct intensive sales campaigns and, often, according to statements of students of these schools, high pressure salesmen employed by the schools have induced them to sign up for courses by stating that graduates will not only be assured of high paying jobs but also will be qualified for state licensure. The student finds out later, often not until a part or all of the tuition fee (reported to range from $175 to $250) has been paid, that the claims are not true. The committee heard from many representatives of the medical profession and hospitals, as well as from graduates themselves, that graduates of these schools are not employable on the basis of the training received in the schools. And, as indicated above, only those who complete a nursing course in a school accredited by the state board may apply for state licensure.

Enforcement agencies throughout the State have received complaints from students who find that promises of employment and licensure are unfounded. Sergeant C. B. Clark of the Los Angeles City Police Department indicated the difficulty of prosecuting these schools on grounds of misrepresentation; he stated that the schools can absolve themselves of responsibility for salesmen's claims by producing a contract signed by the student specifying that oral statements are not binding. Since the schools cannot be held responsible for the verbal promises of their salesmen, neither the enforcement agencies nor the students have any recourse.

The courses offered by these nonaccredited schools have been frequently criticized for operating without adequate or qualified teaching staffs and without adequate classrooms or other teaching facilities. The National Association for Practical Nurse Education, Inc., wrote the committee on September 19, 1955, that:

> "The N. A. P. N. E. in company with every Board of Nurse Examiners in the country and with the Federal Trade Commission does not recognize commercial or correspondence courses and is bending every effort to discourage their activities. In no instance do they meet minimum standards for accreditation nor is their

> product able to give safe nursing service since they have inadequate curricula, little or no planned and supervised hospital experience and generally inadequate classrooms and instructors. It would be a blow to the health interests of California and to nursing education in general to enact any law that would confuse the public by giving recognition to schools whose graduates would not be recognized by Boards of Nurse Examiners in any state."

The failure of many of the schools to provide students with direct nursing experience with patients is considered one of their most serious shortcomings. Miss Ruth Fieder, Executive Secretary of the Board of Nurse Examiners, stated in this regard that "nursing can only be taught where there are patients. People can only learn by doing * * * I do not believe that it is possible for people to learn how to nurse patients by reading books and sticking hypodermic needles into 'Mrs. Chase' * * *." ("Mrs. Chase" refers to a dummy used in nursing schools for training purposes.)

Another serious weakness, and one that the committee considered a distinct danger to the public health and safety, is failure of the schools to impress upon students the limitations of their training; i.e., what they do not know and what they should not attempt to do. Several persons interviewed by the committee stated that graduates of these schools are often left with the conviction that they are able to do anything that a registered or vocational nurse can do.

The need for adequate training for those persons employed as nurses in the home was pointed out by Mrs. Barbara Chesler, Executive Secretary of the Board of Vocational Nurse Examiners, when she indicated that the tendency now is to release patients earlier in their convalescence than was formerly the case; thus the need is increasing for adequately trained persons to perform home nursing functions. She therefore questioned the advisability of permitting these graduates to serve as nurses in the home.

Maxime Taylor pointed out that:

> "At no time is a nurse working for a patient in the home under the supervision of a registered nurse or a doctor in her actual patient care. The doctor comes in, gives orders and leaves. The carrying out of the orders, the record of same and the other responsibilities so implied must be done without supervision. Unless a nurse of the practical-vocational status has had certain supervised classroom and clinical experience on sick patients that nurse is not qualified to care for a sick patient even in the convalescent period in the home."

Regulation of Commercial Nursing Schools

The Education Code appears to relate to the operation of commercial schools, including nursing schools, which issue certificates or diplomas. Section 24202 provides that a number of educational corporations (including those incorporated for the purpose of teaching nursing), if authorized by their articles of incorporation to issue certificates or diplomas, conduct classes, give instruction, or accept tuition fees, must file certain statements with the Secretary of State, including an "affidavit by the president or other head of the corporation setting forth

that the real or personal property * * * is to be used exclusively for the purposes of education, and an appraisal * * * showing the value of the interest of the corporation therein to be at least $50,000."

Under Section 24205, the power to issue certificates or diplomas evidencing completion of courses in certain specified schools, including nursing, is limited to schools incorporated pursuant to the Education Code, whose articles of incorporation confer such authority.

However, the following opinion and analysis of the Legislative Counsel, dated November 22, 1955, indicates that Section 24205 does not apply to the commercial schools with which the committee is concerned. It should also be noted that even if the code did apply, it would not control or regulate the type or quality of instruction, but would only fix the requirements for incorporation.

"PRACTICAL NURSING—#476

"QUESTION

"You have asked whether Section 24205 of the Education Code,[1] relating to institutions which issue certificates or diplomas, is applicable to schools of practical nursing (schools which train students to perform nursing and other chores, primarily in the home, other than those performed by registered and vocational nurses) by reason of the fact that such schools issue certificates or diplomas evidencing the completion of such a course.

"OPINION

"In our opinion, Section 24205 is not applicable to a school which issues certificates or diplomas for completion of a course in practical nursing by reason of that fact alone.

"ANALYSIS

"Section 24205 provides, in part, as follows:

" '24205. The power to issue certificates or diplomas evidencing the completion of any course of instruction in * * * nursing * * * or to confer degrees of any kind or character whatsoever, is limited to corporations incorporated pursuant to this article (Secs. 24201 through 24215) whose articles of incorporation, or amended articles of incorporation, confer such authority, and which comply with Sections 24202 to 24204, inclusive * * *'[2]

"Thus, where a school of practical nursing issues certificates or diplomas, its incorporation pursuant to Sections 24201 through 24215 would be required by this section if the Legislature in using the phrase '* * * any course of instruction in * * * nursing * * *' intended to include the type of courses given by schools of practical nursing.

"It is well established that, in order to ascertain the intention of the Legislature, sections of the codes relating to the same subject matter are to be read together (*Kennedy* v. *Board of Education* (1890), 82 Cal. 483, 22 Pac. 1042).

[1] All references are to the Education Code unless otherwise noted.

[2] Since the type of instruction given by schools of practical nursing does not appear to be of a type normally required for an academic degree, we have not, in this opinion, considered that such schools confer degrees of any kind or character.

"Looking to the other provisions of this article (Sections 24201-24215) we find specific references to the practice of 'nursing' in Section 24206. By this section Article 4 and '* * *' all other pertinent provisions of Chapter 6, of Division 2 (Secs. 2700-2830) of the Business and Professions Code are made specifically applicable to any corporation issuing certificates or diplomas evidencing completion of any course of instruction in nursing.'

"Chapter 6 of Division 2 of the Business and Professions Code constitutes the chapter on professional nursing (Sec. 2700, B & P. C.). Article 4 of that chapter provides for the accreditation of, and courses of instruction in, schools of nursing preparing persons for licensing to practice nursing in this State. The practice of nursing within the meaning of the chapter '* * *' is the performing of professional services requiring technical skills and specific knowledge based on the principles of scientific medicine, such as are acquired by means of a prescribed course in an accredited school of nursing as defined herein, and practiced in conjunction with curative or preventive medicine as prescribed by a licensed physician and the application of such nursing procedures as involve understanding cause and effect in order to safeguard life and health of a patient and others * * *' (Sec. 2725, B. & P. C.).

"We believe that the Legislature, by making these provisions of the Business and Professions Code specifically applicable to any corporation issuing certificates or diplomas evidencing the completion of any course of instruction in nursing (Sec. 24206), has indicated an intention to include within the phrase '* * * any course of instruction in * * * nursing * * *' as used in Section 24205, only such courses as purport to prepare a person for the practice of nursing as such practice is defined by Section 2725 of the Business and Professions Code. The courses of instruction given by schools of practical nursing are not such courses.

"It is therefore our opinion that Section 24205 does not require the incorporation of schools of practical nursing by reason of the fact that such schools issue certificates or diplomas. It is recognized, however, that the status of a college or seminary of learning which is subject to the provisions of Sections 24201-24215 would not be affected by the fact that a course in practical nursing was added to the curriculum."

Very few of the commercial nursing schools in California have met the requirements of incorporation, and it appears that neither the regulations in the Business and Professions Code nor those in the Education Code apply to the operations of the schools.

Several of the schools selling correspondence courses in California operate from outside the State. The only law, therefore, that can affect them is federal law, and the injunctions to cease and desist occasionally

[1] It was reported in January, 1957, that the Federal Trade Commission had issued consent orders to the Post Graduate Hospital School of Nursing, Inc., and Wayne School, Inc., both in Chicago, to prohibit them "from advertising that their courses lead to full qualification in practical nursing and that graduates may expect to receive exceptional compensation." (National Association for Practical Nurse Education, *Practical Nursing*, Vol. VII, No. 1, January, 1957.)

issued by the federal government serve only as temporary measures in the control of these correspondence schools.[1]

Thus, as long as the commercial schools of practical nursing do not claim to be accredited, and especially if they refrain from identifying themselves either as professional or as vocational nursing schools, they may and do continue to operate virtually without regulation.

The committee recognizes that some type of regulation is necessary not only to protect the general public but also to protect prospective nursing students from misrepresentations made by such schools. The committee feels that such regulation can in part be effected by requiring every commercial school of nursing to incorporate under the provisions of the Education Code.

SUBCOMMITTEE ON TRANSPORTATION AND HANDLING OF EXPLOSIVES

FINDINGS

1. Approximately 90 percent of all explosives and ammunition transported over public highways in California is in interstate commerce and thus subject to regulation by the Interstate Commerce Commission.

2. The remaining 10 percent moves in intrastate commerce Only a small part of this 10 percent, that part which is transported by common carrier, is subject to regulations of the California Public Utilities Commission and, under their regulations, is in turn subject to the Interstate Commerce Commission regulations

3. There are no similar safety regulations over the private or contract carriers which are reported to carry the largest portion of those explosives transported in intrastate commerce.

4. There is need for state-wide regulation to provide for the safe operation of those carriers not presently regulated by either the Interstate Commerce Commission or the California Public Utilities Commission.

5. Amendments to those sections in the Health and Safety Code relating to items such as storage, handling, use or possession, packaging, and transportation of explosives are needed because of new developments in the field of explosives since the original enactment of those sections. There is also a need to revise the permit system for the issuance of unpackaged explosives to insure effective state-wide regulation thereof.

RECOMMENDATIONS

That legislation be enacted during the 1957 Legislative Session to:

1. Provide for state-wide regulation over intrastate transportation of explosives over the public highways, these regulations to conform as closely as possible to the regulations of the Interstate Commerce Commission over the transportation of explosives in interstate commerce;

2 Amend those sections of the Health and Safety Code relating to explosives to provide for the safe handling, packaging, storage and transportation of explosives.

BACKGROUND AND EXTENT OF EXISTING REGULATIONS

From 1943 until 1952 trucks transporting explosives on public highways in both *interstate* and *intrastate* commerce were required to comply with safety regulations of the Interstate Commerce Commission. In 1952, however, the commission relinquished is jurisdiction over all those trucks transporting explosives intrastate and it now regulates only interstate movements (Order No. 7, Docket 3666 of 1952). Since 1952, therefore, trucks transporting explosives intrastate have done so without regulation unless other provisions have been made by the state or local governments. In this regard it has been reported that 19 states have adopted the ICC regulations as their own.

In California, approximately 90 percent of all explosives and ammunition transported is in interstate commerce and thus subject to ICC

regulation. The only regulations over the remaining 10 percent are those of the California Public Utilities Commission. Its jurisdiction, however, is limited to the operations of highway common carriers, petroleum irregular route carriers and petroleum contract carriers, i.e., certificated carriers. The rules and regulations relating to the safety of operations of carriers transporting explosives are set forth in the Commission's General Order No. 99.[1] Those carriers subject to General Order No. 99 are required (under Part 9) to meet the standards of the Interstate Commerce Commission covering the subject.

It was pointed out to the committee, however, that the three classes of carrier specified in Order No. 99 represent only a small percentage of the carriers in the field. Although these three classes, the common carriers transporting explosives intrastate, are effectively regulated, there is virtually no regulation applying to private or contract carriers—the permitted carriers—since the only regulations are those found in the Vehicle Code (Sections 576 and 599) which apply to *every* motor vehicle transporting explosives. They include only that every such vehicle

1. Stop at all railroad crossings; and
2. Display a placard.

On a local level, Los Angeles has adopted safety regulations for all movers of explosives and other dangerous materials; it is the only major city in California that has taken such action.

The possible need for regulaion over those presently unregulated carriers was the subject of a study by a subcommittee of the Advisory Committee on Motor Vehicle Legislation. This committee, which serves in an advisory capacity to the Assembly Interim Committee on Transportation and Commerce, is a voluntary association representing some 50 state-wide agencies and organizations in the fields of agriculture, industry, labor, truck transportation, motor clubs, and other public and private agencies interested in motor vehicle legislation.

At the request of the Public Utilities Commission, this special subcommittee was assigned to study and develop "suggested legislation governing safety of operation over the public highways in the transportation of explosives and other dangerous articles."

As a result of the advisory committee study, Senate Bill No. 934 was introduced at the 1955 Regular Session. The bill, had it passed, would have established in the Vehicle Code state-wide regulations for the operation of certain vehicles transporting explosives over public highways. Since the bill was not enacted, House Resolution No. 178 was passed directing the Assembly Interim Committee on Public Health to study "all facts relating to, or in any way bearing upon, the subject of explosives, including * * * the manufacture, sale, storage, transportation, use, or possession of explosives." Upon adjournment of the 1955 Session, this Subcommittee on Transportation and Handling of Explosives was appointed; a public hearing was held on January 20, 1956, in Los Angeles to study specifically the problem of transportation of explosives.

[1] A second order, General Order No. 98, was adopted by the commission. Although it, too, relates to the safety of operations of motor vehicles transporting explosives and other dangerous articles, it is not pertinent here since it is concerned only with "operations of passenger stage corporations and street railroad corporations."

NEED FOR ADDITIONAL REGULATION

Although only 10 percent of those explosives moved on California highways are not interstate movements and thus not subject to Interstate Commerce Commission regulations, that this 10 percent is significant both in terms of quantity and number of shipments was shown by a study of the Advisory Committee on Motor Vehicle Legislation. In their investigation of the volume of high explosives moving over California highways in intrastate commerce, it was found that the following shipments were made by the military services (during Fiscal 1952-53), the U. S. Forest Service and commercial organizations (calendar year 1953):

	Truckloads	*Amounts*
Military	1,126	37,376,588 lbs.
Commercial	10,778	17,500,000 lbs.
U. S. Forest Service	250	88,250 lbs.
Totals	12,154	54,964,838 lbs.

The Advisory Committee study showed that, "with the exception of an occasional less-than-truckload lot," all of the movements over the public highways were handled by contract or private carriers without any regulations other than the two requirements previously mentioned, i.e., that they:

1. Stop at all railroad crossings, and
2. Display a placard.

The study also reported that, "There are only three manufacturers of commercial explosives in the State of California who sell directly to 36 distributors located throughout the State. These distributors in turn sell to any person having a need for explosives, such as farmers, miners, logging operators, and large construction firms. Consequently, these dangerous articles moved over any and all of the highways within the State and in or through any community at any time and in any type of vehicle."

Witnesses at the hearing indicated that one of the principal objectives in seeking regulatory legislation on a state-wide basis is to obtain uniformity throughout the State and to eliminate the possibility of varying and conflicting local ordinances.

Further, some witnesses recommended that California adopt the Interstate Commerce Commission regulations as its own. They indicated that this would not only result in uniformity throughout the State but would also standardize the regulations in California with those of the ICC in interstate commerce and with those of other states which have already adopted the ICC regulations as their own.

According to testimony at the hearings, there have been no fatalities due to explosion and the safety records of those trucks transporting explosives have been irreproachable. However, it was generally agreed by interested agencies throughout the State that additional regulation would be advisable.

SENATE BILL No. 934 AND UNRESOLVED QUESTIONS

The measure which would have provided uniform state-wide regulation (Senate Bill No. 934) was not enacted at the 1955 Legislative Session because several questions were not resolved to the satisfaction of all agencies concerned. Included were questions as to the extent of coverage of the regulations or the level at which legislation should begin, the amount of jurisdiction to be retained by local authorities, and the agency to administer and enforce the regulations.

The legislation recommended by the Advisory Committee on Motor Vehicle Legislation, embodied in Senate Bill No. 934, would have added a new division to the Vehicle Code relating to the transportation of explosives. Although the advisory committee members felt that state regulations should harmonize with ICC regulations insofar as possible, they also felt that the field covered by these regulations was broader than necessary. They felt that flammables should be excluded since the transportation of flammables in California is now well regulated by agreement within the industry and by various requirements for equipment used in their transportation. Therefore, the bill provided for regulation of only those explosives classified by the Interstate Commerce Commission as Class A and Class B. It excluded Class C explosives.

Senate Bill No. 934 would have applied to "the operation of any motor vehicle on any public highway for the purpose of transporting any explosive in any amount when such transportation is rendered as a delivery service or for hire, or in any other event for the purpose of transporting any explosive in an amount in excess of 1,000 pounds." The 1,000-pound limitation was placed in the bill so that the bill would not, in the words of a member of the advisory committee, "apply to each and every farmer that might transport two or three sticks of dynamite."

The bill also would have required that a permit be obtained from the California Highway Patrol before any vehicle (as defined in the bill) would be allowed to transport explosives on a public highway; it contained provisions for inspection of vehicles and a number of regulations for the owners and drivers of such vehicles.

The California State Fire Chiefs Association and the California State Firemen's Association, while they believe that the concept of a state-wide uniform law is a good one, objected to a number of the provisions of Senate Bill No 934. The Los Angeles City Fire Department, in a letter written to the committee on January 10, 1957, indicated that it believed the following provisions were necessary in any legislation regulating either the transportation or handling of explosives:

1. Legislation relating to the handling, storage, sale and transportation of explosives should be retained in Part 1, Division 11 of the Health and Safety Code. This highly dangerous commodity is and his been a problem of the fire service for its entire history and will remain so as to the responsibility for fire prevention, safe practices and the extinguishment of fires; for the handling of disasters which result from explosives will always be a major problem of fire departments The Health and Safety Code is the

only state code which contains the bulk of regulatory legislation that is enforced by one segment or another of the fire service.

2. Enforcement.
   (a) The State Fire Marshal should be made the principal enforcing agency for the field of explosives with the proper delegation of local enforcement given to the fire chiefs, as it is in most other Fire Marshal laws and regulations. This provides a uniform enforcement and a uniform law for explosives throughout the State, which all concerned seem to desire, and yet does not encumber the State with a large organization for this specific purpose.
   (b) A system of annual permits or licenses be established by the State Fire Marshal covering the various phases of explosives operations, with sufficient fees attached thereto to provide the necessary revenue for the State to make the plan work on a "pay as you go" basis. * * *
3. The State Fire Marshal, with the advice and assistance of the State Fire Advisory Board, should draw up regulations covering the sale, storage, handling and transportation of explosives. Any such law that may be drawn up for the Health and Safety Code could not feasibly cover the many facets of the matter in detail and would be far too bulky for a general law which would apply to a very specific field. Any such regulations so drawn should be in conformity with accepted national standards and safe practices as outlined in ICC regulations, Bureau of Explosives manuals, information in documents of the Explosives Manufacturers Association, and various military manuals of procedure covering all phases of the explosives problem. Further, such rules and regulations should be adopted only after full public hearings before members of the industry concerned, transportation companies, fire service representatives and any others that may be involved in this commodity. A practical set of working regulations can best be established by this means rather than being frozen into a state law which is very difficult to change and must wait two-year intervals of the Legislature for the correction or addition of any material which has been affected by technological changes or field experience. * * *

4 Inasmuch as transportation is a very vital factor in the explosives field, some provision should be made for the highway patrol and police officers of the various communities to check trucks for the purpose of determining whether they are operating a properly issued permit for the handling of such dangerous commodities * * *

5. It must also be remembered that there is a wide variation of situations and conditions throughout the State, varying from northern mining and agricultural areas to the various highly urbanized metropolitan cities. Some degree of latitude must be left to local officials in the matter of routing and the hours of use of principal streets through highly congested districts This would be impossible to spell out on a state-wide basis.

To sum up, the proposed state law should be as follows:

1. Should be a part of the Health and Safety Code and contain the following:
   (a) Definitions and scope.
   (b) Authority and enforcement (fire marshal and the fire service).
   (c) Provide for rules and regulations to be established in conformity with nationally accepted safe practices.
   (d) Provide for transportation inspection while using the streets and highways of the State by the CHP and local police agencies.
   (e) Allow for a few definite rules regulating routing and related matters to be left to local jurisdictions because of the wide diversity of conditions.

* * * * *

Division 11, Part 1, of the Health and Safety Code (Sections 12000 through 12402) contains provisions relating to sales records, storage, use or possession and transportation of explosives The Los Angeles Fire Department stated that these sections are obsolete and need to be brought up-to-date to take cognizance of new materials and new developments in the field of explosives.

This committee recognizes the need for bringing these provisions up-to-date. As indicated earlier in this report, state-wide regulation is needed to cover those carriers not now regulated by either the Interstate Commerce Commission or the California Public Utilities Commission. The committee believes that legislation to correct these defects should be adopted during the 1957 Session of the Legislature.

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ASSEMBLY INTERIM COMMITTEE ON EDUCATION

DONALD D. DOYLE, *Chairman*
DOROTHY M. DONAHOE, *Vice Chairman*

REPORT OF THE SUBCOMMITTEE ON THE SEVERELY MENTALLY RETARDED

March, 1957

MEMBERS OF THE SUBCOMMITTEE

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WALTER I. DAHL — CARLOS BEE

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The people of the United States have inherited a commitment, and have the responsibility to provide for all, *without discrimination, a full opportunity for a free public education to develop all human potentialities regardless of physical, intellectual, social, or emotional differences, or of race, national origin, economic status or place of residence.*

—White House Conference on Education, November, 1955

LETTER OF TRANSMITTAL

ASSEMBLY CHAMBER, STATE CAPITOL
SACRAMENTO, CALIFORNIA, March 6, 1957

Hon. L. H. Lincoln
Speaker of the Assembly; and
Members of the Assembly
Assembly Chamber, Sacramento, California

GENTLEMEN: Pursuant to House Resolution 241, adopted June 6, 1955, the Assembly Interim Committee on Education herewith submits its final report on the severely mentally retarded.

Respectfully submitted,

DONALD D. DOYLE, Chairman

SUBCOMMITTEE LETTER OF TRANSMITTAL

ASSEMBLY CHAMBER, STATE CAPITOL
SACRAMENTO, CALIFORNIA, March 6, 1957

Hon. Donald D. Doyle
Chairman, Assembly Interim Committee on Education
Assembly Chamber, Sacramento, California

DEAR MR. DOYLE: Pursuant to the general authority of House Resolution 241, adopted June 6, 1955, under which you appointed this subcommittee, the Subcommittee on the Severely Mentally Retarded held hearings in San Francisco on June 26, 1956, and in Los Angeles on October 3, 1956. This report is the final report and legislative recommendations of the subcommittee based on those hearings.

Respectfully submitted,

DOROTHY M. DONAHOE
Chairman of the Subcommittee
CARLOS BEE
WALTER I. DAHL
DONALD D. DOYLE
ERNEST R. GEDDES

SCOPE OF REPORT

The Subcommittee on Severely Mentally Retarded, created under the general authority of House Resolution 241 of the 1955 Regular Session of the California Legislature, held hearings during 1956 in San Francisco and Los Angeles. Testimony heard at those hearings, and background material gathered by the subcommittee staff have formed the basis of this report.

In addition to formal hearings, subcommittee members, as individuals and as members of other subcommittees, have attended and participated in many state, regional and local meetings pertaining to retardation and its allied fields. In cooperation with the California Council for Retarded Children, the subcommittee chairman represented the Assembly Interim Committee on Education at the National Convention of the National Council for Retarded Children held October, 1956, in Seattle, Washington. Contact with state and national leaders in the field of mental retardation at these meetings helped the subcommittee members to better understand the problem of retardates and to develop their ideas for improvement of the laws governing their custody, education and welfare.

The cooperation and intent of the California Legislature, as demonstrated by its sending a representative to the convention of the National Council for Retarded Children, is mentioned because it is in sharp contrast to the spirit shown by legislators in many western states. A recent mental health training and research survey conducted in the 11 western states and Alaska elicited responses from only 20 percent of the 1,194 legislators polled, the lowest ranking group in the survey, indicating that few either cared or knew enough about the program to reply.

The report delineates the problem area of the severely mentally retarded and explores a tentative program for their lifetime care in order to provide a context for specific proposals within the education field. Being outside the jurisdiction of the Assembly Committee on Education, specific proposals in fields outside education, though needed for a total program, have not been included in this report Rather than intrude in other fields with specific proposals, the report makes a recommendation that a joint interim committee investigate all fields concerned in the formulation of a total program for the severely mentally retarded.

The success of the hearings and the report which grew out of them can largely be attributed to the valuable testimony of the many witnesses who appeared before the subcommittee. Particular tribute is due Dr. Walter Rapaport, State Director of Mental Hygiene; Dr. M. E. Porter, Deputy State Director of Mental Hygiene; Dr. Thomas L. Nelson, Superintendent of Sonoma State Hospital; Mr. Theodore A Bravos, Assistant Superintendent of Sonoma State Hospital; Mr. Paul Thormahlen, School Principal at Sonoma State Hospital; Dr. Francis W. Doyle, Chief of the Bureau of Special Education of the State De-

partment of Education; Dr. Leo F. Cain, Dean of Educational Services at San Francisco State College; Miss Frances A. Caine, Supervisor of Atypical Classes of the San Francisco Unified School District; Dr. David H. Fils, Consultant in Special Education in the Office of the Los Angeles County Superintendent of Schools, and Dr. Milton Miklas, Office of Research and Guidance of the Los Angeles County Superintendent of Schools, who have given the subcommittee and its staff their time and effort without stint during the hearings and the preparation of this report.

FINDINGS

1. Severely mentally retarded children comprise only one of many groups requiring special training and educational facilities. It is, in fact, one of the smallest of these groups, including approximately 7,000 children throughout the State in it, but its needs are as great as those of far larger groups. The patchwork of laws providing for the training and education of many of these groups has created an uncoordinated structure that impedes realization of adequate programs.

2. Data concerning the incidence of severely mentally retarded persons is incomplete and inaccurate.

3. Until an adequate lifetime program for the severely mentally retarded has been formulated, the disadvantages of making the training program for mentally retarded minors who come under the provisions of Section 9801.2 of the Education Code mandatory will outweigh the advantages, due to the teacher shortage and the problems that would be created in sparsely settled districts.

4. Allowances for the training of severely mentally retarded children are not adequate enough to encourage needed expansion of the program under the present permissive laws.

5. Delay until completion of the school year for payment of allowances for training severely mentally retarded children causes a drain on the funds of school districts and county superintendents of schools that discourages the establishment of point 2 classes.

6. Formulation of a total lifetime program for the care, education and welfare of the severely mentally retarded is required to complement and give meaning to the present point 2 system of classes.

7. Teachers in the schools operated by the state hospitals for the mentally retarded are placed at a competitive disadvantage with their fellows in the public school system by the requirement that they work under civil service rules which deprive them of the opportunity for using their summers to acquire the advanced schooling necessary for professional advancement. Recruitment of teachers for these schools is also rendered more difficult by this requirement.

8. More special training classes and incentives are needed to attract teachers into the mentally retarded program.

9. A more active scientific research program is needed to give direction to a total program for the severely mentally retarded.

RECOMMENDATIONS

1. That Assembly Bill No. 630 or Senate Bill No. 244, identical bills providing for establishment of community mental health services on a permissive basis, and their companion appropriation bills, Assembly Bill No. 2736 or Senate Bill No. 245, be passed by the 1957 Legislature.

2. That Senate Bill No. 62, a bill providing for a study of the problems in the education of emotionally disturbed children in the public schools, be passed by the 1957 Legislature.

3. That the State Department of Mental Hygiene, through its hospitals for the mentally retarded, and the University of California be encouraged to undertake extensive research in the problems of mental retardation, including the medical, psychiatric, educational and social aspects; and that adequate facilities, appropriations and endowments be provided for such research.

4. That the joint interim committee proposed by Assembly Bill No. 3354 of the 1957 Legislature formulate a full and complete program for the lifetime care, custody, training and welfare of the severely mentally retarded, and prepare appropriate legislation for implementing the program; such program to include, but not be limited by, consideration of the following subjects:

a. Integration of the schools operated by the state hospitals for the mentally retarded with the public school programs established under Sections 9801.1 and 9801.2 of the Education Code;
b. Placement of teachers in the schools operated by the state hospitals for the mentally retarded under appropriate teacher tenure laws;
c. Utilization of community mental health services (if approved by the 1957 Legislature), where established, for the purposes of diagnosing retardates, counseling parents, operating half-way houses, cooperating with county general hospitals in operation of special wards for retardates, operating sheltered workshops or community centers for the mentally retarded, cooperating with education authorities in the education and training of both minor and adult retardates and cooperating with parent cooperatives and other groups concerned with the problems of the severely mentally retarded.
d. Establishment of funds for research in the problems of the mentally retarded by the state hospitals for the mentally retarded and the University of California;
e. Contractual agreements between public schools and private schools to permit payment of school moneys to such private schools which undertake to educate pupils who fall within the provisions of Section 9801.2 of the Education Code;
f. Contractual agreements between public agencies and privately operated sheltered workshops;

g. Completion of as accurate a survey as possible of the incidence of severely mentally retarded persons of all ages throughout the State;
h. Completion of comprehensive tabulation of facilities, public and private, throughout the State which provide services to the severely mentally retarded, including colleges and universities which offer the specialized courses necessary for award of the credential for teachers of the mentally retarded;
i. An authoritative and comprehensive study of the value, need, effectiveness and validity of all existing educational programs for the severely mentally retarded in California;
j. Compilation of comparative data concerning programs, facilities and laws relating to the severely mentally retarded in the other states, the territories and the District of Columbia; and
k Incentives necessary for the attraction of more teachers into the educational programs for the severely mentally retarded.

PROPOSED LEGISLATION

1. Assembly Bill No. 1083, relating to the education of mentally retarded minors: authorizes half-day classes where one teacher handles two such classes per day on the same basis as now authorized for kindergartens.

2. Assembly Bill No. 3351, relating to the advance apportionments to school districts providing for the education of mentally retarded minors: authorizes advance payments of excess costs for eight units of average daily attendance for each point 2 class established.

3. Assembly Bill No. 3352, relating to the education of mentally retarded minors: authorizes state allowances for excess costs up to $600 per unit of average daily attendance.

4. Assembly Bill No. 3353, relating to the education of mentally retarded pupils: raises the age limit for minors within the provisions of Section 9801.2 of the Education Code to 21 years.

5. Assembly Bill No. 2267, relating to scholarships for training in teaching of mentally retarded pupils, and making an appropriation therefor: provides state-sponsored scholarships for students working toward the credential for teaching the mentally retarded, and requires their acceptance of positions in designated critical districts or state hospitals for the mentally retarded for one year for each scholarship year.

6. Assembly Bill No. 3354, relating to the Joint Interim Committee on the Mentally Retarded, and making an appropriation therefor: establishes a joint interim committee competent to inquire into all phases of the program for the mentally retarded, and to propose necessary legislation.

7. Assembly Joint Resolution No. 15, relative to inclusion of information concerning mental retardation in the reports of the 1960 federal decennial census: memorializes the Bureau of Census to gather needed, but now unobtainable, data concerning the incidence and nature of mental retardation at all age levels.

FULL REPORT

Each and every child is worth educating, has a right to an education, and the community through its schools has an obligation to provide adequate educational services for all children.

—Dr. Francis W. Doyle, Chief, Bureau of Special Education, Department of Education

By law and by custom the people of California have guaranteed that every child shall have an education. Considering the so-called normal children—those equipped with the mental and physical capacities that are considered to be normal in our present society—the state has made a tremendous effort to provide the best education possible. For those children whose mental or physical capabilities deviate considerably, the state has proceeded in a piecemeal fashion through the years, providing for various categories one at a time.

The parents and other groups interested in each category of child anomalous to the norm have worked hard to achieve legislation providing educational facilities for the children in the particular category in which they are interested. Many fine, progressive laws are on the books as a result of the untiring efforts of these people. Today we have, as a result, a patchwork of laws and regulations which provide for many, though not all, of the mental and physical categories into which the children of California may be placed. Among these is the group with which this subcommittee has been interested—the severely mentally retarded. This complex structure, having already been created, tends to encourage each group of partisans for special educational programs to seek new laws rather than integration into existing laws.

CALIFORNIA'S EDUCATIONAL PROGRAM

California today has an educational program which even a few decades ago would have been thought utopian. Every child is required to attend school through his eighteenth year unless excused by the school district by reason of physical or mental disabilities. For those who wish it, and are qualified, there are junior colleges, state colleges and the University of California to carry them to the highest academic peaks attainable in the United States. Even for those who drop out of the educational stream after age 18, the public provides adult education facilities through adult classes in the high schools and through a wide variety of day and night, on- and off-campus classes and extension services offered by the junior colleges, state colleges and the University of California.

These are the educational services which have become so instilled into the fabric of California life as to be unquestioned. Yet, because of continual technological advancement of the American civilization and the phenomenal growth of the State these basic educational services are

demanding ever greater financial support each year. Not only must the growing population be provided for, but there must be provision for the increasing proportion of children who wish to continue into the college level. At all levels of education there is a greater body of knowledge to be imparted in the already limited time available, and, accordingly, there is an increased need for auxiliary educational services such as libraries and audio-visual facilities. All of these factors are contributing to the annual competition for appropriations, and could easily use every cent available for education without considering the needs of gifted and exceptional children.

GIFTED AND EXCEPTIONAL CHILDREN

The problem of the child who deviates considerably from the normal must be considered in the light of this huge and still growing program. Though comprising a relatively small proportion of the population, these children are just as entitled to educational benefits befitting their capabilities as are normal children. Because there are so many different categories into which they may be grouped, it is in caring for these exceptional children that the education laws have taken on their patchwork characteristic. Among these categories are the gifted children, those whose intelligence would permit them to move rapidly ahead of their contemporaries if allowed and encouraged to do so; and the mentally normal but physically handicapped children such as the crippled, the cerebral palsied, those with sensory defects or speech difficulties, and those confined to their homes or hospitals. In addition are two educationally difficult groups, the emotionally disturbed and the mentally retarded. To further complicate the picture, there are innumerable combinations of these groups.

All of these must be taken care of within the State's educational budget to the extent that the education they are being given benefits them and benefits the State. According to Joseph Weingold, Executive Director of the Association for the Help of Retarded Children in New York, "Everything we do for the retarded, whether it be diagnosis, schooling, therapy, social groups, parent counseling, camping—everything—is aimed towards the goal of achieving an adjusted individual in adulthood, hopefully capable of becoming a contributing member of society."

It has been the task of this subcommittee to attempt to delineate the State's responsibilities for education of one of the smallest of these groups—the severely mentally retarded, bearing in mind all of the ramifications of the State's educational program; and to at least point the way toward integration of this group into the over-all system of state services.

THE PROBLEM AREA

The severely mentally retarded are sometimes classified as those individuals having I. Q.s below 50. The dividing line between this group and the group, called mentally retarded, above it cannot be so simply drawn. Intelligence quotient is merely one of many criteria used for the determination. Each case must be diagnosed separately to determine into which category it falls. This division can in part be based on the proper definitions of the words "education" and "train-

ing'' which have been the subject of endless semantic debate among educators and people interested in the welfare of the mentally retarded. Dr. Forrest Mitchell, Assistant Superintendent of Oakland schools, has defined ''education'' as having ''goals in literacy, vocational competence and social independence,'' and ''training'' as ''building self-help in bodily control, guiding the children toward attainment of the simple routine physical skills such as feeding, dressing, toileting * * *; the inculcation of some communication skills aimed * * * toward the ability to recognize common objects (and) signs for their own protection * * *, and the achievement of some degree of social competence and acceptance.'' Dr. Mitchell believes that the term ''education'' is not properly applied to the schooling of the severely mentally retarded. Use of these definitions thus provides one useful criterion for differentiating between the mentally retarded and the severely mentally retarded groups.

Many educators and parents disagree with Dr. Mitchell's exclusion of the latter category from education. They feel that education is the sum of life experiences and that, therefore, any progress represents education Most would, however, agree that Dr Mitchell has defined adequately the goals of education for the two groups of mentally retarded.

The California Education Code draws a similar distinction in the twin sections which provide mandatory education of mentally retarded children (the ''point 1'' program), and permissive education and training of severely mentally retarded children (the ''point 2'' program), but it uses the word ''education'' in both sections. The two sections of the Education Code are:

Ed. C. § 9801.1. The education of mentally retarded minors who are of compulsory school age and who may be expected to benefit from special educational facilities designed to make them economically useful and socially adjusted shall be provided * * *.

Ed. C. § 9801.2. The education of mentally retarded minors who do not come within the provisions of Section 9801 1, who are five or more, and less than 18 years of age, and who may be expected to benefit from special educational facilities designed to educate and train them to further their individual acceptance, social adjustment, and economic usefulness in their homes and within a sheltered environment, may be provided * * *.

Although the schooling of point 2, severely mentally retarded children has some very definite goals in social and personality development, it lacks the type of objective inherent in normal education—the preparation of the individual to do something besides just existing after graduation. The reason for this is the almost complete failure of society to make provision for adult activities of the severely mentally retarded Many suggestions have been made in line with establishing a lifetime point 2 program. One of the intents of this study has been to formulate a tentative program so that the educational features which are the primary responsibility of this subcommittee will have greater meaning.

Of interest in view of the extremely limited future presently open to the severely mentally retarded are the objectives for their programs set forth by the Louise M. Lombard School for severely mentally retarded in the San Francisco school system and by the school at Sonoma

State Hospital for the Mentally Retarded. Lombard has expressed its "general aims and objectives" in rather specific terms as follows:

"The school program for severely mentally retarded children has as its goal the development of social acceptance and economic usefulness at home and in a limited environment. To reach these goals it becomes necessary that the school curriculum be planned

1. To help the child make a successful adjustment between home and school life
2. To help the parent accept his child's limitations and build on his abilities
3. To help the child work and play as a member of a group
4. To develop in the child courtesy and good manners
5. To teach the child good health habits
6. To train the child neatness and cleanliness of person and place
7. To develop the child's muscular coordination
8. To train the child to be helpful at home
9. To develop the child's confidence and self-expression
10. To teach the child to speak as clearly and correctly as possible, and to enlarge his vocabulary as much as possible
11. To train the child in the recognition of words and numbers that will be useful to him in his everyday life
12. To train the child to keep himself busy so that he does not just "sit"
13. To develop personal happiness within the child's capabilities"

The school at Sonoma State Hospital, partially because it is merely one segment of a larger program, has developed a more generalized statement of objectives which emphasizes the great flexibility necessary in point 2 level programs:

> "The basic philosophy underlying the education of children who are mentally retarded is no different from that recognized for all children. The child with mental retardation is, first of all, a human being. The primary objective of the education department is to provide an integrated program for physical, emotional, social and mental growth of the individual. We wish to minimize pressure in the learning process and to provide a program of happy and meaningful experiences. The goal is to develop each child to his maximum capacity and to guide him toward adjustment in a community. This program must be flexible and varied in order to function effectively."

Educators have at times stated that a point 2 program is not properly within their sphere of responsibility because it is more in the nature of care and training than it is education. If there is disagreement as to responsibility for this one phase, a complete, lifetime program for the severely mentally retarded will be certain to engender even more controversy over the proper delegation of responsibility. Not only must the question of responsibility be settled between the various interested departments of the State Government, but it must be settled between the various levels from the family to the State. While formulating an approach to a lifetime program for the severely mentally retarded, the subcommittee has remained fully aware of the complex problem of establishing even tentative areas of responsibility.

As previously alluded, although the problem of the severely mentally retarded is great, the problem area is relatively small Accurate census data concerning the incidence of severely mentally retarded persons do not exist. A rough statistical index of 0.23 percent for determining the number of such persons in a given population has been developed through limited analyses. Computing with this index on the estimated school age population as of July 1, 1956, the expected county by county incidence of point 2 children is tabulated below. This tabulation, sufficiently accurate for the purposes of this study, but not for fiscal planning, indicates that there are about 6,900 point 2 children in California.

During the 1955-56 school year 125 point 2 classes were in operation under the jurisdiction of either the school districts or the county superintendents of schools. An average of eight children were in average daily attendance in these classes, a total of 1,000 throughout the State. 1,634 children within the point 2 bracket are currently estimated to be in the care of the three state hospitals for the mentally retarded, of which less than half are attending the hospitals' schools. Completion of the State's five-year program of capital improvements, funded by passage of proposition 3 in the 1956 general election, should allow practically all point 2 patients of these hospitals to receive school training.

Just as there are private schools concerned with normal education, so are there private schools and institutions for the mentally retarded. These are extremely limited, however, at present taking care of only about 1,150 children throughout the State. Because of the broad classification of children admitted by these schools and institutions, including epileptics and both levels of mental retardation, this figure is not directly comparable with the incidence rate for the severely mentally retarded. A liberal estimate of 250 point 2 children receiving some kind of private training has been used in the tabulation below.

Considering all of these facilities, only about 3,384 of the estimated 6,900 point 2 children have access to training. Provision for the remainder of about 3,555, just over half of the estimated point 2 population, also lies within the scope of this study.

ESTIMATED DISTRIBUTION OF POINT 2 CHILDREN AND PRESENT ACCESS TO SCHOOLS OR INSTITUTIONS

County	*Pt. 2 children*	*Pt. 2 classes*	*Maximum strength of classes*
Alameda	451	3	36
Alpine	--	--	--
Amador	5	--	--
Butte	35	1	12
Calaveras	5	--	--
Colusa	6	--	--
Contra Costa	179	1	12
Del Norte	8	--	--
El Dorado	9	--	--
Fresno	166	--	--
Glenn	8	1	12
Humboldt	49	--	--
Imperial	35	--	--
Inyo	6	--	--
Kern	136	5	60
Kings	24	2	24
Lake	6	--	--

County	*Pt 2 children*	*Pt. 2 classes*	*Maximum strength of classes*
Lassen	9	--	--
Los Angeles	2,760	30	360
Madera	19	--	--
Marin	62	1	12
Mariposa	2	--	--
Mendocino	28	--	--
Merced	43	1	12
Modoc	5	--	--
Mono	1	--	--
Monterey	91	2	24
Napa	29	1	12
Nevada	9	--	--
Orange	211	8	96
Placer	24	--	--
Plumas	6	--	--
Riverside	105	--	--
Sacramento	206	13	156
San Benito	8	--	--
San Bernardino	204	2	24
San Diego	442	6	72
San Francisco	407	13	156
San Joaquin	119	5	60
San Luis Obispo	31	2	24
San Mateo	184	8	96
Santa Barbara	57	2	24
Santa Clara	239	5	60
Santa Cruz	35	1	12
Shasta	23	--	--
Sierra	1	--	--
Siskiyou	16	--	--
Solano	61	2	24
Sonoma	68	1	12
Stanislaus	74	5	60
Sutter	15	--	--
Tehama	10	--	--
Trinity	3	--	--
Tulare	74	3	36
Tuolumne	8	--	--
Ventura	79	--	--
Yolo	27	1	12
Yuba	14	--	--
California	6,939	125	1,500
State hospitals for the mentally retarded	--	--	1,634
Private schools and institutions	--	--	250
Totals	6,939	--	3,384

Balance uncared for—3,555

California presently maintains three state hospitals for the mentally retarded: Pacific State Hospital, Porterville State Hospital and Sonoma State Hospital. These hospitals care for patients of all ages and degrees of mental retardation. Current figures for the hospitals are as follows:

Hospital	*Patients*	*Est. Pt. 2*	*In school*	*Ward instruction*
Pacific	2,297	467	473	30
Porterville	2,191	697	* 210	98
Sonoma	3,952	470	220	216
Totals	8,440	1,634	903	344

* Includes 134 part-time pupils.

The figures indicating patients under instruction include both point 1 and point 2 children, and chronological adults. Less than half those in school or receiving ward instruction could be considered as being point 2 children. Planned expansion of the school will permit the hospitals to offer educational facilities to all or nearly all for whom such training is expected to be of benefit.

A new hospital for the mentally retarded, Fairview, is now under construction at Costa Mesa. The Department of Mental Hygiene expects that it will eliminate present hospital waiting lists when it is placed in operation late in 1958. A principal for the Fairview school has already been hired and the school is expected to begin accepting pupils shortly after the hospital opens.

A TOTAL PROGRAM

In organizing a total program for the life-time needs of the severely mentally retarded, the initial consideration must be the finding and diagnosing of such cases. Many are recognized at birth, which somewhat simplifies their problem because they can be started on a proper program immediately, but many others get into the early grades of grammar school before detection. Because serious dislocations can result in these latter cases, all pediatricians and child psychiatrists should be constantly vigilant so that the earliest possible diagnosis can be made.

At whatever stage cases of severely retarded mentality are uncovered or suspected they should immediately be referred to a competent diagnostic team. Following diagnosis a comprehensive program for counseling the child's parents should be undertaken. Two primary considerations are paramount in parent counseling, first, to explain as fully as possible the nature of the deficiency in an attempt to obviate any feelings of guilt which may be harbored by the parents, and second, to explain the various courses of action open to the parents. Valuable aid in the counseling phase may be obtained by calling in members of organized groups for the severely mentally retarded in a manner somewhat analogous to the operations of Alcoholics Anonymous. Use of parents who have already become accustomed to the problems of the severely mentally retarded will generate confidence and remove the sense of isolation parents often feel when first informed that their child is retarded.

Many such groups, banded together in the California Council for Retarded Children, have already been organized. Founder and first president of the California Council was Dr. George W. Bemis, former research director of the Assembly Interim Committee on Education. Not only do these groups perform invaluable service in maintaining parent morale, but they are in a position to sponsor, or assist parent cooperatives in sponsoring, the private facilities for retardates which are badly needed to supplement those of public agencies.

Depending on where the child lives, responsibility for diagnosis and the counseling in conjunction with diagnosis might be lodged with either local mental health authorities or the State Department of Mental Hygiene acting through one of its hospitals for the mentally retarded. Bills are now before the 1957 Legislature providing for establishment of community mental health services. Agencies of this type must accept responsibility for diagnosis and counseling all families within their geographical

jurisdictions. In cases where community mental health services are nonexistent, recourse to the nearest state hospital for the mentally retarded must be authorized.

Among the courses of action open to parents of severely mentally retarded children are the private institutions and schools. While these will not be discussed in this report because they do not represent a lien on public funds, their programs, services, advantages and disadvantages must be included among the alternate courses of action presented to parents in the course of early counseling.

CARE AND CUSTODY

The first problem that presents itself during the formulation of a course of action is that of the care and custody of the child. Most experts are now coming to agree that the best place for the child is in the home. However, many homes will prove to be unsuited for emotional or other reasons. As a part of the counseling program case workers should visit the home and should then help the family determine whether both the child and the family would be better off with the child in or out of the home.

Even when parents decide to place the child outside the home, housing as nearby as possible would allow ready access by the parents. Nearby housing can be furnished by either foster homes or in special wards of county general hospitals. As an aid in locating suitable foster homes, complete central files indicating current openings should be maintained by the State Department of Mental Hygiene for distribution to all interested agencies. Special wards for custody of severely mentally retarded children are only possible in the general hospitals of counties larger than about 15,000 population. In smaller counties the rate of incidence would be so low as to render such wards completely unfeasible. Such wards should be operated in cooperation with the local community mental health service, which should also be responsible for observing operations of foster homes within its geographical jurisdiction.

As a last resort, for those children who cannot be accommodated in or near their homes the facilities of the state hospitals for the mentally retarded will be available. At present there are considerable waiting lists for these hospitals because there are few intermediate custodial facilities available between them and the home. The opening, late in 1958, of Fairview State Hospital for the Mentally Retarded is expected to eliminate present waiting lists. However, as California continues to grow these lists will again become necessary. With development of a program of community mental services in at least the larger counties and cities, the new pressures on the hospitals would be greatly reduced. They would then be able to concentrate their attentions on more serious cases and on cases originating in the very sparsely settled counties which cannot afford to provide local services for the few people involved.

As in all phases of the total program for the severely mentally retarded, the placement of children must be kept flexible. As the children grow, as home conditions vary or as local programs in their home counties change, the possibility of transfer into or out of the home, or from one facility to another should always be kept in mind by the responsible custodians or counselors.

SCHOOLS AND TRAINING

Despite their disability severely mentally retarded children are generally capable of being trained to a point well beyond that which could be achieved solely in the home. The present point 2 program recognizes this fact and permits the institution of classes to accommodate their needs. In the total program the present point 2 program, with a few modifications, should prove to be well-fitted if its coverage were increased.

Many interested people have urged that the point 2 program now on a permissive basis, be made mandatory as is the point 1 program for the less retarded. This subcommittee, though wholly sympathetic to the viewpoint of the people who urge mandatory legislation, feels that such legislation could not measurably accelerate the program, and could easily impede it by creating antagonism in those districts which for any of a number of reasons have thus far been unable to institute a point 2 program. In many small counties the incidence of point 2 cases is so small as to render any program unrealistic and uneconomical. Probably more important is the fact that teachers qualified to teach mentally retarded children are extremely hard to obtain. Until the shortage of teachers credentialed for work with retardates (the same credential is applicable to both the point 1 and point 2 classes) is overcome, and there appears to be little chance that it will be until the general teacher shortage is eliminated, consideration of mandatory point 2 legislation should be deferred. As soon as sufficient experience under the mandatory point 1 program, now only one semester old, for secondary schools has been accumulated, together with the interim studies and scientific research recommended in this report, serious consideration should be given to making point 2 mandatory.

One of the greatest stumbling blocks in the way of establishing and expanding point 2 programs is the present critical shortage of teachers. If point 2 classes were put on a basis of 130 minutes per day in cases where one teacher handles two classes in succession, the provision now applicable to kindergartens, point 2 capacity could be doubled without either recruiting new teachers, purchasing new equipment or having to provide new classroom space.

Training of severely mentally retarded children is an expensive proposition. So much so that many districts feel that they cannot afford to undertake a point 2 program for which they will not receive state aid until the end of the school year. It is felt that many of these districts would be encouraged to initiate point 2 classes if they were given an outright grant of the equivalent of one year's allowances for an average daily attendance of eight children for each class organized. An increase in the annual allowance for excess costs of training point 2 children from $400 per child to $600 is also considered to be a worthwhile incentive to the districts and counties to expand their point 2 programs. The extra cost to the State in the 1955-56 school year has been computed by the Department of Education as $47,997 for an increase to the $500 level. To this would have to be added the increased allowances paid for each additional child in average daily attendance because of the increase. The increment for an increase from $500 to $600 would be substantially less than the increment from $400 to $500.

Point 2 facilities of the public schools take care of the training requirements for children living at home and in foster homes. Those children being cared for in the state hospitals for the mentally retarded receive similar training from the schools maintained in each of the hospitals. Because of the limited population extent of the point 2 problem, particularly in view of the present teacher shortage, it is felt that it would be wise if the hospital school program were to be integrated more fully into the general point 2 program. The fact that hospital schools must operate as integral parts of their hospitals is also appreciated. In the light of these two considerations the subcommittee feels that the hospital schools should remain under the jurisdiction of the State Department of Mental Hygiene but should hire their teaching personnel on the same basis as do the public schools with normal teacher tenure rather than civil service tenure and with teachers working the regular school year so that they may utilize their summers for academic advancement as do other teachers. The flexibility previously urged for the custodial phase would be enhanced by this procedure because it would simplify the transition from hospital school to public school, or vice versa, as custodial needs change.

Serious doubt has been raised from time to time as to the efficacy of carrying a point 2 child through 13 years of schooling. Many believe that a point of diminishing returns is often reached before the child reaches age 18. Half-day sessions, as previously recommended, would undoubtedly tend to postpone arrival at this point, but, nevertheless, serious consideration should be given to the possibility of moving the child into the postschool phase prior to reaching age 18 if it appears that the school program has accomplished all it can in the particular case. It must be remembered that the schools are not to be considered as having custodial responsibilities. When the time comes that they are no longer expanding the child's training, but are only taking care of him, the time has come to move the child into the next phase. Responsibility for making this decision would rest on the school authorities in consultation with their psychiatrists, the child's teacher and parents, the Bureau of Vocational Rehabilitation of the State Department of Education, sheltered workshops or potential employer.

So that children not now receiving the benefits of school training may receive at least some schooling, it is felt that the point 2 age limit should be raised to age 21 until the point 2 program has expanded to the point that all eligible children will be able to enter the program, either in public schools or in hospital schools, at a sufficiently early age that they will receive training to their maximum capabilities before reaching age 19. Authorization for this extension should be temporary, not more than five years to start.

Parent counseling is as important during the child's school days as before. When a child enters a point 2 class, the counseling services previously handled through community mental health services should be transferred to the school or the school district. Through counseling parents should be kept fully informed as to their child's progress, his needs in the home, and the possibilities that lie ahead. This would become increasingly important as the child approaches the end of his school career, either because of reaching terminal age or because of reaching his saturation point.

ADULT PROGRAM

Third phase in the total program for the severely mentally retarded is the postschool or adult phase. Under present law the point 2 program must be terminated at the end of the school year in which the individual reaches age 18. Public responsibility ends at this point and the entire load is thrust upon the family unless the severely mentally retarded adult, still only a child mentally, is committed to one of the state hospitals for the mentally retarded. This is a dead end which satisfies no one.

The severely mentally retarded need 24-hour supervision just as much in adulthood as in childhood. This is an almost impossible burden for the parents to shoulder alone, yet retention in the home or community is still considered far preferable to institutionalization. It is at this point that the proposed community mental health services should again enter the picture. The severely mentally retarded adult needs a source of activity, social contact with his peers and recreation. The home is not equipped to provide an outlet for these needs. Such a source would be provided by the opening of sheltered workshops under the supervision of community mental health services or of adult education divisions, as is the practice in Seattle. Parent cooperatives are already performing valuable services in pointing the way in this field.

Sheltered workshops satisfy the employment and custodial needs of the severely mentally retarded during the day, relieving the parents, foster parents or local institutional authorities for six to eight hours daily while providing a decent and meaningful life for the retardate. These workshops could also serve the needs of graduates of point 1 classes who are not suited for normal employment, and would provide the basis for the social contact which is so often ignored when planning for retarded individuals.

While the responsibility for operation of sheltered workshops should generally lie with the community mental health services which have been proposed on a permissive basis in the 1957 Legislature, educational authorities should accept a responsibility for provision of teaching and vocational rehabilitation services considered beneficial to the retardate being employed and cared for in the workshops.

A valuable guidepost along the road toward a complete program for the mentally retarded has been erected by the Goodwill Industries of Cincinnati. Though still in the experimental stage, they have actually demonstrated that some individuals with I. Q.'s between 25 and 50 are capable of performing remunerative and personally satisfying work if properly trained in the skills, job responsibility and other characteristics essential for satisfactory work adjustment. The ultimate goal of sheltered workshops cannot, however, be competitive competency, but must be the provision of an environment in which the retardate may achieve a meaningful life without losing himself in idleness.

Custodial responsibilities for the adult retardate should remain as in the earlier phases: parents, foster homes, community mental health services in cooperation with county general hospitals, or state hospitals for the mentally retarded. Unless the individual must be committed to a state hospital, the community mental health services would retain responsibility for counseling services. Flexibility in custodial arrange-

ments is just as important in this phase as in the others, perhaps more so because increasing attention must be paid to the advancing age of the parents.

Sheltered workshops can be economically productive to a limited extent as has been shown in Cincinnati, but not nearly to the extent required for complete self-support. The balance of their support should be divided between the sponsoring local government and the State in accordance with the provisions contained in the community mental health services bills being introduced in the 1957 Legislature.

All of the facilities discussed or implied in this report, community diagnostic and treatment services, family counseling, special classes, sheltered workshops, foster homes, half-way houses, community institutions and state hospitals, are but facets in a total program necessary for the whole person. All are important, none can stand completely alone. With their establishment, parents will be able to plan the program most suited to their child and circumstances without the agony of continuous worry about his future.

EMOTIONALLY DISTURBED CHILDREN

Another of the special categories of children for educational purposes is the emotionally disturbed. Many witnesses appeared before this subcommittee to describe their problems, to explain what is being done and to suggest possible courses of action. The problem, however, lies outside the field of inquiry with which the subcommittee was charged and it feels that it is not competent to make recommendations. A proposal (Senate Bill No. 62—McBride, Teale and Sutton), now before the 1957 Legislature, provides for a complete study of the problem out of which would come the program needed to rehabilitate emotionally disturbed children.

INFORMING THE PUBLIC

An adequate public relations program is essential to the success of any program for the severely mentally retarded. All interested agencies should be encouraged to carry on such programs to the maximum extent. In addition to the public agencies, private groups like the California Council for Retarded Children, must disseminate the information needed to dissipate public ignorance and apathy.

The general public must be schooled to accept the retardate as an individual just as deserving of affection and respect as his more fortunate brethren. It must be taught that many of the problems of the mentally retarded result not only from his limitations or from his inability to adjust to the demands of society, but from the reluctance of society to accept him. The problems of the mentally retarded must be brought out of the dark corners where they have been hidden by a society which hates to face anything disturbing to its equanimity.

Public enlightenment concerning mental retardation will not only help give the retardate a more satisfactory life, but will arm parents with the foreknowledge which will relieve their fears and feelings of guilt after learning that their baby is retarded. They will not feel alone in their crisis, but will know where to turn for aid and support.

In addition to promoting an atmosphere conducive to public understanding and acceptance of retardates, adequate public information

concerning the programs for the mentally retarded would support the recruitment of teachers needed by school districts and state hospitals to man their special educational programs.

Regular workshops and institutes for teachers, parents and public officials interested in the problems of the severely mentally retarded should be encouraged and sponsored by such agencies as the State Departments of Education and Mental Hygiene, the state colleges and the University of California. Workshops and institutes would serve not only as media for the discussion and exchange of ideas and information, but also as a means of disseminating information to the public.

TEACHER PROCUREMENT

Without the availability of properly trained teachers, no amount of legislation will serve to expand the point 2 program. The need for publicity designed to influence potential teachers to undertake the specialized training necessary for the mentally retarded teaching credential has already been mentioned. Two further steps in this direction are also worthy of consideration. The state colleges and the University of California should be encouraged to follow the trail blazed by Dr. Leo F. Cain at San Francisco State College by organizing the classes necessary for this credential. As an incentive to potential students of these classes, the State should sponsor a limited number of scholarships for students working toward this credential with the agreement that they will be obligated to serve one year in a district or a state hospital designated by the State Department of Education for each scholarship year. The State Department of Social Welfare is already engaged in a similar scholarship program to help satisfy the need for qualified personnel in its field.

SCIENTIFIC RESEARCH

A total program cannot be established without a well-financed program of scientific research which will point out the proper path to the program's goals, and which will describe the nature of the terrain en route. Research is basic to a successful attack on any problem. In the fields of mental illness and retardation, California has been badly deficient in its research program.

An effective research program would uncover much needed knowledge concerning the nature of mental retardation, would determine the educational needs and capabilities of all levels of retardation, and would establish the validity of various curricula, techniques and teaching programs. Such a program would also enhance California's stature and position of leadership in this field.

The subcommittee believes that the State Government should take the lead in encouraging research in mental retardation by establishing the necessary physical facilities and financial endowments in the state hospitals for the mentally retarded in the University of California and in selected state colleges.

FURTHER INVESTIGATION

The total program tentatively outlined in this report has been presented only because such a program is necessary to complement and give meaning to the point 2 program. As a part of the Assembly Interim Committee on Education, the subcommittee has not been charged with considering and proposing legislation outside the field of education, and has, therefore, limited its detailed recommendations to that field, making only suggestions outside it. Other interim committees, charged with making investigations and recommendations in other fields connected with the total program for the severely mentally retarded would similarly be operating outside their fields were they to make recommendations concerning the educational aspects of the total program.

To overcome the difficulty presented by the lack of any individual interim committee presently constituted having the jurisdiction to survey the complete field, the subcommittee feels that a joint interim committee should be charged with investigating the training, custody and welfare of the severely mentally retarded throughout their lifetime. From this study it should recommend a total program integrated insofar as possible with existing laws and systems of the State. Establishment of such a committee would end the needless duplication of Senate and Assembly committees investigating the problem simultaneously as is often the case.

The Assembly Interim Committee on Education should at the same time be given the responsibility for examining the legal bases of all special educational and training programs, and for formulating proposals for elimination of their present piecemeal structure. It is felt that more complete coordination of these programs for exceptional children should achieve economies which would reduce per capita costs, releasing funds needed for their expansion.

Though in numbers the problem of the severely mentally retarded may appear small, in reality it is as large and pressing as any facing the State because it vitally affects the well-being of every citizen. Progress has already been made toward solving this problem, but much remains to be done. Progress will continue and will be accelerated if the philosophy of Dr. Paul Benoit, research associate in the University of Illinois' Institute for Research on Exceptional Children, is adopted. Dr. Benoit has said, "We believe it far more fruitful for both the children and the teacher to glory over the possibilities that remain in spite of the handicap, than to pine away with the idle wish that the handicap had never occurred. We have faith in the fertility of the view that starts with a positive evaluation of the children and also some measure of appreciation and even enjoyment of the rich reality that is in them."

GLOSSARY

Educable—Those capable of assimilating education with goals of literacy, vocational competence and social independence.

Exceptional—"Those who deviate from what is supposed to be average in physical, mental, emotional or social characteristics to such an extent that they require special educational services in order to develop to their maximum capacity." (National Society for the Study of Education, 49th Year Book, Part II, Education of Exceptional Children, University of Chicago Press, 1950.)

Gifted—Children with very high intelligence, generally considered to be those with I. Q.'s in excess of 130.

Half-Way Houses—Community institutions which provide custody for patients in transition between the state hospitals and their homes.

Parent Cooperatives—Privately organized parent groups engaged in the operation of sheltered workshops.

Point 1—School program for mentally retarded children organized under Sec. 9801.1 of the Education Code, also used to designate children eligible for education under this section.

Point 2—School program for severely mentally retarded children organized under Section 9801.2 of the Education Code, also used to designate children eligible for education under this section.

Retardate—One who is mentally retarded.

Sheltered Workshop—Public or private institution designed to provide employment, guidance and social contact with their peers for retardates, but which does not provide full-time custody.

Trainable—Those capable of assimilating education directed toward building self-help in bodily control; guiding the children toward attainment of the simple routine physical skills such as feeding, dressing and toileting; inculcating some communication skills aimed toward the ability to recognize common objects and signs necessary for self-protection, and achieving some degree of social competence and acceptability.

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REPORT OF SUBCOMMITTEE ON SCHOOL DISTRICT TAX AND BONDED INDEBTEDNESS

March, 1957

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LETTER OF TRANSMITTAL

ASSEMBLY CHAMBER, STATE CAPITOL
SACRAMENTO, CALIFORNIA, March 8, 1957

Hon. L. H. Lincoln
Speaker of the Assembly; and
Members of the Assembly
Assembly Chamber, Sacramento, California

GENTLEMEN: Pursuant to House Resolution No. 254, adopted June 8, 1955, the Assembly Interim Committee on Education herewith submits its final report on school district tax and bonded indebtedness.

Respectfully submitted,

DONALD D. DOYLE, Chairman

SUBCOMMITTEE LETTER OF TRANSMITTAL

ASSEMBLY CHAMBER, STATE CAPITOL
SACRAMENTO, CALIFORNIA, March 8, 1957

Hon. Donald D. Doyle, Chairman
Assembly Interim Committee on Education
Assembly Chamber, Sacramento, California

DEAR MR. DOYLE: Pursuant to the directive of House Resolution No. 254, adopted June 8, 1955, the Subcommittee on School District Tax and Bonded Indebtedness held hearings in San Diego on October 21, 1955, in San Francisco on September 6, 1956, and in Sacramento on December 17, 1956. This report is the final report and legislative recommendations of the subcommittee based on those hearings.

Respectfully submitted,

SHERIDAN N. HEGLAND
Chairman of the subcommittee
FRANK P. BELOTTI
EDWARD M. GAFFNEY
ERNEST R. GEDDES
VERNON KILPATRICK

SCOPE OF REPORT

House Resolution No. 254 of the 1955 Regular Session of the California Legislature charged the Interim Committee on Education with the responsibility of investigating the subject matter of Assembly Bill No. 328 of that session. The Subcommittee on School District Tax and Bonded Indebtedness held hearings in San Diego, San Francisco and Sacramento in 1955 and 1956, and has developed a program designed to solve the problems with which Assembly Bill No. 328 dealt.

The report traces the development of the present problems and examines the legislation which has been enacted in an effort to solve the problem. The many inequities which have developed as a result of both this legislation and the growth of California have been explored at length.

Using this background, the subcommittee has examined and recommended five legislative measures, including an improved version of Assembly Bill No. 328 and a comprehensive measure which deals with the whole problem as a unit instead of merely attacking it piecemeal.

FINDINGS

1. The root of the school construction problem lies in the unequal distribution of population and wealth which has appeared as a result of California's growth and industrialization.
2. This difference has produced a wide variation in assessed valuations per child among the school districts.
3. Variations between tax requirements of different state aid districts have appeared as a result of the application of two different state building aid laws to the problem.
4. Necessary boundary changes in school districts have been made increasingly difficult by the pyramiding of district bond issues and state loans.
5. Teacher recruitment has been rendered more difficult in state aid districts by limitations on salaries and facilities.
6. Other taxing agencies have been penalized when operating within impoverished districts.
7. Commercial enterprises within impoverished districts have been placed at a competitive disadvantage because of higher tax rates.
8. Existing high tax rates in impoverished districts have discouraged the entry of enterprises which would spread the tax base.
9. School district voters in some districts have exhibited increasing reluctance in approving school bond issues as their taxes have mounted.
10. Half-day sessions have not been eliminated, there still being almost 200,000 students in such classes.

RECOMMENDATIONS

Any plan designed to relieve or solve the present school construction problem should:

1. Strengthen local control of education;
2. Promote equity between taxpayers, both of property taxes and taxes which are general fund revenues, and should reduce total costs by placing construction on a current basis; and
3. Fully meet the school construction needs of California, completely eliminating half-day sessions, with buildings which conform with proper education and safety standards.

PROPOSED LEGISLATION

1. Assembly Bill No. 394, relating to public utility tax payments.
2. Assembly Constitutional Amendment No. 44, relating to bonds of school districts and the liability of the State, of school districts, and of the residents of school districts in connection therewith.
3. Senate Bill No. 619, relating to school building aid.
4. Assembly Bill No. 1110, relating to loans by the State to school districts for school building aid.
5. Assembly Bill No. 3903, relating to school districts public works and the financing thereof.

FULL REPORT

The basic principles on which California's school system rests are being threatened by her explosive population growth. First among these principles is that of equal educational opportunity for all children. This was recognized at the very outset of California's statehood in the Constitution of 1849 which said, "The Legislature shall provide for a system of common schools by which a free school shall be kept up and supported in each district at least six months in every year, after the first year in which a school has been established."

Second, the principle of equal responsibility for support of the schools was, until recent years, maintained on a relatively fair basis with each school district raising the greater part of its funds by property taxation within the district or by bonding programs secured by future taxation. This principle became threatened only when the distribution of taxable property began to be radically different from the population distribution.

Local governmental control, third of the basic principles, has always been respected by giving local school boards primary direction of the school system. The demand for state aid to schools which has followed sharply rising school construction costs has brought with it the threat of increasing state control. In recent years the inability of many school districts to catch up with increased enrollments has generated strong pressures favoring federal intervention. Control of education could be removed even farther, probably irretrievably, from the local level, if these pressures force enactment of a federal aid to education law.

UNPRECEDENTED GROWTH

Until World War II the public school system grew with the State without doing noticeable damage to any of the three basic principles. All through the prewar years California grew at a fairly steady rate which caused little difficulty to the school districts. During the second decade of this century 2,251,000 inhabitants were added to the population, and in the third decade only 1,230,000 were added.

Then came the war with its vast influx of people to man the garrisons and defense plants. A five-year growth of 2,437,000 between 1940 and 1945 had a great impact on the schools which was compounded by the virtual halt of school construction. The war's end brought a hope that the pressure would ease while the five-year construction lag was overcome. This hope was unfounded and the population rose another 1,265,000 from 1945 to 1950. The crushing blow, however, was yet to come. A second tidal wave of humanity, bigger than that of the war years, rolled over California with an increase of 2,991,000 people from 1950 to 1956.

STATE-AID PROGRAMS

By 1947 it was obvious that school construction had fallen so far behind that state support would have to be sought. Two of the three basic principles were by then already badly impaired. With many children attending half-day sessions, there was no longer equality of opportunity; and with wide variations appearing between different districts' tax bases, there was no longer equality of responsibility.

Recognizing the need for supplying school construction money to districts which had reached their bonding and taxing limits, the 1947 Legislature passed a state school building aid law (Ch. 1575, Stats. 1947). Total appropriations of $55,000,000 were made in 1947 and 1948 for distribution on an outright grant basis by the State Allocations Board. Spending of these grants was limited to purchasing and improving school sites, constructing school buildings and furnishing the buildings. School districts, to be eligible, were required to have a tax rate within one-half cent of the legal limit and to be bonded to within 95 percent of the limit.

The school construction grants were soon found to be inadequate and a new state school building aid law (Ch. 1389, Stats. 1949) was passed by the 1949 Legislature. To finance the new program a $250,000,000 bond issue was approved. Apportionments under this act were made by the State Allocations Board for the same purposes and with the same bonding requirements as under the 1947 law. These new apportionments, however, were authorized as interest-bearing loans which the districts must repay under certain conditions. To protect the taxpayers, repayments were limited to any balance remaining, after service and retirements of district bonds, of a 40¢ per $100 of assessed valuation tax rate. A maximum repayment rate of 30¢ per $100 was established as further protection. Any part of a loan which could not be repaid within these limits was to be forgiven.

When it became apparent that impoverished districts' construction needs were still not being met, the Second Extraordinary Session of 1952 passed a third state school building aid law (Ch. 27, Stats. 1952 (2d Ex. Sess.)). The law was initially financed by a $185,000,000 bond issue. The 1952 act used almost identical language as the 1949 law in its provisions for making and repaying loans. Further bond issues under this law of $100,000,000 in 1954 and $100,000,000 in 1956 were adopted later. Proposals for a fourth school bond issue under this law are now before the 1957 Legislature.

INEQUITY OF THE PROGRAM

Despite approval of new school bond issues every other year the problem has continued. Glaring inequities which have appeared as a result of the loan program have further confused the situation. Until the construction lag is finally overcome, the principle of equal educational opportunity will continue to be violated. Almost 200,000 children are on the half-day sessions which many people accuse of limiting academic development. This belief is highly suspect, at best, and any supporting evidence would be meaningless unless it involved the study of identical pairs for whom a strict statistical record had been kept.

That half-day sessions are limiting social development can, however, be hardly doubted. Social and academic development of children are both important objectives of the school system so the retardation of either is a serious indictment of the system. The postwar rise in juvenile delinquency has sometimes been attributed to this deficiency. While the charge appears to have some justification, it could not be definitely established in the absence of sociological studies made with the strictest controls.

The principle of local control has become increasingly violated under the state loan program. Construction loans are authorized for only the barest essentials necessary for housing the almost explosive increase in school age population. Because the uses to which the loans can be put are limited by law, state control of impoverished districts' building programs has become necessary.

The loan acts have not only set square footage per pupil standards, but also have imposed limitations on the uses to which the square footage may be applied. Further restrictions have been imposed by the requirement for complete servicing of state loans by school districts before they may spend locally raised money to improve their real estate beyond the austerity limits set by state law. This requirement has encouraged districts to bend, if not break, at least the spirit of the law in their efforts to construct buildings of the quality they believe necessary for an adequate educational program and to avoid extravagant maintenance costs in the future.

State finance and education officials have in effect charged many school districts with providing deliberately misleading data in an effort to secure larger state apportionments than could properly be asked for under the program. Moreover, it is a matter of common knowledge that proponents of many local bond issues have often deliberately encouraged a misunderstanding among voters that the state program is a grant rather than a loan. In any case, there is little doubt that the program as it now operates encourages unethical practices and possibly downright dishonesty.

Not only does the program tend to encourage dishonesty, but it tends to encourage uneconomical methods. The tendency to pay less attention to value received when buying on credit is well known. The pyramiding of state loans and bond issues in impoverished districts has created a huge "buy as you borrow" base on which this tendency is almost certain to flourish.

Most badly damaged of the basic principles is that of equality of responsibility. As the State has grown, particularly in the metropolitan areas, great variations in taxable wealth between districts have developed. Although there are all gradations between the extremes, investigation of the financial condition of districts representing the extremes will show how inequities have grown.

At the low end of the scale are the so-called "bedroom" districts, the suburban communities to which people have flocked in their flight from the noisy, crowded and smelly cities These districts have large school age populations supported by a restricted tax base composed mainly of residential real estate and neighborhood retail stores. Many of these districts are already on state-aid, and the rest are fast approaching the time when they will be legally impoverished.

At the other end of the scale are the downtown districts left behind by the residents of suburbia. In them school age populations are small, but are supported by a large tax base which includes industrial plants, wholesale warehouses and markets, and large retail stores. Whereas the population associated with suburban real estate is generally living on it; the population associated with a large part of the downtown real estate, the people who work on it, is composed of people living elsewhere. Effectively these people are taxed for their tools, yet derive no benefit from their taxes.

An example of this situation may be found in three adjacent unified school districts in Contra Costa County. The districts are Pittsburg and Antioch, both of which are industrial districts, and Mt. Diablo which is the "bedroom" for those districts. Reference to Table 1 will indicate that Mt. Diablo, though having a somewhat higher assessed valuation than its neighbors, has such an inflated enrollment that its assessed valuation per child falls far below those of the other two districts. As a result, Mt. Diablo is bonded to near capacity, has by far the highest tax rates for operation and debt service, and is on state-aid. Comparisons of this type may be made throughout the State, illustrating the oft-repeated remark that, "The taxpayer in the state loan districts is being required to pay for more, and his kids are getting less."

TABLE 1. 1956-57 BONDING AND TAXATION FOR ADJACENT CONTRA COSTA COUNTY UNIFIED SCHOOL DISTRICTS

	Pittsburg district	*Antioch district*	*Mt. Diablo district*
Assessed valuation 1956-57	$86,018,190	$62,838,560	$102,408,575
Enrollment September 4, 1956	4,079	4,232	21,548
Assessed valuation per child	$21,088	$14,848	$4,752
Bonding capacity June 30, 1956	$7,624,000	$5,341,000	$9,343,000
Outstanding bonds June 30, 1956	$5,128,000	$4,235,000	$8,593,000
Percentage of capacity	67.3	79.4	92.0
Operation tax, 1956-57	$1.864	$1.866	$3.188
State repayment, 1956-57	--	--	$0 277
Bond rate, 1956-57	$0.461	$0.642	$0.730
Total tax, 1956-57	$2.325	$2.508	$4.195

The Contra Costa County example illustrates the present inequity between an industrial area and its suburbs. Table 2 is a more general comparison of 19 nonstate-aid districts, including San Diego, with 12 impoverished districts around San Diego.

Another inequity, this one existing between different state-aided districts, has grown as an unintended, technical result of the operations of the two school building loan acts. Both laws have the intent that state loans would be forgiven to the extent that they drive the combined tax rate for local bond service and state loan repayment above 40¢ per $100 of assessed valuation. However, because two separate laws are involved, repayment computations must be made separately for loans made under different laws.

Districts which borrowed money under only one law are protected at the 40-cent level. Districts which borrowed under both laws, while protected at the 40-cent level under one law, have an additional responsibility for repayment up to another 30 cents under the other

TABLE 2a. 1954-55 SCHOOL TAXATION IN 19 REPRESENTATIVE NONSTATE-AIDED CALIFORNIA CITIES

District	*Maintenance and operating tax*	*Debt service*	*Total tax*
Compton	$3.35	$0.69	$4.04
San Bernardino	3.49	0.53	4.02
Pasadena	3.05	0 43	3.48
Palo Alto Unified	2 99	0.39	3.38
San Jose Unified	2.62	0 69	3.31
Riverside	2.61	0.58	3.19
Burbank Unified	2 37	0 57	2.94
Fresno Unified	2 04	0.80	2.84
Stockton Unified	2.81	--	2.81
Santa Barbara	2.51	0.27	2.78
Sacramento Unified	2.33	0.39	2.72
Long Beach Unified	2 12	0.55	2.67
Los Angeles	2.25	0.35	2.60
Glendale Unified	2 08	0.51	2.59
Berkeley Unified	1 95	0 39	2.34
Santa Monica Unified	2.03	0 28	2.31
Oakland Unified	2.04	0.21	2.25
San Diego Unified	1.84	0.35	2.19
San Francisco Unified	1.58	--	1.58
Averages	$2 42	$0.42	$2.84

TABLE 2b. 1954-55 SCHOOL TAXATION IN 12 STATE LOAN CITIES AND AREAS OF SAN DIEGO COUNTY

District	*Maintenance and operating tax*	*Debt service*	*Total tax*
Santee	$2 62	$1.70	$4.32
El Cajon Valley	2.36	1.53	3.89
La Mesa-Spring Valley	2.37	1.42	3.79
Chula Vista	2.34	1.38	3.72
Lemon Grove	2 21	1.38	3.59
Vista	2.93	0.59	3.52
Lakeside	2.23	1.28	3.51
Alpine	2 25	1.16	3 41
South Bay	2.09	1.29	3.38
San Ysidro	2.08	1.24	3 32
Jamul-Las Flores	2.13	1.17	3.30
Oceanside	2.57	0.46	3.03
Averages	$2.34	$1.22	$3.57

law. A total liability of up to 70 cents, well above the original intent of the two acts, is thus imposed on these districts.

Two districts sitting side by side could have the same state debt. However, if one became impoverished before 1949 and contracted part of its debt at that time and part under the three later bond issues, it could have a tax liability up to 70 cents. If the second district commenced its growth later and only became impoverished after 1952, its tax liability would be held at the 40-cent level even though it had borrowed the same total amount and is now equally impoverished as the first district.

INEQUITY COMPOUNDED

This pyramiding of taxes and state repayments, together with the badly unbalanced tax bases between districts, is the most obvious inequity of the present state loan program. There are other, less obvious,

inequities hidden in the background. Another difficulty, directly connected with district financing and operations, lies in the increasing difficulties connected with district boundary changes as bond issues and state loans are piled on top of each other.

Boundary considerations should be based solely on district needs as populations shift or administrative requirements change. As bond issues and state loans mount, district needs tend to be overriden by financial considerations connected with assigning responsibility for debt service.

State aided districts are likely to suffer another disadvantage in comparison with their richer neighbors. They may find it very difficult to compete with them in teacher recruitment. Both salaries and teaching conditions are often better in the rich districts which can realize a higher tax income per pupil, and which are not limited by the austerity construction program imposed on state aid districts.

In addition to school districts, and the cities and counties in which they may be located, there are other kinds of taxing districts in the picture. Some of these districts have the same problem of unequal tax bases that have been encountered by the school districts. In any case they are penalized when they operate within an impoverished school district with its high tax rate. They often find that they have greater difficulty passing or selling bond issues which drives their interest rates up.

Industry is involved in two related problems Lack of industry and other centralized commercial activities within a district is one of the basic causes of impoverishment. One of the ways to reduce impoverishment would be to attract light industry and other less offensive enterprises into the district. This would serve to spread the tax base without destroying the residential attractions of the area. The already existing high tax rates, however, discourage such enterprises from moving into these districts.

This fact leads directly into the second problem. Industry and other business already located in impoverished districts find themselves at a distinct competitive disadvantage in relation to their competitors in other districts because of the large tax differential. This amounts to an artificial subsidy for the more fortunately located businesses which is in distinct violation of the American ideology that competition should be free, open and unsubsidized.

All of the inequities that have arisen in the course of California's expansion have worked to widen the gap between the taxing responsibilities of different areas. The principle that tax sacrifice should be equitably spread among the people in accordance with the services they receive from their governments is an old one, but in this case appears to be more honored in the breech than in reality. The subcommittee has conducted its hearings and formulated its recommendations in the belief that this trend must be countered and equity restored before our system of taxation breaks down irreparably.

BASIS OF INVESTIGATION

Several conditions must be borne in mind while seeking improvements in the present system of support for school construction. Every proposed solution should be tested in relation to the following questions

which are based on the three historic principles which have guided our public school system: Does the proposal promote—

1. Equality of educational opportunity for all children regardless of where they happen to live?
2. Equality of responsibility for financial support by all people and commercial entities no matter where they happen to be?
3. Local control of education?

Six other factors have also been considered to be important in the consideration of each proposal's feasibility:

1. The ease with which necessary legal changes can be integrated into existing law, and the need, if any, for amendment of the State Constitution;
2. The impact on other groups or governments which might give rise to serious new problems;
3. The costs of a proposal in relation to existing costs, to the needs of the state and to the ability of the state to absorb the costs;
4. The encouragement of ethical and honest practices;
5. The encouragement of economical practices—of getting the most for the money spent; and
6. Assurance by the "Solution" of adequate, full-day housing for every public school student in every district.

AREAS OF LEGISLATION

Legislation designed to accomplish each of the following objectives, listed in the order in which they will be discussed in this report, has been considered by the subcommittee:

1. To broaden the tax base in a district.
2. To reduce interest rates for district bonds.
3. To eliminate the inequities caused by loans having been made under two state aid laws.
4. To reduce restrictions on district building activities.
5. To eliminate the inequity between distributions of taxable wealth and population.

1. As a means of extending the tax base within many school districts, Assembly Bill No. 394 (Hegland and others) has been introduced to permit imposition of annual property taxes by school districts on all publicly owned utilities engaged in producing, selling or distributing gas or electricity.

Passage of this law would have the effect of equalizing financial responsibility for school support by placing the customers of publicly owned gas and power systems on the same basis as the customers of private companies. Private companies' customers are now liable to indirect school taxation through payment of that part of their bills which represents school taxes paid by the companies. Present exemption of publicly owned systems has created a class of preferred gas and power users who do not have to pay school taxes in the form of higher rates.

A serious inequity will still remain, to which consideration should be given. Taxes of utility systems are collected from customers living in many school districts, but are paid to the support of only those districts in which the systems' real property is located. Customers in

other districts are effectively paying taxes to governments in which they have no representation and from which they receive no services.

Table 3 is an estimate of the additional tax revenues which would have been available to school districts throughout the state had publicly owned gas and electric utilities been subject to school taxation in the 1955-56 Fiscal Year.

TABLE 3. 1955-56 FISCAL YEAR POTENTIAL REVENUES FROM TAXATION OF PUBLICLY OWNED UTILITIES

Utility	*County*	*Average school tax rate in county*	*Estimated assessed valuation (in thousands)*	*Estimated revenue*
	ELECTRICITY			
Alameda	Alameda	$2.49	$715	$18
Anaheim	Orange	2 78	833	23
Avalon	Los Angeles	2 58	18	--
Azusa	Los Angeles	2.58	313	8
Banning	Riverside	2.54	247	6
Biggs	Butte	1.94	3	--
Burbank	Los Angeles	2 58	5,965	153
Colton	San Bernardino	2.99	692	21
East Bay M. U. D.	Alameda	2 49	155	4
Glendale	Los Angeles	2.58	8,094	209
Gridley	Butte	1.94	104	2
Healdsburg	Sonoma	2.58	126	3
Imperial Irrigation District	Imperial	2.72	16,674	454
Lodi	San Joaquin	2.40	313	8
Lompoc	Santa Barbara	2.27	81	2
Los Angeles	Los Angeles	2.58	261,531	6,747
* Merced Irrigation District	Merced	--	--	--
Modesto	Stanislaus	2.58	3,414	88
Palo Alto	Santa Clara	3.14	1,748	55
Pasadena	Los Angeles	2.58	9,404	243
Redding	Shasta	2.62	562	15
Riverside	Riverside	2.54	3,231	82
Roseville	Placer	2.27	221	5
Sacramento M. U. D.	Sacramento	2.96	20,805	616
San Francisco	† Tuolumne	1.77	2,876	51
Santa Clara	Santa Clara	3.14	1,381	43
Turlock Irrigation District	Stanislaus	2.58	3,251	91
Ukiah	Mendocino	2.05	269	6
Vernon	Los Angeles	2.58	269	7
				$8,960
	GAS			
Avalon	Los Angeles	2.58	60	2
Coalinga	Fresno	2.39	88	2
Long Beach	Los Angeles	2.58	5,988	154
Palo Alto	Santa Clara	3 14	544	17
Ukiah	Mendocino	2.05	88	2
				$177
				$9,137

* Even remotely reliable data unavailable
† Principal property in Tuolumne County

2. Because most school construction is financed through bond issues, a significant part of a school district's income must be used to pay interest. Assembly Constitutional Amendment No. 44 (Hegland and

others) places the full faith and credit of the State behind all school district bonds.

This measure would have the effect of equalizing interest rates between the districts and the State. Rates on state-issued bonds and the bonds of districts which now enjoy low interest might tend to rise slightly, but the interest on bonds of districts which have suffered high rates should drop appreciably to meet the state rate.

Besides enlarging the available resources of many districts to some extent, this measure would have the desirable effect of removing comparative interest rates from consideration when deciding between the State and districts as preferable sponsors of any activity.

The two proposals already discussed have the common characteristic that they increase the available resources of school districts to some degree. They would have little effect in extending equality of educational opportunity and of responsibility. Their greatest importance, so far as the three basic principles are concerned, lies in their strengthening of local control of education. Any move to increase locally derived funds reduces the need for state aid and the state control that goes with such aid.

3. Among the objections to present operations of the state aid laws is the strong measure of state control over school construction in state aid districts. Senate Bill No. 619 (Dilworth) has been introduced at the request of the State Department of Education for the purpose of eliminating as much of this control as possible.

Under this proposal districts would be permitted to exceed the floor area on which its loan was based so long as it does not exceed the authorized costs. In addition they would be given greater discretion in the uses to which they could put their floor area.

Like the proposals which preceded it, Senate Bill No. 619 acts to increase local control. It does so, however, by actual relinquishment of certain state controls through open-end financing of construction, whereas the others did it by extending local financial resources. The following two proposals have been designed to remove some of the inequities that now exist between school districts.

4. The 1955 Legislature considered a bill, then designated as Assembly Bill No. 328, which would have eliminated the inequities arising out of the repayment provisions of the 1949 and 1952 state aid laws. The bill was referred to the Assembly Interim Committee on Education for further study. Having been under consideration during a series of hearings held by this subcommittee, it has been reintroduced as Assembly Bill No. 1110 (Hegland and others).

The amended proposal nearly equalizes the liability of districts which have borrowed under both state aid laws with the liability of those who borrowed under only one. It would reduce the liability of double-law districts, which may now be as high as 70¢ per $100 of assessed valuation, to 40 cents with a 30-cent rate as the maximum state repayment level. Single-law districts would retain the existing 40-cent liability and 30-cent maximum repayment levels.

The proposal would also provide for inclusion of district bonds sold after receiving a state loan in the computation of the portion of a district's bonded indebtedness which may be serviced within the 40-cent tax rate. Bonds added by this provision would be limited to those whose

proceeds were spent for purposes eligible under the austerity construction program. Under existing law only those bonds sold before receiving a state loan can be included in this computation. This proposal would tend to reduce somewhat the responsibility of the property taxpayer, and increase somewhat the responsibility of the state general fund taxpayer. The extent of this "shift" is difficult to anticipate precisely. It will depend in large part on the degree to which state-loan districts "repay." The degree of repayment will depend on population growth within the state-loan districts, the timing of that growth; the increase in assessed valuations within the districts; and other factors, some of them imponderable. One of these would be subsequent legislative action.

5. "Equalization" factors in meeting costs of school operation are achieved by use of the general fund. Traditionally about half of the cost of school operation in California is carried by the general fund taxpayer, and about half by the school district property taxpayer.

In school construction, however, the property taxpayer has been in theory held responsible for payment of the full cost. Beginning in 1949 under an "emergency" and "temporary" program, an equalization factor in school construction was added by use of the state loan program. Eight years later this "temporary" program continues.

To date no effort has been made to achieve equalization in school construction costs by taxing property wealth where it is found, and using the proceeds to build schools where they are needed. An amendment to Assembly Bill No. 3903 (Hegland) has been designed to achieve this purpose, and to end the inequity resulting from wide variations in assessed valuations per child.

The amendment contemplates financing school construction, at least eventually, on a pay-as-you-build basis, thereby eliminating or at least reducing the vast costs of bond servicing.

It proposes the creation of a "State School Building Construction Fund" which would be the source of all funds needed by school districts for school construction within the limits of the austerity program, and for service and retirement of existing district construction bonds. It would also be the source of funds needed to service and retire state school construction bonds.

The fund's needs would be computed by adding together estimated school construction costs, under an austerity program, costs for servicing and retiring existing district construction bonds, and all state school construction bonds.

Thirty percent would be considered an obligation of the general fund taxpayer and 70 percent the obligation of the school district property taxpayer. The 30 percent would be a recurring charge against the general fund.

The remaining 70 percent would be raised by assessing each county, up to a limit to be determined, in the proportion its taxable valuation bears to the taxable valuation of the State. The counties would pass this assessment on to their taxpayers as part of their property tax. The plan contemplates that if the needs of the fund could not be met within a specified limit of average taxation, the balance might be raised from the general fund backed by state school construction bonds.

Construction payments to districts would be made on the basis of estimated number of children for whom housing would be needed in the next year, including necessary replacement of school buildings. A flat rate per pupil for construction under the austerity program would be computed with a factor included to allow for geographical differences in construction costs. Districts which over-estimate their need would have the overage deducted from their apportionments, while those which underestimate need would be paid the balance the following year.

District needs to service and retire their construction bonds outstanding as of the effective date of the act would be paid out of the fund automatically in accordance with a schedule furnished by each district when the act becomes effective.

School districts wishing to build beyond the limits imposed by their entitlements under this law would be permitted to bond themselves for the purpose. The fund, however, would not assume any responsibility for the funds needed to service and retire such bonds

The table below indicates the costs which would have been the responsibility of the proposed fund had it been in operation during the 1955-1956 Fiscal Year. A small part of the construction costs incurred by non-state aid districts was for purposes beyond the limits of the state austerity program. A conservative amount, as indicated in the table, has been deducted to exclude this sum which would not have been payable out of the proposed fund. Also indicated are the average property taxes which would have been assessed by the counties to meet these costs, computed on the basis of a total assessed valuation of California amounting in 1955-56 to almost exactly $20,000,000,000.

TABLE 4. STATE-WIDE SCHOOL CONSTRUCTION COSTS AND DEBT SERVICE, 1955-56

Cost item		*Cost (millions)*	*Average tax*
District construction bonds			
Interest		$25.5	
Retirement		59.5	
		$85.0	$0.4250
District repayments to state			
1949 law		$6.5	
1952 law		0.4	
		$6.9	0.0345
General fund share of state bond service		$9.9	0.0495
Construction costs			
Total local resources	$196.0		
Less allowance for non-austerity construction	12.5		
Local share under this law	183 5	$183.5	
State apportionments		74.5	
		$258.0	1.2900
Total		$359.8	$1.7990

Had Assembly Bill No. 3903 been operative during the 1955-56 Fiscal Year, the average property tax load, established at 70 percent of the total load, would have been $1 2493. This is not too unrealistic a tax load for construction of facilities for education from kindergarten through grade 14, *particularly when it is considered that it is serving not only to pay off past debts, but to place the whole school construction program on a pay-as-you-go basis.* It should be recalled that additional funds will be available at the outset of this program from the proceeds of presently authorized but unsold state bonds.

The method of financing school construction proposed in the amendment to Assembly Bill No. 3903 would satisfy the three basic principles to a marked degree. With provision for financing basic school construction in all districts on a common basis, it appears that facilities should become largely equalized, promoting equality of educational opportunity. A few districts would probably continue to construct beyond the basic austerity program, using locally raised funds, but fewer and fewer districts are doing that under existing law and even fewer would be likely to do so under the proposed law. The problems of teacher procurement should also become more equitable between districts because of better facilities and greater opportunity for raising salaries in impoverished districts. This should further equalize educational opportunity.

By procuring construction funds according to distribution of wealth and spending them according to distribution of need, the bill is intended to equalize financial responsibility to a great extent.

Local control of education should also be greatly strengthened by passage of Assembly Bill No. 3903. The limitations of the austerity program would be used only to determine the amount of money to be allocated for each added pupil or for each pupil in a school which must be replaced. Once allocated, the funds would be under complete control of the school districts just as though they were locally raised.

The open-end plan of construction financing, long advocated by many educators, is an integral part of this proposal. A district would merely state its anticipated growth and replacement needs each year in terms of numbers of pupils, and would receive a sum of money equal to the number submitted multiplied by the construction cost per pupil determined for its area. The district could not be penalized for underestimating its needs and the state could not be penalized for an overestimation by the district because full adjustment would be made each year on the basis of actual growth and replacement data.

The present drive for federal school construction aid has gained great strength because of the obvious inequities in the present system of financing Adoption of this plan could forestall federal intervention in California—and the federal control of education that could come with it. Successful solution of the problem in California could point the way for similar solutions in other states, ending completely the threat to local control.

Considering the six feasibility factors listed earlier in this report, Assembly Bill No. 3903 as amended is considered to be completely feasible. The only factor which might give rise to any difficulty is the first. Extensive revision of the laws concerning financing of school construction would be necessary. This revision would result, however, in

considerable simplification by eliminating the need for those laws dealing with repayment of state aid, and by simplifying the provisions governing allocations to districts.

The greatest effect on other governments, the second factor, should be a reduction in bonding competition in impoverished districts. Taxes in the richer districts would be forced up, probably creating some new tax competition. The increase in taxes should not be too large in even the hardest hit districts, and should be relatively small in most non-state aid districts. These increases should be more than offset by reductions in the hard pressed state aid districts. The third factor, costs of the proposal, has already been discussed in relation to the known facts for the 1955-56 Fiscal Year Considering the State as a whole, costs should be reduced, while better serving the educational needs of the state, by reducing the need for bonding.

Plato believed that laws should be so framed as to encourage honesty, the fourth factor under consideration. As already pointed out, present laws tend to encourage dishonesty or unethical practices by placing the benefits to be derived on the basis of detailed plans with no fixed sum per pupil. By placing benefits on the basis of estimated growth and replacement needs, with a fixed sum per pupil in either class, this bill encourages honesty. Estimation errors can be corrected easily at the end of each year.

Economical practices, the fifth factor, should also be promoted. Except for a relatively small amount of bonding by a few districts wishing to augment the austerity program, all districts would be placed on a cash basis. Economy should be further promoted by the greater simplicity in budgeting which would result.

Assembly Bill No. 3903 as amended seems to be the only proposal at present which considers our problems of financing school construction as a whole instead of attacking them piecemeal. Its passage would go far toward overcoming the construction lag and placing school building on a current basis. Failure to solve the problem as a whole before it becomes more serious seems likely to make the eventual readjustment a much greater burden on the rest of the State, with the increased likelihood of greater state or even federal control over local school districts.

APPENDIX I

PYRAMIDING OF SCHOOL DISTRICT TAX RATES

"Pyramiding" of tax rates, a practice which causes undue hardship for property owners in school districts that must borrow from the State to finance building needs, is a recent development in the field of California school finance. It is a development which was not anticipated by those who framed the State School Building Aid Law. Pyramiding of tax rates has two very significant results:

1. *It violates the very principles which the State Legislature set forth when it prescribed that, to finance a building program, a school district might issue bonds.* Wisely, the legislature limited each school district's bonding capacity to 5 percent of its assessed valuation. A 5 percent interest rate, and a 25-year repayment period were also prescribed as maximums. These three limitations, all of them on the statutes of this State for many years, combine to produce about a 40-cent tax rate for building purposes in those districts which bond themselves to capacity at 5 percent interest with 25-year bonds. Thus, in the district that makes a normal local effort, a 40-cent tax rate for building has been accepted for years as being an equitable share of the property tax bill.
2. *It establishes a double standard for school districts in California.* Under this double standard the district which can finance its own building program need not exceed a tax rate of about 40 cents for building purposes. On the other hand, the district which despite a maximum local effort is unable to finance all of its needs, must levy a tax rate of much more than 40 cents if it borrows from the State and subsequently issues bonds to continue the local effort. This practice violates the principle of equalization which has been accepted as being sound in connection with the financing of school districts' operating expenses, and which is also accepted as being proper in connection with the financing of building needs.

HYPOTHETICAL, APPROXIMATE REPAYMENT SITUATION UNDER PRESENT STATE-AID BUILDING LAW

The chart on the following page illustrates graphically some typical repayment situations that could exist under the present law. The "pyramiding" effect is shown for districts C, D, and E. The chart may be interpreted as follows:

District A. Did not borrow from State. Finances building program with local bonds. FORTY-CENT TAX RATE.

District B. Borrowed from State under Chapter 1389, or Chapter 19, and has not issued bonds subsequent to receiving apportionment.

Prior and qualifying bonds	26¢
State repayment	14
Total Tax	40¢

District C. Borrowed under Chapter 1389, has stayed bonded to the limit through subsequent or "interim" bond issues. Has not borrowed under Chapter 19.

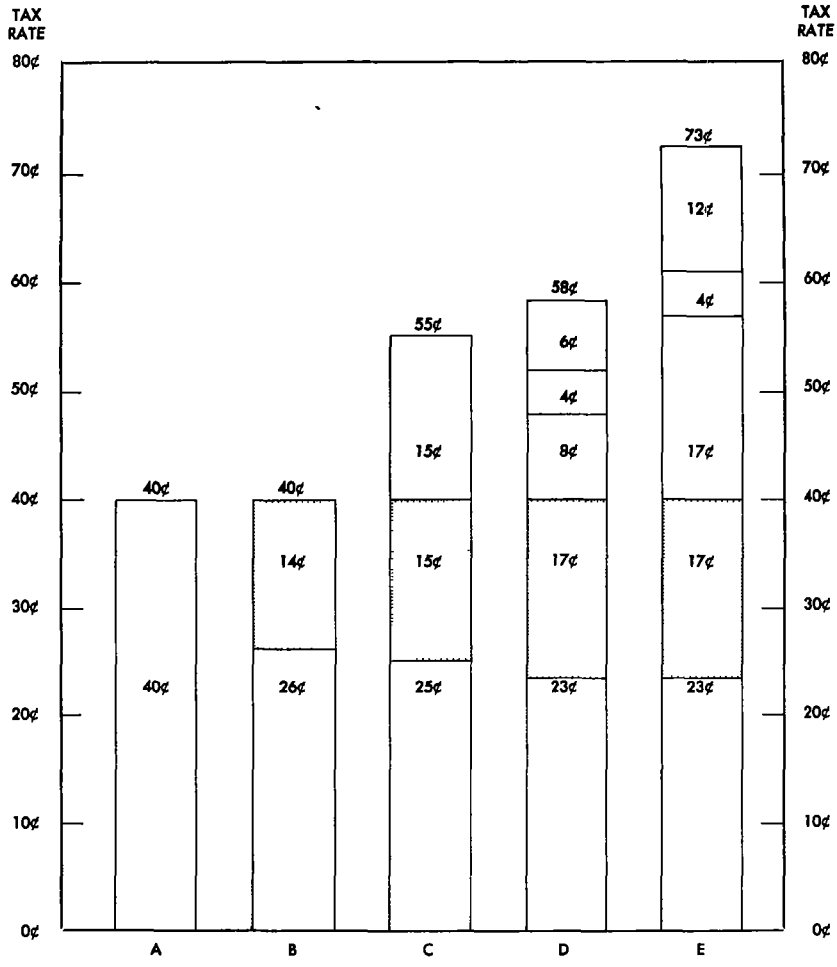
Prior and qualifying local bonds	25¢
Public school repayment (1389)	15
Interim or post-1389 bonds	15
Total Tax	55¢

District D. Formerly on Chapter 1389; has issued interim bonds bringing district up to capacity for one year, then has had to issue a qualifying bond issue as condition to receiving Chapter 19 apportionment. Also, has received Chapter 19 funds, and has subsequently issued additional bonds.

Prior and qualifying (1389) bonds	23¢
Public school repayment (1389)	17
Post-1389 (interim) local bonds	8
Qualifying for Chapter 19, local bonds	4
Bonds issued subsequent to receiving Chapter 19 apportionment	6
Total Tax	58¢

District E. Conditions identical with those in District D. However, in order to make an even greater local effort, and to lessen the necessity of borrowing from the State, this district issues its bonds on less than a 25-year basis, thus requiring a voluntary, higher local tax rate.

Prior and qualifying local bonds (1389)	23¢
Public school repayment (1389)	17
Post-1389 "interim" local bonds	17
Bonds issued to qualify for Chapter 19 loan	4
Subsequent district bonds	12
Total Tax	73¢



PYRAMIDING OF TAX RATES FOR STATE-AIDED DISTRICTS
HYPOTHETICAL REPAYMENT SITUATIONS

APPENDIX II

STATEMENT OF THE STATE BUILDING AID COMMITTEE OF THE CALIFORNIA ASSOCIATION OF SCHOOL ADMINISTRATORS SUBCOMMITTEE ON PERMANENT SCHOOL BUILDING PROGRAM

Presented by F. C. DARBY, Subcommittee Chairman

This subcommittee was formed because the C. A. S. A. organization, with its state-wide representation, believes strongly that the school housing problems of California are of a permanent nature. More than a year of work has gone into the consideration of the problem of establishing a permanent and adequate plan for the housing of the children of the State. The committee has worked closely with other interested organizations, such as the State Department of Education and State Department of Finance. We are indebted particularly to Assemblyman Dahl for his help and counsel.

Four major topics will be discussed here:

I. The basis for setting up the continuous school building fund.
II The basis for allocations to school districts.
III. The basis for school district participation in a state-aided building program.
IV. The administration of a permanent state-aided building program.

I. The Basis for Setting Up the Continuous School Building Fund

1. A state-wide bond issue of an undetermined amount ($500,000,000 was a suggested figure).
   a. The state bonds to be sold as needed in order to provide for the needs of school district applicants. This would mean that the entire $500,000,000 would not be sold as one block of bonds.
   b. The state bonds which are sold would be retired by the State General Fund over a 25-year period It was noted that a 25-year period is normal for school districts.
   c All money paid into the school building fund by the participating districts is to be made available for reallocation to other districts. As these payments are made it will reduce the necessity for selling large blocks of the state bonds. In any year that the payments from the school districts exceed the applications of school districts the excess could be used to retire some of the outstanding bonds. With these two features in effect such a revolving fund should last for an indefinite period of time. It also would prevent the accumulation of a large nonworking fund.

II. The Basis for Allocations to School Districts

Here there are two possible measures for allocations to school districts. One is on a square footage basis, the other is on a dollar amount per unhoused pupil. For administrative purposes and because there is familiarity with the present program dealing with square footages, the committee felt that such a program would be best.

1. Districts should apply through the present means of preparing a justification document. This basic document should determine the number of unhoused pupils against the criteria of square footage. The same square footage requirements should be made here as are being asked for in revising the present state program:

K through 6	70 square feet
7 and 8	100 square feet
9 through 12	110 square feet

2. The loading of classrooms should be the same as is now used, because it is the norm being used by large school districts that are not under the state-aid programs:

Kindergarten	55 pupils enrolled
1 through 6	33 pupils enrolled
7 and 8	30 pupils enrolled
9 through 12	Use the same standards used now except that enrollment rather than average daily attendance be used.

Special education to continue as provided in present regulations.

These enrollment ratios would be used to determine the *minimum* number of classrooms to be built by the district.

3. When the square footage entitlement has been determined for a school district, the same procedure for determining cost per square foot that is now in use would be used to determine the total amount of money to be granted to the school district.

4. The amount of money would be the controlling factor on the district and the district would be required to provide the number of classrooms called for under 2. If it were possible for the school district to build more classrooms or more special facilities or more square footage out of the total sum, it would be its privilege to do so. Such square footage, of course, would be counted against any entitlement for any subsequent request for aid.

5. It was not the intention of the committee that this law be retroactive as regards the number of square feet available to each district. Therefore, it is proposed that all justification documents count the square footage of all buildings in existence or under contract for construction as of July 1, 1957, in accordance with the present square footage regulations on unhoused pupils. After July 1 pupils would be counted on the new square footage basis.

III. The Basis for School District Participation in a State-aided Building Program

1. To be qualified for a state allocation the school district must be bonded to 5 percent of its assessed valuation.

2. Payments to State School Building Fund.

   a. School districts should pay to the State School Building Fund the sum of money raised by a 40 cent tax rate less the amount

of money necessary to repay school district bonds outstanding and less required payments to the state for school building loans secured under Chapters 1389 and 19. Payments by districts would continue for a 40-year period or until such time as the district had paid to the State an amount equal to the total allocation received under this chapter.

IV. The Administration of a Permanent State-aided Building Program

The committee is of the opinion that an additional agency is not necessary and that the administration of the program should be through a unit of the State Department of Education. As a compromise measure the committee felt that it might be acceptable to all parties concerned to set up a state school building commission with members appointed by the California State Board of Education. The school building commission would then be charged with the definition of the director's position and qualifications and with his selection in the same manner in which a board of education is responsible for choosing a school superintendent. The school building commission would be charged with the responsibility of determining policies and procedures under its selected director and his staff. The commission is also to act as a board of appeals.

The committee believes that it is important to have this agency under the State Board of Education at least if not under the State Department of Education.

The committee was in agreement with the composition of the school building commission which was suggested by Assemblyman Dahl, i.e., representatives from each of the following groups: public school superintendents, public school trustees, architects, building contractors, and building materials industry; Department of Education, Department of Finance, Division of Architecture of the Department of Public Works, one Senator, and one Assemblyman. The committee believes that each organization being represented (C. A. S. A., School Boards Association, A. I. A., etc.) should be required to name three nominees for the consideration of the State Board of Education.

It is the belief of the committee that a state school building program can be successfully administered within the general framework which has been outlined here. There are many technical problems which must be solved, but if there is agreement on the basic issues these problems will be readily surmounted.

We also believe that it is desirable and possible to provide adequate school housing for all the children of California regardless of the wealth of the districts within which they live.

APPENDIX III

HEARING OF THE ASSEMBLY COMMITTEE ON EDUCATION'S SUBCOMMITTEE ON SCHOOL DISTRICT TAX AND BONDED INDEBTEDNESS, CALIFORNIA STATE LEGISLATURE

Mr. Harris: Mr. Jaqueth has asked me to present this statement to the members of this committee. In considering methods of providing tax relief to school districts by liberalizing the repayment formula of the state school building aid programs, it is of equal importance to consider the broad fiscal implications such relief could have on the State's General Fund.

As you know, the state school building aid program is financed through the issuance of state general obligation bonds. To date 415 million dollars of bonds have been sold of the total 535 million dollars authorized by the electorate. The State General Fund is obligated to service the debt created by the issuance of school building aid bonds.

Repayments from school districts have been available for transfer to the State General Fund to apply to the debt service requirements of the state bonds. The amount of repayment from school districts through the 1956-57 Fiscal Year will have totaled $26,741,795, whereas the debt service requirements for the state bonds for the same period are $82,753,936. In other words, the State has assumed $56,012,141 of the debt service burden The following tabulation will illustrate the state school bond debt service requirement throughout 1957-58 Fiscal Year, repayment by school districts and debt service burden assumed by the State.

Assemblyman Hegland· It is important to point out here that the 56 million represents about seven years, so actually this in in effect a subsidy of only about 7 million a year, isn't it?

Mr. Harris: Accumulative total, yes, sir. The tabulation listed below would show the amount per year In 1950-51 Fiscal Year it is $1,700,084; 1951-52, $4,925,610; 1952-53, $8,282,106; 1953-54, $9,330,979; 1954-55, $10,508,842; 1955-56, $11,370,460; 1956-57, $9,894,060. And the debt service for the state bonds in the 1957-58 Fiscal Year will have gone to 22 million dollars from the bonds that have been sold to date There is a new bond issue being sold in January which, of course, will increase the burden.

Assemblyman Hegland: Before you turn that page, here in your second paragraph where you speak of 535 million dollars authorized by the electorate, does that amount include the bonds just voted in November?

Mr. Harris: No, sir.

Assemblyman Hegland: So in other words, there has been up until right now 635 million dollars authorized by the electorate?

Mr. Harris: Yes, sir.

Assemblyman Hegland: And of that only 415 million dollars have been sold?

Mr. Harris: That is right. None of the 1954 and 1956 authorizations of 200 million dollars have been sold as yet, but the sale of that will occur in January.

In 1952 the Legislature created the School Bond Retirement Fund and appropriated 50 million dollars to meet a part of the annual cost of redemption of the state school building bonds.

The Budget Act of 1954 transferred $27,369,821 from the School Bond Retirement Fund back to the General Fund to improve the cash position of the latter fund. Through the 1955-56 Fiscal Year, $4,560,140 of the School Bond Retirement Fund has been transferred to the General Fund in accordance with the prescribed formula to meet a part of the annual cost of school building bond debt service so that the balance available in the School Bond Retirement Fund on June 30, 1956, was $18,000,000.

As additional state bonds are issued the debt service burden will increase. It can be assumed that the sale of the balance of the bonds authorized at the 1954 and 1956 general elections of 200 million dollars will increase the debt service requirements by an average of 10 million dollars per year for 25 years.

In providing tax relief to school districts, the amount of relief granted would of necessity require the State to assume a greater share of the debt service burden for the State's bonded indebtedness by the amount of relief granted. The impact of an additional obligation against the State's General Fund could have an adverse effect on the State's tax structure to a point additional taxes may be required to help balance the budget.

A study of 1954 and 1955 tax rates for local bonded indebtedness and repayments of state loans for both elementary and high school purposes, of elementary school districts making repayment on state loans is shown in the following tabulation.

The tax rate less than 40 cents, in 1954-55 there were 22 districts representing 7 percent of the total. In 1955-56 there were 27, or 7.2 percent of the total.

From 40 to 49 cents there were 44 or 13.9 percent in 1954-55; and 63 districts or 16.7 percent in 1955-56.

From 50 to 59 cents there were 47 districts or 14.9 percent in 1954-55; and in 1955-56 there were 58 districts or 15.4 percent.

From 60 to 69 cents, in 1954-55 there were 59 districts or 18.7 percent; and in 1955-56 there were 58 districts or 15.4 percent.

From 70 to 79 cents, in 1954-55 there were 44 districts or 13.9 percent; and in 1955-56 there were 49 districts or 13 percent.

From 80 to 89 cents, in 1954-55 there were 34 districts or 10.8 percent; and in 1955-56 there were 45 districts or 12 percent.

From 90 to 99 cents, in 1954-55 there were 26 districts or 8.2 percent; and in 1955-56 there were 31 districts or 8.2 percent.

From $1 to $1.09, in 1955 there were 19 districts or 6 percent; and in 1955-56 there were 20 districts or 5.3 percent.

From $1.10 to $1.19 there were 12 districts or 3.8 percent; and in 1955-56 there were 12 districts or 3.1 percent.

From $1.20 and up there were nine districts are 2 8 percent; and in 1955-56 there were 14 districts or 3.7 percent.

I might comment on the picture that is illustrated here. The percentages seem to remain pretty much the same in the two years. There is some variation but it seems to follow a pattern.

Although, obviously, the repayment of a state loan causes higher school district tax rates, the methods of scheduling local bonds for redemption have also contributed to high school district tax rates. Referring to the tabulation of tax rates shown above, our analysis of the tax rates in excess of 90 cents indicates that the excessive amount of tax rate is not because of repayment of state loans but rather by high local debt service requirements caused by methods of scheduling bonds for redemption.

Local debt service tax rates can be controlled by using a method of amortizing the debt so that annual payments of principal and interest are equal, known as "level debt service." Using the level debt service method, an elementary school district could issue bonds maturing in 25 years so that the tax rate for local debt service should never exceed 30 cents as long as assessed valuation remains constant. As long as tax rates are an important consideration, the use of level debt service could be an important contribution to control the so-called pyramiding of school district tax rates.

Assemblyman Hegland: You mean under a great many conditions but even using level debt service, it is possible—you don't mean to imply that the bill for local bond redemption purposes would not exceed 30 cents under all conditions?

Mr. Harris: For each grade level if the bonds were scheduled so that you achieved a level debt service. Unfortunately the bonds that are—for instance, if a district bonds themselves to capacity, and schedule their bonds in 25 years, but in equal annual payments of principal—the first year they are paying all of the interest on the total debt and on the last year only the interest on that principal that is being redeemed at that time, so actually the tax rate would vary somewhere about 35 cents in the first years to a low of 20 cents or approximately thereabouts in the last year. Now, the level debt service would be to set it up so that each year throughout the 25 years the annual payments would be approximately the same, somewhat like a person buying a home on a mortgage. They pay a monthly rent on that and that covers both principal and interest.

Assemblyman Kilpatrick: Same principal as the easy payments on automobiles.

Mr. Harris: I have here a schedule of particularly high school districts in Sacramento County which illustrates the problem that they have. In the 1956-57 Fiscal Year they are retiring $64,000 in principal and interest, but in 1980 81 they are only—their debt is only $10,300. In other words, they drop down and actually as your debt ages your assessed valuation curves up so actually you have a broader base upon which to collect the last taxes.

APPENDIX IV

APROVED STATE AID FOR SCHOOL BUILDING CONSTRUCTION—BY COUNTY

Summary of State School Building Aid Allocation Under Division 3, Education Code as of June 30, 1956

County	Chapter 1 5 (Ch 1575, Stats. 1947) grant	Chapter 1 6 (Ch 1389, Stats 1949) loan	Chapter 19 (Ch 27, Stats 1952) (2nd Ex Sess) loan	Total	Ch. 1 6 total repayment	Ch. 19 total repayment	Repayment total Ch. 1 6 and Ch. 19 —51-52 to 55-56
Alameda	$1,518,358.26	$15,597,350 61	$28,587,366 03	$45,703,074 90	$600,517 34	$110,707.28	$711,224.62
Alpine	0 00	0 00	0 00	0 00	0 00	0 00	0 00
Amador	117,708.70	376,910 58		494,619.28	20,948 83		20,948 83
Butte	213,588 04	3,612,056 98	475,167 01	4,301,112 03	139,070.94	1,155.31	140,226 25
Calaveras	49,557 99	206,596 33		256,154 32	11,697.76		11,697 76
Colusa	28,192 14			28,192 14			
Contra Costa	1,093,175 15	9,648,943 54	11,108,269 50	21,850,388 19	669,873 54		669,873.54
Del Norte	117,171.53	202,826 61	2,522,800 88	2,842,799 02	5,381.58	1,827.58	7,209.16
El Dorado		252,865 93	563,767 13	816,633.06	13,886.08		13,886 08
Fresno	1,676,004 21	12,467,997 80	7,990,716 12	22,134,718 13	384,498.55	29,669 02	414,167.57
Glenn	0.00	0.00	0 00	0 00	0 00	0 00	0.00
Humboldt	430,915 49	5,888,792 01	4,365,586 07	10,685,293 57	150,942 85	1,632.85	152,575.70
Imperial	3,615,458 25	2,979,775 41	2,855,186 58	9,450,420.24	74,355 06		74,355 06
Inyo	114,532 84	131,896.93	178,481 52	424,911.29	3,291 09		3,291 09
Kern	1,097,541 59	2,074,238.54	3,972,385.72	7,144,165 85	108,770 68	8,927.86	117,698 54
Kings		3,973,046.57		3,973,046 57	137,875 80		137,875 80
Lake	0.00	0 00	0.00	0 00	0 00	0 00	0 00
Lassen	352,971.00	407,954 14		760,925.14	9,306.27		9,306.27
Los Angeles	8,607,329.64	72,312,460.57	81,258,317.43	162,178,107.64	4,639,906 55	38,260.97	4,678,167 52
Madera	775,090.82	2,673,927.21	538,894 24	3,987,912.27	85,253.18		85,253 18
Marin	665,015.61	4,110,368.67	4,799,928 69	9,575,312 97	462,823.14	8,076.94	470,900 08
Mariposa	0.00	0.00	0 00	0 00	0.00	0.00	0 00
Mendocino	99,435 68	1,652,605.72	1,561,003 33	3,313,044 73	143,728.01	4,582.49	148,310 50
Merced	1,555,774.99	2,004,173.73	1,128,056.74	4,688,005 46	102,817.05		102,817.05
Modoc	108,680.54	348,811.77		457,492.31	50,453.73		50,453 73
Mono	0 00	0.00	0 00	0.00	0 00	0 00	0.00
Monterey	1,952,932.14	609,546.35	749,285.75	3,311,764 54	46,145.34	4,697.90	50,843 24
Napa	9,240.14	132,492.17	459,160 92	600,893.23	29,732 90		29,732.90
Nevada	0 00	0 00	0 00	0.00	0 00	0.00	0 00
Orange	1,361,319 56	2,384,430 31	23,052,959.46	26,798,709.33	193,030.15	62,942.00	255,972.15

APPENDIX IV—Continued

APROVED STATE AID FOR SCHOOL BUILDING CONSTRUCTION—BY COUNTY

Summary of State School Building Aid Allocation Under Division 3, Education Code as of June 30, 1956

County	Chapter 1 5 (Ch. 1575, Stats. 1947) grant	Chapter 1.6 (Ch 1389, Stats. 1949) loan	Chapter 19 (Ch 27, Stats. 1952) (2nd Ex. Sess.) loan	Total	Ch. 1 6 total repayment	Ch. 19 total repayment	Repayment total Ch. 1.6 and Ch. 19 —51-52 to 55-56
Placer	245,397 94	1,121,961 03	470,053.95	1,837,412.92	100,813 98	3,453.06	104,267 04
Plumas	242,818.53			242,818.53			
Riverside	1,950,084 55	1,977,147.31	1,699,130.99	5,626,362 85	166,570 81	2,136 36	168,707.17
Sacramento	2,693,217 28	15,154,034.23	16,905,561 45	34,752,812 96	955,934.11	4,103.31	960,037.42
San Benito	0 00	0 00	0 00	0 00	0 00	0 00	0.00
San Bernardino	2,061,797.73	7,345,225 01	6,135,566 28	15,542,589 02	560,162.52	32,456.18	592,618 70
San Diego	3,544,659 66	17,667,937.41	1,004,363 47	22,216,960 54	2,211,247.18		2,211,247.18
San Francisco	0 00	0.00	0 00	0 00	0 00	0 00	0 00
San Joaquin	115,849.44	2,801,656 69	2,183,773 29	5,101,279.42	169,749 95		169,749.95
San Luis Obispo	137,344.77	2,234,238 73	1,195,291 43	3,566,874.93	117,091.63	620 97	117,712 60
San Mateo	596,378.85	14,010,046.93	4,256,414 76	18,862,840 54	2,664,517 76		2,664,517 76
Santa Barbara	0 00	0 00	0 00	0 00	0 00	0 00	0 00
Santa Clara	1,131,192 23	7,569,197.83	16,663,990 55	25,364,380 61	701,189.09	25,258 78	726,747.87
Santa Cruz	745,337 69	995,352.42		1,740,690 11	193,135 02		193,135 02
Shasta	723,504 00	1,837,328 12	1,931,152 02	4,491,984.44	101,713 49	171.42	101,884 91
Sierra	170,776.90			170,776 90			
Siskiyou	206,598.77	133,258 18	1,360,701 79	1,700,558 74	1,187 01	1,970 10	3,157 11
Solano	414,471 24	1,244,066 25	1,510,185 39	3,168,722 88	205,450 67		205,450.67
Sonoma	535,978 50	1,768,795 54	2,659,116 00	4,963,890 04	142,634 28	6 017.20	148,651 48
Stanislaus	3,861,231 20	1,619,663 78	1,088,199 88	6,569,394 95	64,050 25	872.16	64,922 41
Sutter	0 00	0 00	0 00	0.00	0 00	0 00	0 00
Tehama	45,971 59	368,302 19	227,350 14	641,623.92	2,269 10	144 33	2,413 43
Trinity	151,575.85	418,236 30		569,812 15	17,057 33		17,057 33
Tulare	5,924,316 18	7,171,282 63	1,923,005 90	15,018,604 71	233,444 28	3,606 65	237,050 93
Tuolumne	65,948 05		268,666 75	334,614 80			
Ventura	480,171 93	1,848,423 90	1,470,460 75	3,799,056 58	207,316.88		207,316 88
Yolo	105,559 36	799,280 66	2,002,017 04	2,906,857.06	76,417.33	12,461.75	88,879 08
Yuba	173,275.18	814,784 81	500,680 36	1,788,740 35	16,509 56		16,509.56
Totals	$52,183,452.12	$232,950,318.73	$241,623,615 31	$526,757,386 16	$16,993,068 65	$365,752.47	$17,358,821.12

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1955-1957
VOLUME 10 NUMBER 9

ASSEMBLY INTERIM COMMITTEE ON EDUCATION

REPORT OF SUBCOMMITTEE ON LIBRARY PROBLEMS

March, 1957

MEMBERS OF THE SUBCOMMITTEE

ERNEST R. GEDDES, *Chairman*
CARLOS BEE
DOROTHY DONAHOE
JOHN McFALL
JOSEPH SHELL
JESSE UNRUH

BLANCHE V. HANSEN, *Legislative Secretary*

Published by the
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OF THE STATE OF CALIFORNIA

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LETTER OF TRANSMITTAL

ASSEMBLY CHAMBER, STATE CAPITOL
SACRAMENTO, CALIFORNIA, March 8, 1957

HON. L H. LINCOLN
Speaker of the Assembly; and
MEMBERS OF THE ASSEMBLY
Assembly Chamber, Sacramento, California

GENTLEMEN: Pursuant to House Resolution No. 264, adopted June 8, 1955, the Assembly Interim Committee on Education herewith submits its final report of California Library Problems.

Respectfully submitted,

DONALD D. DOYLE

SUBCOMMITTEE LETTER OF TRANSMITTAL

ASSEMBLY CHAMBER, STATE CAPITOL
SACRAMENTO, CALIFORNIA, March 8, 1957

HON. DONALD D. DOYLE
Chairman, Assembly Interim
Committee on Education
Assembly Chamber, Sacramento, California

Dear Mr. Doyle.

Pursuant to the directive of House Resolution No. 264, adopted June 8, 1955, your Subcommittee on California Library Problems has held hearings and transmits its final report.

On March 27, 1956, the Subcommittee on Library Problems in California of the Assembly Interim Committee on Education rendered a Progress Report containing valuable and pertinent data relating to part of the study which our predecessor committee had recommended to be made.

We requested at that time, that the funds allocated to the Assembly Interim Committee on Education be augmented in amount sufficient to continue our studies.

The present and final report brings our assigned task to an end, and we are confident that the legislation proposed will solve some of the problems of our public libraries and lead to a well financed and well directed study by a commission. This will allow greater participation by those well qualified in the field of library service, as well as interested citizens and members of the Legislature.

We must recognize the fact that busy librarians and library trustees gave freely of their time to assist us, and our thanks are to them and to the Office of the Legislative Counsel for assistance in research of Library Law and drafting of the proposed legislation.

Respectfully submitted,

ERNEST R. GEDDES, Chairman
CARLOS BEE
DOROTHY DONAHOE
JOSEPH SHELL
JESSE UNRUH

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SCOPE OF REPORT

House Resolution No 264 of the 1955 Regular Session of the California Legislature charged the Interim Committee on Education with responsibility of investigating problems of public libraries in the State of California. The subcommittee assigned to study this subject held a number of hearings with those persons most interested in this problem, which is vital to our educational system and the culture of California.

The report does not introduce much new material since the bulk of statistical matter, pertaining to public libraries, has been presented in those reports made previously by this committee, but it brings to a head the studies which may be said to have been a continuance of those first begun in 1953, when legislation provided for a library survey to be conducted by the State Library, and financed from the General Fund. It has also been twice requested as a budget measure, which with the separate legislation, was defeated on each occasion.

Brief mention is made herein of the subject matter of proposed legislation which will solve some of the most evident problems relating to public libraries in California. None of the arguments in support thereof is included in the report since the bills which have been introduced should be, in our opinion, noncontroversial.

It is anticipated that the Study Commission proposed to take over the uncompleted task originally assigned to this committee will complete the analysis and comparison of the hodge-podge of local laws and ordinances which govern county and municipal public libraries. Mr. Austin N. Barber, Deputy Legislative Counsel, endeavored to make a compilation of these ordinances, but the tabulation is not yet complete. This is not through lack of diligence on his part or follow-up by the chairman of the committee. Actually, in many cases this is simply because the local ordinance providing for the establishing, management and financing of the library was adopted many years ago and has not since been amended, and the copy requested has to be dug up from the archives. It appears evident that this shows why the public library is, too often, the "stepchild" of home rule institutions. The incomplete tabulation already prepared, is not included herein but will be assigned to those succeeding this committee.

Included in our reports however, is a brief summary of other library law in general, prepared for us by Mr. Barber.

The balance of this report consists of excerpts of testimony by those interested in a solution leading to the betterment of our public libraries, and endorsing the proposal that a Library Study Commission be created to make an intensive study in the field originally assigned to us. We are pleased to include for the record that portion of Governor Goodwin J. Knight's message to the 1957 California Legislature recommending such a study.

SUMMARY OF SPECIFIC LEGISLATION PROPOSED

1. Legislation to specify the inclusion of library services and buildings in.
   a Community Services District Act (Gov. Code 61600);
   b. County Service Areas Law (Gov. Code 25210);
   c. Section 25351 of the Government Code, relating to construction and repair of public buildings by county boards of supervisors.
2. Amendment of Education Code Section 22131 to remove disability imposed by specification of four-year term, whereby many county librarians as "county officers" (Gov. Code 24000) may not have their salaries increased during their term of office (California Constitution Art. XI, Sec. 5).
3. Addition of Section 22110.5 to Education Code to permit two or more county libraries to be administered by a single qualified librarian.
4. Addition of Section 22139 to Education Code to require that acting county librarians must qualify for a certificate from the Board of Library Examiners; or if no qualified person can be found, the county supervisors must secure written permission from the Board of Library Examiners to appoint an unqualified person for a period not exceeding one year, such permission to be renewable at the discretion of the board.
5. Addition of Sections 22024 and 22025 to the Education Code to provide:
   a Permission for the Department of Education to contract with counties, cities, districts, and state and federal agencies to provide library services;
   b. Permission for the establishment and operation of library service centers;
   c The deposit of funds received under the Library Services Act and their appropriation for use by the Department of Education, Division of Libraries.
6. Elimination of Section 11561(d) of the Government Code, which sets the salary of the State Librarian, and amendment of Section 22003 of the Education Code to assure more frequent and uniform review, and to place responsibility for salary determination upon the Superintendent of Public Instruction with the approval of the Director of Finance, pursuant to Section 145 of the Education Code and Section 18004 of the Government Code.
7. Technical amendments to the Education Code designed to bring laws governing the State Library into conformity with changes in the State's fiscal administration, and with long-established administrative practice:

a Substitution of "General Fund" for "Library Fund" and "State Library Fund";
b. Explicit authorization for the State Library's long-existent and major services to other libraries in California.

8. Amendments to the Education Code and the Business and Professions Code to bring into agreement the various requirements in state law that libraries submit annual reports to the State Library.
9. Establishment in the Department of Education of the Office of School Library Consultant.
10. Creation of a commission to be appointed by the Governor to study library problems in California.

MESSAGE OF THE GOVERNOR†

LIBRARY SERVICE

Our splendid public libraries constitute what is probably our most valuable single asset for the continuing and expanding educational needs of our people. Both as a substitute for and a supplement to formal education, these institutions are of tremendous lifetime benefit to those Californians who are able to take advantage of their services.

However, their availability is, according to reliable authority, somewhat restricted and many communities of our State suffer from an inadequacy or total absence of such facilities.

I believe that this is an important and frequently overlooked area for public consideration and discussion. I commend the members of the Legislature who have expressed their deep interest in the subject and I feel that their activities in this direction certainly merit your attention.

RESOLUTION

Proposed by the CLA Legislative and Library Development and Standards Committees at their joint meeting on October 31, 1956*

Adopted by unanimous vote at the Fourth General Session of the CLA San Diego Conference on November 2, 1956

WHEREAS, The California Library Association in conference at Pasadena in 1952 and again at Long Beach in 1954 adopted resolutions expressing the great need for a state-wide survey of public library service in California; and

WHEREAS, Legislation proposed and supported by the California Library Association to accomplish this purpose through a survey by the State Library has twice failed of passage in the State Legislature; and

WHEREAS, The Assembly Education Committee's Subcommittee to Study Library Problems has stressed in two reports the need for detailed further study; and

WHEREAS, The subcommittee has provided an opportunity for the presentation of desirable library legislation at a public hearing scheduled for November 29th and 30th at Sacramento; therefore, be it

Resolved, That the California Library Association in convention assembled at San Diego on November 2, 1956, reiterate its position that the public interest of all the people of California will be served by a comprehensive inquiry into the present condition of library service in this State; and be it further

Resolved, That the California Library Association in convention assembled at San Diego on November 2, 1956, recommend to the Assembly Education Committee's Subcommittee to Study Library Problems that the subcommittee request the Governor of California to appoint a properly constituted body to make the necessary study.

† Message to the California Legislature by Goodwin J. Knight, Governor, page 72, Assembly Journal, January 7, 1957

* California Library Association

EXCERPTS FROM TESTIMONY

Excerpts of testimony presented before the Subcommittee on Library Problems on November 29 and 30, 1956, on which dates the committee held a public hearing at Sacramento to hear testimony from librarians, library trustees, California Library Association and others to ascertain its shortcomings and its legislative needs. These excerpts are presented rather than a complete transcript of the testimony since incorporated re the investigations from the various opinions of legislation which have been introduced in this session bearing on the problems which should be solved at this time.

Harold L. Hamill, City Librarian, Los Angeles Public Library, and Chairman of C. L. A. Library Development and Standards Committee:

* * * Today we bring to your attention the severe problems which confront the public libraries of many of our cities and counties, both large and small. First, I want to point out that within our State are some of the finest public libraries in the world. * * * Although many of these libraries have their troubles, and all must go through a rigorous yearly struggle for adequate budgets to improve their services and to keep up with rapidly growing communities, we are not today primarily addressing our attention to their problems.

We *are* very much troubled by the low standard of library service and coverage which prevails throughout a large part of our State in small towns, unincorporated areas, and the less prosperous and smaller counties. The laws under which the public libraries in most of these areas have been established were passed almost 50 years ago. Library revenue structures set up in these laws placed a very heavy reliance, in fact, a sole reliance in many cases, on real estate levies, a tax principle popular at that time. Meanwhile a revolutionary shift in the tax base for most governmental purposes has taken place, but the laws and revenue sources of libraries have remained static. * * *

The public library situation today is very similar to the public school situation in California several years ago, before the State made an intensive study of the problem and committed itself to a policy of aiding the smaller schools when local tax resources could not achieve minimum standards. * * *

Only recently the members of the California Library Association produced, after intensive and careful work, a set of public library service standards. * * * These standards establish a minimum below which library services should not fall. They also envision a strengthening and extension of library service to the citizens of California through cooperation and federation among existing libraries. Let me make clear that they do not contemplate the wiping out of the smaller libraries of the State and the creation of new superlibraries. On the contrary, may I quote: "Participation in systems of libraries does not eliminate local control of library service. It does provide, however, for maximum and

economical pooling of materials, professional personnel, and technical services."

Those librarians in our association who have been closely watching the progress of libraries in various parts of the State are convinced by general observation, as well as by examination of statistics and published reports, that many of our libraries are far below an acceptable minimum standard of performance. * * *

We * * * urge the appointment by the Governor of a commission consisting of legislators, lay citizens, and trustees, as well as librarians, to be charged with the responsibility of making a comprehensive investigation into the condition of public library service now available to the people of California. There is nothing original in this concept, since it has already been carried out in other progressive states. We commend to your special attention the example set by New Jersey, where such a commission, appointed by Governor Meyner in 1954, has produced a report on the existing status of library service, specific recommendations for improvement, and a master plan for development and adequate financing of library service throughout the state. * * *

Dr. Henry Madden, Fresno State College Librarian, and C. L. A. President-Elect:

* * * The members of the California Library Association, as citizens, are aware of the need for library service which is both adequate and economical. The financial demands for library support are not so great as those of the public schools, but still they should be met on the same intelligent basis by the establishment of minimum standards. These standards can come into being only after facts are adduced from a survey of the legal position of the public libraries, their support by taxation, and of inequities in the basis of support. That there is still no public library service in many regions in California is a matter of concern to librarians as citizens; yet it is just as much a concern to them that there are inefficient overlapping operations, library units too small to operate effectively, operations carried on with only partial knowledge of how they could be done more economically if they were done cooperatively. This unawareness of means for improvement stem largely from inadequate state legislation, from inability to act because the State has not created a comprehensible framework of library legislation. As the segment of the citizenry most aware of these problems, the members of the California Library Association believe that the first step in their rectification is a survey by a disinterested body of legislators, laymen and librarians under the direction of the Legislature. A survey will primarily enable the Legislature to bring order into a situation which is now largely the unexpected result of unplanned growth and patchwork efforts. No undertaking as important as the public library should be carried on without the benefit of information which only a general survey of library service in the State can produce. * * *

* * It must not be forgotten that public libraries are supported because they are educational institutions. Can the librarian, as educator, fail to observe that the State assumes responsibility for surveying the school needs of the State, that the State sets school standards, and that the State attempts to equalize school opportunities? The libraries serve the important purpose of educating both young and old, but

they lack entirely the advantages which accrue to the schools through recognition of the State's duty of surveying. If standards are established, it is evident that the libraries can take their proper place in the state pattern of education. * * *

* * * The California Library Association welcomes this opportunity to speak in behalf of a measure which will put the State in its deserved position of leadership. The members of the association will do all in their power to assist the Legislature in this survey.

As we measure ourselves we learn our capacity, and knowing this, we can do to our capacity.

John D. Henderson, Los Angeles County Librarian, and C. L. A. Past President:

* * * It seems to me that all of the library service problems confronting the State are to be found in the County of Los Angeles. I refer to matters of policy, overlapping jurisdictions, standards of support, service, buildings, and personnel. * * *

Even though the Constitution does not specifically mention public libraries, California has been in a position of leadership in developing public library service, particularly county libraries. The adoption of the California County Free Library Law of 1911, the field work promoting the establishing of county and city libraries directed by the State Library, plus the direct service to the local city and county libraries are evidence of the State's interest in public library service. The lending of books, documents, and other material to libraries in the State, the maintenance of the Union Catalog of Library Holdings in order to facilitate library interloans, plus the advisory service to librarians by the State Librarian and her staff are further evidence of the State's interest in public library service. * * *

The rapid growth of the State, with uneven library service, many jurisdictions supporting their public libraries far below standard, with expanding cities and numerous fringe area problems, residents of the counties depending on cities as shopping centers but unable to use the city libraries, have posed serious problems to the administrators of this public service. County libraries do not have the resources to provide a municipal type service throughout their areas; they are not equipped to establish branches for the benefit of fringe area residents, and most county libraries receive a more limited per capita support than do the city libraries. * * *

Second only to the educational responsibility of the State through the Department of Education and the support of public schools is the responsibility of the State for the continued education of its citizens who have passed school age. Library service augments and assists the school program in the education of our children and youth. The public library provides for most citizens their only educational facility following graduation from school or college.

Outstanding programs of library development have been carried on in Louisiana, New York State, Missouri, Michigan, and New Jersey, as well as in other states. It behooves us to study the achievements of these states in terms of prevailing problems and possibilities in California. The problems that we are encountering have been coped with

in the other states and we would gain by studying their approach and the achievements they have made.

* * * Day to day experience in public library service is proving that the present city and county library systems are no longer adequate to meet the demands of our growing and shifting population, all of which is aggravated by the rapid industrialization in new areas The problems confronting us require immediate analysis and study, with recommendations as to plan of action. Library service in the State has not kept apace with the vast increase in population; the new conditions require realignment of facilities and organization. What this should be can only be determined after thorough and detailed study.

The State guarantees a minimum education to its children and youth through compulsory school attendance, certification of teachers, and state funds contributing to the support of school districts.

The State's educational responsibilities are carried in part by the local public library, which serves citizens of all ages; its support and program, however, are too often limited by local conditions. The problems confronting us indicate that the old pattern served well in its time, but it is now outmoded.

In view of jurisdictional questions, matters of policy, support, overhead costs, and the basic standards that the profession has adopted for minimum public library service, it is imperative that a comprehensive survey be made. This should cover all the conditions and facts of library operation, including a review of library legislation, with recommendations that will point the way to a more complete, a more equalized and efficient public library service throughout the State.

Dr. Percival A. Gray, Jr., President, Santa Barbara Board of Library Trustees, and President of C. L. A. Trustees Section:

* * * I address you today, Mr. Chairman, not in a professional capacity but as a layman interested in helping my fellow citizens obtain good library service regardless of where in the State they may reside

There can be little argument over the proposition that free public education is essential to a democracy. To thrive, its citizens must be alert, informed, and free. They must have the facilities necessary for educational and cultural development. The public library helps to satisfy these needs at all ages.

As a layman in the library world, I have read widely and have had an opportunity of observing closely some of the problems which confront our libraries in their struggle to furnish good library service to their respective communities. And struggle it often is, because even when some communities tax themselves to their legal and practical limits they are still unable to provide sufficient financial support to their local libraries. As a result, the available number of books, magazines and other library materials, the physical facilities and the personnel do not meet the minimum standards agreed upon by professional librarians for most communities The extent to which this situation prevails throughout the State should be investigated by an adequate survey. In order to realize the promise of democracy, it may be necessary for the State of California to assist some of its smaller libraries Others will tell you about the financial plight of some of our libraries.

Librarians are dedicated, self-effacing people who are daily providing a basic and necessary service to their communities. They desire your consideration. * * *

When all the facts are known, direct grants-in-aid may be necessary to strengthen library service in some areas; in others, an integration of smaller units into larger ones may suffice. Here, through cooperation, an increased efficiency of operation, the pooling of book stocks, discounts on large purchases, and interchange of personnel might effect real savings. In some cases enabling legislation would have to be passed so that different boards of trustees could negotiate by contractual arrangement across political boundaries. Local autonomy in library matters would continue to be maintained. * * *

Now, Mr. Chairman, I urge the honorable members of this subcommittee to act favorably upon the resolution of the California Library Association which lies before you, to request the Governor of California to appoint a broadly based body including legislators, librarians, library trustees and lay persons to make the necessary study and I urge you to appropriate the sum of $50,000 for this purpose. * * *

Percy Heckendof, Member, Santa Barbara Board of Library Trustees, and Vice President-Elect of C. L. A. Trustees Section:

* * * Free public libraries * * * are the only public educational agencies serving *all the people throughout their lives.* They are dedicated to keeping *all the people* well informed and helping them to solve their daily personal and civic problems.

Thus, they are actually and essentially an integral and important segment of the 360 degrees of the circle of public education.

The first two segments of our free educational system—the schools and colleges—as the keystone of the democratic way of life, have long been accepted as a responsibility of the State, and have received considerable state support including financial aid. * * *

The free public libraries, as the third and vital segment of our whole plan for public education, likewise deserves active state support and financial assistance. Thus far the State has not accepted this aspect of its public educational system. No logical reason can be advanced for further failure to accept this responsibility which rests upon the shoulders of the Legislature. * * *

Although adequate library standards have been *established* by the California Library Association, practical *application* of these standards in the field of library service has not been satisfactory. This defect has resulted from the fact that enforcement of the standards has of necessity rested upon a voluntary basis, since there has been no legal basis or legislative authority upon which compulsory compliance with minimum standards could be predicted. This inadequate foundation upon which the present program of standards enforcements rests has resulted in a serious situation in which the citizens of many areas of the State are not receiving adequate library services. * * *

The present condition of library service throughout the State demands that a comprehensive survey of the situation be made by an agency established by and with state authority.

The State of New Jersey faced a situation very similar to that now facing this State so far as the condition of library service is concerned,

and solved the problem by establishing a commission to study library services and make recommendations for improvement of the service. An excellent and comprehensive report with recommendations was made in January, 1956, and has resulted in greatly improved library service throughout the State.

Such a survey in this State could be made by: (a) a commission appointed by the Governor with an adequate staff, or (b) a broad based commission appointed by the Governor. It should consist of representatives of the Senate and Assembly, professional librarians, library trustees and others representing the geographical areas of the State and the State Librarian, or (c) following the New Jersey plan whereby the Senate appoints three members, the Assembly three members, and the Governor five members at large.

The factual results of such a survey together with the recommendations of the study group would constitute a solid foundation upon which to base prospective legislation which would assure the citizens of this State that they will always have adequate standards of public library service. * * *

Edwin Castagna, City Librarian, Long Beach Public Library, and C. L.A. Past President:

* * * I would like to tell you what our public libraries do that makes them educational agencies and why I believe the State must do more for public libraries. * * *

The public library is a community educational, reference and information center. It probably serves a broader segment of the population than any other agency. It is used by all age groups and by citizens with all shades of political, economic, religious and social ideas. The public library supplies vital reference service for business, government and private individuals. It enables all to continue lifelong learning. It assists citizens in solving personal problems. It aids people in the enrichment of their lives. It offers material which contributes to better citizenship. The public library then is one of constructive, cohesive forces in our State. It is educational in the truest sense. * * *

It is an unfavorable reflection on California that so many of the public libraries of this rich State are so far below minimum standards in financial support, salaries of librarians, collections of books and other material for public use and in physical plant. * * *

While the public schools of this State have benefited in hundreds of millions of dollars or even in billions through state grants, California's public libraries have been dependent entirely on local support which no longer adequately maintains them. Local support should always be the main support of libraries. And local autonomy should be preserved. No small libraries should be forced out of existence by any new state program for libraries. But we must not fail in the State's responsibility. * * *

These are only a few of the painful facts about our public libraries. I respectfully urge this subcommittee to bring about a careful and comprehensive study of the public libraries of California to reveal all the facts. This should lead to improved public library service for the citizens of our State. Failure to do this is very likely to lead to deterioration of public library service at a time when it should be making

great progress to keep up with the needs of the State. At a time when California is making such magnificent progress, when the State is pouring out ever-increasing support to our public schools, I believe the time for attention to public library needs can no longer be delayed without serious results.

Margaret Klausner, *Director of Library Service, Public Library, Stockton and San Joaquin County, and C.L.A. Past President:*

* * * My interest in appearing here today arises from firm knowledge that public library service in California is generally poor and during the past 30 years has been declining This is not to say that there are not some fine libraries in this State but general complacence, apathy, and now the tremendous pressures brought on by exploding population rates of growth and patterns of growth have left us inadequate. * * *

San Joaquin County is considered a rural county in California and the Nation. It is 20th in the United States in farm population and is listed as the fourth richest agricultural county in the United States. Yet over its 1,400 square miles of area, public library service is spotty, substandard and in many places nonexistent. * * *

Our total county population jumped from 50,000 in 1910 to 228,000 in 1956. In 1912 there were 19 community stations supplying library service in the county. By 1925 there were 31 such outlets. But during the thirties and forties there was a breakdown of service so that today we have only 10 such outlets plus five rural-urban branch centers.

The implication of this proven experience in our county is of some significance to the State. We say that in California there are some 72,000 people without local library service and we mean mostly those people living in such places as Lake, Alpine, Nevada and other counties without libraries. I would challenge that statement.

There are thousands of people in our cities and counties without local library service. Those of us who work closely to situations in our own areas know that California has rested too long on a reputation of a wonderful system of public library service which developed in the first two decades of this century and which has since become antiquated and inadequate. For example, in 1954-55 although 208 public libraries including 51 county libraries there were only 43 mobile or moving branch libraries in the State.

This situation should be of concern to the community and to the State. If continuing education of all of our citizens is considered important in our democracy we should be sure that the great, central source of knowledge which can support this need is kept alive and active. * * *

Once this State ranked among the foremost in the Nation in its per capita support of public library service. Today it ranks in 13th place.

We feel the need for an over-all review of the public library in California. We talk today of area planning and we know that such planning leads to better solutions of common problems. We know also that such planning needs sound analysis as a base. With our limited budgets and pressing problems we need area planning for libraries. * * *

Raymond Holt, City Librarian, Pomona Public Library, and Editor, *California Librarian:*

[The Pomona Public Library feels that its] * * * basic objective [is] to provide * * * books and other materials which relate to the needs of the citizen. As a result, this year more than 300,000 volumes will be circulated to our 35,000 patrons, and some 30,000 specific information or reference questions will be answered in the various departments of the library. More than 200,000 people will see films supplied by the library, and thousands more will listen to musical recordings or enjoy our art loan collection. * * *

Still we fall far short of the place which we should occupy in the community and find ourselves operating below minimum standards for public library service. Our book budget, for instance, will fall short again of meeting the minimum standard of purchasing 5,000 new titles At the same time, many people wait unduly for desirable books because we do not have funds with which to buy sufficient duplicate copies. We have no special youth collection or young people's department through which to contact and serve the young adults of our community This is a tragedy, for young minds are particularly susceptible to the information and vicarious experiences which come through reading. We cannot supply an adequate staff of professional librarians and our inadequate building makes impossible extension of library service to special groups such as our senior citizens * * *

Now, I would like to turn our attention to the problem of library service in the area which surrounds Pomona, for we are not an isolated community. As our own library is surrounded by communities with even poorer library services, we are overwhelmed by nonresident borrowers who feel that because they are encouraged to use our shopping facilities, they should also be given free use of the public library To the 200 000 people who live within a radius of 10 miles of Pomona, city boundaries mean little, while residence in unincorporated county areas appears as a mere political accident. So critical has this outside demand on our services become that we have had to join other libraries in charging a nonresident fee, realizing at the same time that we are defeating our objective of providing equality of library services to all residents of the State.

There exist in this area six municipal libraries and seven branches of county library services The county branches have, in each instance, been tagged by their own patronage as inadequate for other than lightest use. Therefore, let us concentrate our attention on the municipal libraries. Here we find tremendous disparity of collections and ability to serve. For instance, the hours open to the public range from 40 to 74 weekly; financial resources vary from 9 cents per $100 of assessed valuation to 26 cents per $100, or from 95 cents to $3 30 per capita; the total income of one of the smaller libraries is less than the book budget of the largest. The staff numbers three in the smallest library and 26 in the largest. There is similar variance in every other item or comparison. Realizing these deficiences, librarians representing these communities have been meeting together for nearly a year in an attempt to discover areas of cooperation by which they can better serve their communities. Unfortunately, voluntary cooperation does not seem to

go deeply enough, for nearly every cooperative activity requires either more money, exchange of funds, or circumvention of local ordinances These are legal barriers also: Library Boards must sanction cooperative plans, and since these necessarily involve finances, such arrangements must be submitted to the city councils in many cases. Harassed by the growing needs of all the other city departments and confused by the usual interpretation that cooperative measures are really disguised attempts to extend library service beyond that which is absolutely necessary, city councils discourage interlibrary cooperation. * * * I ask, "How far would school district consolidation have gotten had schools been under the same legal and financial restrictions?" * * *

* * * I strongly recommend that this committee take such action as may be necessary to establish a study commission charged with studying the resources, the problems, and the inequities of library service in California, and formulating a program to assist librarians of this State to systematically achieve adequate standards of library service. Certainly, the libraries may need financial incentives and assistance, and a new pattern of organization may have to be tested in such areas as the study commission might recommend. Libraries of this State must have your assistance in providing a library service program which will ultimately mean a stronger and better citizenry.

Esther Mardon, Shasta County Librarian and former chairman, C. L. A. Library Development Committee:

* * * I believe I can safely say that in the mountain and the valley areas of which I speak not one library is now meeting the California standards for minimum library service In fact, as they are now organized and supported, few, if any of them could meet standards. To do so would require such a high expenditure of money per capita as to be impractical if not actually impossible with the present populations and assessed valuations in the area. * * *

* * * We are considering an area comprising between one-third and one-half the area of the State, but with less than 500,000 of the State's better than 13 million population. There are some 30 independent county and municipal libraries in the area, each with its separate budget, staff and book collection and not one with adequate support to enable it to meet minimum standards of service. * * *

Many of the county libraries in this area have been in existence for more than 30 years, having been established during the early days of county library organizing. Some of the municipal libraries were established even earlier. Because of poor transportation and communication facilities probably all were justified at the time of their establishment. But today it seems of questionable value to have five separately organized and supported county library systems operating in an area smaller than that served by the one county library systems operating in an area smaller than that served by the one county library of San Bernardino. * * *

* * * The good library, today, must provide from its own or other readily available sources, materials that will enable its patrons to keep informed in a wide variety of constantly growing fields of knowledge. These materials can no longer be restricted to books. Films and recordings are only two of the materials in addition to books that should be

available. None of the libraries in this area can buy all of the good titles published each year, nor can they secure them readily from other libraries. Only two libraries in this whole area provide recordings for their patrons, and three, through membership in a film circuit offer educational films.

Skilled guidance in the use of materials that will meet the patron's needs are also essential to good library service. Yet in many of these libraries there is only one trained person trying to do the job of administrator, book selection expert, reader's assistant, reference librarian, children's librarian and cataloger. In some county libraries it has been years since the salary offered has made it possible to employ a trained librarian. In all the area north of Sacramento there is only one librarian specializing in work with children. * * *

But more and more, librarians and interested citizens in this area are becoming aware of what good library service should be Television and radio are opening up whole new fields of knowledge and people are turning to their libraries for assistance in pursuing their aroused interests. The time is right for a careful and understanding study of library needs in this area and for constructive, workable suggestions for changing our rural libraries into dynamic contributors to society.

Laws will have to be changed to encourage rather than hinder adoption of new methods. Inducement in the form of financial assistance from the State as well as the federal level may be needed to break down resistance to taking a chance on something new. But it is important to the very life of a basic democratic institution that this be done.

Thelma Reid, Chief Librarian, San Diego City Schools, and C. L. A. President:

* * * For 50 years, librarians, leaders in the California Library Association, the California State Library and friends of libraries at the state and local level have worked to further public library development in this State. However, library service in California is still extremely uneven in quality. From Crescent City to El Centro this State displays a wide variety of library facilities illustrating service comparable to both the best and the worst in the United States. Unfortunately the not-so-good category has a wider range that that of adequate-plus service, and consistently superior library service is less frequently demonstrated than any other. Even in communities where the public library may be recognized as an essential center of continuous education which provides opportunity for all people to become better informed citizens and live a richer personal life, the growth of population and increasing costs hampered by local jurisdictional boundaries and complicated legal restrictions have frequently blocked required expansion of existing facilities to meet additional demands. In other areas where total lack of local library service or general inadequate facilities have made communities unaware of the advantage of a really good library, public library advocates have been repeatedly unable to secure sufficient support to establish or develop effective book and reference services. * * *

It appears likely that any real progress toward meeting state-wide public library needs will depend upon all or some of the following factors:

1. Legislation to clearly establish the presently implied responsibility of the State to stimulate and encourage local public library service as a part of its educational responsibility.

2. Provision of tangible financial incentive to local jurisdictions to meet public library service standards in their individual communities or to pool resources with other jurisdictions for combined services.

SUMMARY OF THE LEGAL STRUCTURE OF CALIFORNIA LIBRARIES

OFFICE OF LEGISLATIVE COUNSEL
SACRAMENTO, CALIFORNIA, October 31, 1956

SUMMARY OF THE LEGAL STRUCTURE OF CALIFORNIA LIBRARIES—#2180

In California, free public libraries may be organized pursuant to general law under the County Free Library Act (Ed. C. Secs 22101-22180), Municipal Library Act (Ed. C. Secs. 22201-22265), Library District Act of 1935 (Ed. C. Secs. 22601-22733), Unincorporated Towns Library Act (Ed. C. Secs. 22301-22434), and the Union High School District Library Act (Ed. C. Secs 22801-23102).

All libraries subject to general law are governed by a board of library trustees. The members of this board are appointed or elected under all the general laws, except the County Free Library Act where the board of supervisors of the county acts as the trustees, and the Union High School District Library Act where the high school trustees are also the trustees of the library.

All of these general law libraries are required to make an annual report either to the State Librarian or the Department of Education.

In all cases the trustees appoint and prescribe the duties of the librarian but only in the county act is the librarian specifically required to show qualifications as a librarian. It is to be noted also that a conflict in the general law exists as to the residence requirement of a county librarian. The Education Code states that the librarian does not have to be a county resident or a state citizen while the Government Code makes the librarian a county officer and requires a county officer to be a county elector.

All of the libraries formed pursuant to general law are financed by a special levy on property the receipts from which are deposited in a special fund to be used exclusively for library purposes. There is a limit on this special levy of from one mill per $1 assessed valuation to three mills per $1 in cities of the fourth, fifth and sixth class. It appears that no specific limit has been set in the Unincorporated Towns Library Act (see Ed. C. Secs 22345-22348). Although classes of cities have been abolished (Stats. 1955, Ch 694), no change has been made in the Education Code prescribing these tax limits according to class of city.

The reports from general law cities show a few cases of ordinances that appear to make changes in the law. (See City of Fullerton, San Juan, Vernon, and Signal Hill.)

As is to be expected, chartered counties and chartered cities, in adopting home rule, have made some changes that vary this general rule of management and control by a board of library trustees. Of the

10 chartered counties, three, Butte, Los Angeles, and Fresno, by charter adopt the general law as governing the operation of the library. The charters of Alameda, San Diego, and Tehama have provisions that embody the general law with few exceptions. County executive types of government are established in the counties of Sacramento, Santa Clara, and San Mateo. Here variances from the usual pattern of control and management occur with some apparently inconsistent provisions that may create problems.

In the charters of the chartered cities the library is often established by charter. The other most frequently used method is to grant the legislative body the power to establish a library. In many cities, where the library was possibly in existence at the time the city was chartered, there are no special provisions relating to establishment of the library.

In most of the chartered cities the general law plan for government of the library is followed. That is government by a board of library trustees with a librarian as department or administrative head of the library, and the powers and duties of the trustees and librarian substantially the same as those provided by general law.

It is in the cities with managerial forms of government that the operation of the library as an independent somewhat autonomous unit has been curtailed in varying degrees. Here the library board of trustees frequently becomes an advisory committee only, with more or less authority in the management of the library. Here, also, many of the charters have not clearly delineated the areas of the authority of the city manager, the librarian, and the board of trustees.

These conclusions are based on the literal interpretation of the statutes, charters, and ordinances. No attempt has been made to evaluate the practical application of the law in local government.

RALPH N KLEPS
Legislative Counsel
By AUSTIN N. BARBER
Deputy

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REPORT OF THE SUBCOMMITTEE ON APPORTIONMENT OF SCHOOL FUNDS

MEMBERS OF COMMITTEE

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DOROTHY M. DONAHOE
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March, 1957

Published by the
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OF THE STATE OF CALIFORNIA

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LETTER OF TRANSMITTAL

January, 1957

HON. L. H. LINCOLN
Speaker of the Assembly
Honorable Members of the Assembly
State Capitol, Sacramento, California

GENTLEMEN: Pursuant to House Resolutions Nos. 223, 224, and 241, of the 1955 General Session, the Honorable Donald D. Doyle, Chairman of the Assembly Interim Committee on Education, appointed the following persons as a Subcommittee on Apportionment of School Funds.

Your subcommittee presents herewith its report on:

(1) Assembly Bill No. 1276 which proposed that the State School Fund shall consist of an amount not less than $180 per pupil in average daily attendance during the current fiscal year rather than during the preceding fiscal year;

(2) Assembly Bill No. 3072 of the 1955 Regular Session which proposed a redefinition of Average Daily Attendance as Average Enrollment; and

(3) Assembly Bill No. 857 which proposed extensive changes in the provisions of the Education Code relating to the effect of organization and boundary changes upon the liability of territory to be taxed to pay school bond debt.

It is the hope of the subcommittee that the summary of existing legislation, the factual data presented, the viewpoints of witnesses expressed at the hearings and our recommendations will serve as a basis for corrective action by the Legislature at the 1957 Regular Session.

Respectfully submitted,

BRUCE F. ALLEN
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DOROTHY M. DONAHOE
EDWARD ELLIOTT
ERNEST R. GEDDES
CARLEY V. PORTER, Chairman
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MINORITY REPORT

The last paragraph of the letter of transmittal to the Speaker, as follows:

> "It is the hope of the subcommittee that the summary of existing legislation, the factual data presented, the viewpoints of witnesses expressed at the hearings and our recommendations will serve as a basis for corrective action by the Legislature at the 1957 Regular Session."

prompted me to submit this minority report.

Assembly Bill No. 3045, relating to the Public School System, which changes, if adopted, the present apportionment law, is substantially identical to the recommendations in this report of the lobbyist for the California Teachers Association. In my opinion, those recommendations are superfluous and have only an indirect relationship to the three bills under consideration and the testimony contained in this report relative to Assembly Bill No. 3045 should not be incorporated therein.

All costs borne by the State should come within the State School Fund. If the fund is too small, then it should be augmented.

References are consistently made to raising the foundation program. In my opinion, additional money can be given to districts by adjusting the computational tax. Raising the foundation program is a circuitous method of compelling school districts to raise teachers' salaries. The gimmick is in the present law that was enacted recently and sponsored by the lobbyist for the CTA whereby 65 percent of the foundation program shall be spent for salaries.

Local school boards, elected by the people of the district, should not be told by the State Legislature how to spend money raised at the local level.

The statement in the report, "Unless the foundation programs are substantially improved we can expect a continuation of local property tax increases * * * ." is slanted and infers a raising of the foundation amount.

Suggested recommendations relative to Assembly Bill No. 3072, I concur.

Assembly Bill No. 857—The provisions of this bill are fundamentally sound, however, it was brought to the attention of the committee whether it was desirable to make it retroactive.

JOHN L. E. COLLIER

CHAPTER I

BACKGROUND OF APPORTIONMENT OF SCHOOL FUNDS

A. AUTHORITY AND RESPONSIBILITY OF LEGISLATURE

The Constitution of the State of California places in the Legislature the authority and responsibility to establish and maintain the public school system. Selected provisions of the Constitution which specify the authority and responsibility of the Legislature follow:

Encouragement of Education

A general diffusion of knowledge and intelligence being essential to the preservation of the rights and liberties of the people, the Legislature shall encourage by all suitable means the promotion of intellectual, scientific, moral, and agricultural improvement. (Article IX—2:1100.)

Public School System Defined

The Public School System shall include all kindergarten schools, elementary schools, secondary schools, technical schools, and State colleges, established in accordance with law and, in addition, the school districts and the other agencies authorized to maintain them. No school or college or any other part of the Public School System shall be, directly or indirectly, transferred from the Public School System or placed under the jurisdiction of any authority other than one included within the Public School System. (Article IX—Sec. 6.)

Establishment of State School Fund

The proceeds of all lands that have been or may be granted by the United States to this State for the support of common schools which may be, or may have been, sold or disposed of, and the 500,000 acres of land granted to the new states under an act of Congress distributing the proceeds of the public lands among the several states of the Union, approved A.D. one thousand eight hundred and forty-one, and all estates of deceased persons who may have died without leaving a will or heir, and also such percent as may be granted, or may have been granted, by Congress on the sale of lands in this State, shall be and remain a perpetual fund, the interest of which, together with all the rents of the unsold lands, *and such other means as the Legislature may provide,* shall be inviolably appropriated to the support of common schools throughout the State. (Article IX—Sec. 4.)

Support of Public School System

The Legislature shall add to the State School Fund such other means from the revenues of the State as shall provide in said fund for apportionment in each fiscal year, an amount not less than one hundred

eighty dollars ($180) per pupil in average daily attendance in the kindergarten schools, elementary schools, secondary schools, and technical schools in the Public School System during the next preceding fiscal year.

The entire State School Fund shall be apportioned in each fiscal year in such manner as the Legislature may provide through the school districts and other agencies maintaining such schools, for the support of, and aid to, kindergarten schools, elementary schools, secondary schools, and technical schools except that there shall be apportioned to each school district in each fiscal year not less than one hundred twenty dollars ($120) per pupil in average daily attendance in the district during the next preceding fiscal year and except that the amount apportioned to each school district in each fiscal year shall be not less than twenty-four hundred dollars ($2,400). (Article IX—Sec. 6.)

Statutory Provisions

The Legislature has carried out the responsibility placed in it by the Constitution by enacting provisions of the *Education Code* which are to be found largely in Division 2—Local Administrative Organization, and Division 3—Financial Support of the School System. Further, the Legislature has placed responsibilities and authority to carry out statutory provisions in the State Board of Education and the Superintendent of Public Instruction. *Title 5. Education—California Administrative Code* contains the rules and regulations issued by the State Board of Education and the Superintendent of Public Instruction.

The complete compilation of constitutional provisions, statutory law, and rules and regulations governing the appropriation and apportionment of the State School Fund is to be found in Appendix B of *Apportionment of the State School Fund for the Fiscal Year Ending June 30, 1957—Part 1—Principal Apportionment* published by the California State Department of Education in December, 1956.

B. CURRENT PROVISIONS FOR APPROPRIATION AND APPORTIONMENT OF THE STATE SCHOOL FUND (A Simplified Statement)

Appropriation of the State School Fund

The Constitution, as amended by the Initiative Constitutional Amendment of November, 1952, requires that $180 per ADA during the preceding fiscal year be appropriated to the State School Fund. This requirement fixes a *minimum* allocation. The Legislature may add to the fund The current allowance for the support of excess costs of automobile driver training is such an addition. For 1956-57, the State School Fund is estimated to amount to $460,761,040. This represents $180 for each of the 2,552,178 units of ADA accumulated during the 1955-56 Fiscal Year, and the addition of estimated amount required for apportionment to school districts for 75 percent of excess costs of automobile driver training—an amount estimated in the State Budget at $1,369,000.

Basic State Aid

Under the constitutional amendment of 1952, every school district is guaranteed at least $120 for every pupil in ADA during the preceding year, and every district is guaranteed at least $2,400. (During 1955-56, there were 218 elementary districts and one high school district with less than 20 ADA. This flat grant, known as Basic State Aid, is apportioned without regard to the financial ability of school districts to support the costs of schools. All other apportionments are made as directed by formulas established by the Legislature.

Foundation Program

A "foundation program" may be conceived of as a minimum acceptable level of school support in terms of an amount of dollars. It may also be conceived of as a guarantee by the State to school districts that they will be able to finance this minimum program if it will make a local contribution defined in terms of a specified tax rate.

Separate foundation programs were established by the Legislature effective July 1, 1953, for each of the three levels of the Public School System. In general, the amounts of these foundation programs are as follows:

Elemetary Schools

$212 or an alternate of $232 per ADA.

High Schools

$280 or an alternate of $350 per ADA.

Junior Colleges

$380 per ADA.

Special foundations programs are provided by the Legislature for elementary districts under 101 ADA and for necessary small schools of less than 101 ADA. Also special foundation programs are provided for high school districts and small day high schools under 281 ADA.

District Aid

District aid is the computed amount of local support which can be provided by application of a stipulated rate of local tax on assessed valuation of property, including computed increments on account of federal assistance and on account of miscellaneous funds. These rates of taxes on 100 percent of each hundred dollars of assessed valuation are as follows:

Elementary Schools

60 cents for districts eligible for the $212 foundation program.
80 cents for districts eligible for the $232 foundation program.

High Schools

45 cents for districts eligible for the $280 foundation program.
75 cents for districts eligible for the $350 foundation program.

Junior Colleges

30 cents under the single $380 foundation program.

State Equalization Aid

Allowances of state equalization aid to the districts of the State are made if the total of basic aid and computed district aid is not sufficient to finance the foundation program. Stated in another way, the formula for computing state equalization aid may be shown as follows:

$$\text{State Equalization Aid} = \text{Foundation Program} - \left\{ \begin{matrix} \text{Basic} \\ \text{State} \\ \text{Aid} \end{matrix} + \begin{matrix} \text{District} \\ \text{Aid} \end{matrix} \right\}$$

Special Purpose Apportionments

Apportionments are made out of the State School Fund to school districts of the State for the costs of certain educational services provided during the preceding fiscal year as follows:

Physically Handicapped and Mentally Retarded

1. Not more than $400 per ADA for the excess cost (over the costs of normal pupils) of educating physically handicapped minors such as the blind, the deaf, the speech handicapped, the cerebral palsied, the orthopedically handicapped, and the home-bound pupils.
2. 75 percent of the excess cost of educating mentally retarded minors, not to exceed $150 per ADA. The excess cost of educating severely mentally retarded minors, not to exceed $400 per ADA.

Transportation

1. Districts are partially reimbursed for certain approved expenses of transportation of pupils to and from school. School districts offering transportation to one level of education must pay out of local funds for transportation costs up to the amount raised by a 2-cent property tax. For costs beyond what a 2-cent tax will raise but less than what an 8-cent tax will raise the State will reimburse for one-half of the cost. The district is reimbursed for all approved transportation costs above what an 8-cent tax will raise. The Legislature has provided other formulas for districts which furnish transportation at two or three levels of education.
2. The districts are reimbursed for actual current expense of transporting blind, deaf, cerebral palsied, orthopedically handicapped and severely mentally retarded minors to and from special day classes to the extent of $350 per ADA of these pupils

Automobile Driver Training

Districts are reimbursed for 75 percent of the excess cost of automobile driver training courses, not to exceed $30 per pupil.

Current Growth Apportionment

Current growth allowances are apportioned to the school districts to assist rapidly growing school districts in financing their educational programs for pupils in average daily attendance during the current fiscal year. Growth is computed by comparing the average daily attendance during two periods of the current year with average daily attendance during the same periods of the previous year. The first

growth apportionment is made in February and is based on growth during the full school months between July 1 and December 31. The second growth apportionment is made in June and includes all full school months between the end of the first period and May 1.

The amount apportioned per pupil in average daily attendance for current growth is, in general, the same as that allowed to the district for basic aid and equalization aid for average daily attendance accumulated during the preceding year.

Adult Education

1. "Adults" are defined as those over 21 years of age who are enrolled for less than 10 class-hours per week. Apportionments for these "adults" are computed at the same unit amount per ADA as for other pupils in the district, not to exceed $200 per ADA. Thus, the allowances for "adults" are not less than the Constitutional minimum of $120 per unit of ADA and include equalization aid as otherwise determined for each district to a maximum amount of $80 per unit of ADA.
2. For adult classes in correctional state institutions districts are apportioned an amount equal to the salaries paid teachers of these classes plus 10 percent, but not less than $120 nor more than $148 per unit of ADA.

County School Service Funds

State apportionments represent the major source of income for the county school service funds and, for the most part, are made on the basis of budgets submitted by the county superintendents of schools to the State Superintendent of Public Instruction. Funds are used to supervise instruction in districts below 900 ADA. Reimbursements are also made to county school service funds for pupils educated by the county superintendent of schools in emergency schools, schools for physically handicapped, schools for mentally retarded and schools in juvenile halls. Also apportioned is $2,400 to each county for partial payment of the county superintendent's annual salary. Also, the Superintendent of Public Instruction is authorized to withhold from the State School Fund whatever amount is deemed necessary to reimburse county superintendents for costs of emergency grants to school districts.

Payment of the School Fund

The Constitution requires that the entire amount of the State School Fund be apportioned each fiscal year. The Legislature has fixed ceilings on the various categories of apportionments. They are specified as an amount multiplied by the total average daily attendance in all schools during the preceding fiscal year. Whenever the amounts computed exceed the statutory ceilings, correction factors are applied to the distribution of funds for that particular purpose. Any remaining balance, after restorations have been made to funds with deficits, is distributed as added equalization aid to school districts receiving such aid during the year.

Timing of Payment of Apportionments

A 1955 law provides for an advance payment of the principal apportionment in August and September each of one-tenth of a district's total basic state aid as certified by the Superintendent of Public Instruction. Of the remainder, two-tenths is distributed in November, and the remaining eight-tenths at the rate of one-tenth a month in October, December, and to June, inclusive. Four-tenths of the special purpose allowances are made available to school districts in December, and an additional one-tenth in each of the six months from January to June, inclusive.

Legislative Establishment of Apportionment Funds

The total State School Fund (exclusive of the current allowance for automobile driver training) is made up of $180 times the total average daily attendance during the preceding fiscal year. This total amount has been divided by the Legislature into funds in terms of a unit of average daily attendance. In accordance with Education Code Section 5154 the following funds are established:

1. Exceptional Children Special Aid		$3.70
(a) Excess cost of educating physically handicapped minors	$2.25	
(b) Excess cost of educating mentally retarded minors	1.00	
(c) Excess cost of educating severely mentally retarded minors	.05	
(d) Transportation current expense for blind, deaf, cerebral palsied, orthopedically handicapped and severely mentally retarded minor pupils	.40	
2. Transportation for regular pupils		3.20
3. County Service Fund		4.51
(a) Supervision in districts below 900 ADA	.94	
(b) Additional supervision, county services, and partial payment of county superintendents' salaries	3.57	
4. Growth Allowances		12.00
5. Basic Aid		120.00
6. Equalization Aid		36.59
7. Final Apportionment		a remainder
Total		$180.00

C. DISTRIBUTION OF APPORTIONMENTS OF THE STATE SCHOOL FUND IN THE LAST COMPLETE FISCAL YEAR, 1955-56

	1955-56	Percent of total
Principal Apportionment		
Basic aid		
Elementary districts	$208,376,880	48.49
High school districts	58,294,200	13.56
Junior college districts	11,217,360	2.61
Equalization aid		
Elementary districts	*68,405,304	15 92
High school districts	13,107,218	3.05
Junior college districts	2,751,703	.64
Adult education		
High school	5,197,755	1.21
Junior college	3,367,905	.78
County school tuition fund	19,560	.01
County school service funds	12,010,439	2.79
Adjustment prior years apportionment	163,626	.04
Total—principal apportionment	$382,911,950	89 10
Special purpose apportionments		
Excess costs		
Physically handicapped	$4,798,474	1.12
Mentally retarded	2,363,594	.55
Severely mentally retarded	324,451	.07
Transportation		
Handicapped and retarded pupils	1,144,967	.27
Regular	7,601,076	1.77
Automobile driver training†	1,116,773	.26
Added teachers employed—previously withheld	73,425	.02
Total—special purpose apportionment	$17,422,760	4.06
Current Growth Apportionment		
Elementary	$21,918,419	5 10
High school	5,109,924	1.19
Junior college	1,544,905	.36
Total—current growth apportionment	$28,573,248	6.65
County school service fund emergency apportionments	$156,603	.04
Final apportionment	662,573	.15
Grand total—state apportionment	$429,727,134	100.00

* Includes $69,438 as additional allowance to certain reorganized districts and excludes $179,926 as withholding on account of insufficient number of teachers
† Automobile driver training is only item financed outside "$180" State School Fund.

D. DESCRIPTION OF THE OPERATION OF APPORTIONMENT EQUALIZATION FORMULAS CURRENTLY IN EFFECT

The computation of equalization aid under the legislative formulas currently in effect is determined by the assessed valuation per ADA in a school district. Illustrations of the computation for districts of relatively high, medium, and low assessed valuation per ADA are presented on the following page.

DISTRICTS OF "HIGH" ASSESSED VALUATION PER ADA

	Elementary Kindergarten -grade 8	High school grades 9-12	Junior college
Assessed valuation per ADA excluding "adults"	$20,000	$40,000	$120,000
Computation tax rates	60¢	45¢	30¢
a. Foundation programs	$212	$280	$380
b. Local contributions (rate × A V./A D.A)	—120	—180	—360
c. Principal apportionments per ADA	$120*	$120*	$120*
d. Basic aid	120	120	120
e. Equalization aid	None	None	None

* Although the difference between the foundation program and computed local contribution is less than $120, the district receives the constitutional minimum of $120 per ADA

DISTRICTS OF "MEDIUM" ASSESSED VALUATION PER ADA

	Elementary Kindergarten -grade 8	High school grades 9-12	Junior college
Assessed valuation per ADA excluding "adults"	$12,000	$24,000	$72,000
Computation tax rates	60¢	45¢	30¢
a. Foundation programs	$212	$280	$380
b. Local contributions (rate × A V /A D A)	—72	—108	—216
c. Principal apportionments per ADA	$140	$172	$164
d. Basic aid	120	120	120
e. Equalization aid	$20	$52	$44

DISTRICTS OF "LOW" ASSESSED VALUATION PER ADA
(Using Alternate Foundation Program)

	Elementary Kindergarten -grade 8	High school grades 9-12	Junior college
Assessed valuation per ADA excluding "adults"	$6,000	$12,000	$36,000
Computation tax rates	80¢	75¢	30¢
a. Foundation programs	$232	$350	$380
b. Local contributions (rate × A V /A D A)	—48	—90	—108
c Principal apportionments per ADA	$184	$260	$272
d. Basic aid	120	120	120
e. Equalization aid	$64	$140	$152

The computation of principal apportionment to the school districts of the state (basic aid plus equalization aid) would, of course, be affected by changes in foundation programs, basic aid, and computation tax rates which the Legislature has the power to enact as law. To illustrate the effect of changes in the components of the apportionment formulas which are set forth above, the following computations based upon proposals of the California Teachers Association in their testimony re: Assembly Bill No. 1276 are presented:

DISTRICTS OF "HIGH" ASSESSED VALUATION PER ADA

	Elementary Kindergarten -grade 8	High school grades 9-12	Junior college
Assessed valuation per ADA excluding "adults"	$20,000	$40,000	$120,000
Computation tax rates	60¢	50¢	30¢
a. Foundation programs	$230	$320	$420
b. Local contributions (rate × A V./A D A)	—120	—200	—360
c Principal apportionments per ADA	$135*	$135*	$135*
d. Basic aid	135	135	135
e. Equalization aid	None	None	None

* Although the difference between the foundation program and computed local contribution is less than $135, the district would receive a minimum of $135 per ADA

DISTRICTS OF "MEDIUM" ASSESSED VALUATION PER ADA

	Elementary Kindergarten -grade 8	High school grades 9-12	Junior college
Assessed valuation per ADA excluding "adults"	$12,000	$24,000	$72,000
Computation tax rates	60¢	50¢	30¢
a. Foundation programs	$230	$320	$420
b. Local contributions (rate × A V./A D A)	—72	—120	—216
c Principal apportionments per ADA	$158	$200	$204
d. Basic aid	135	135	135
e Equalization aid	$23	$65	$69

DISTRICTS OF "LOW" ASSESSED VALUATION PER ADA
(Using Alternate Foundation Program)

	Elementary Kindergarten -grade 8	High school grades 9-12	Junior college
Assessed valuation per ADA excluding "adults"	$6,000	$12 000	$36,000
Computation tax rates	135¢	85¢	30¢
a. Foundation programs	$305	$400	$420
b. Local contributions (rate × A V./A.D A)	—81	—102	—108
c. Principal apportionments per ADA	$224	$298	$312
d. Basic aid	135	135	135
e. Equalization aid	$89	$163	$177

SUMMARY OF DIFFERENCES IN PRINCIPAL APPORTIONMENT TO DISTRICTS OF VARYING ASSESSED VALUATION PER ADA

(Examples Limited to Those Presented Above)

Classification according to assessed valuation per ADA	Elementary level			High school level			Junior college level		
	Current formulas	Proposed formulas	Increase	Current formulas	Proposed formulas	Increase	Current formulas	Proposed formulas	Increase
"High"	$120	$135	$15 12 5%	$120	$135	$15 12 5%	$120	$135	$15 12 5%
"Medium"	$140	$158	$18 12 9%	$172	$200	$18 16 3%	$164	$204	$40 24 4%
"Low"	$184	$224	$40 21 7%	$260	$298	$38 14 6%	$272	$312	$40 14 7%

SUMMARY OF DIFFERENCES IN EQUALIZATION AID TO DISTRICTS OF VARYING ASSESSED VALUATION PER ADA

(Examples Limited to Those Presented Above)

Classification according to assessed valuation per ADA	Elementary level			High school level			Junior college level		
	Current formulas	Proposed formulas	Increase	Current formulas	Proposed formulas	Increase	Current formulas	Proposed formulas	Increase
"High"	None	None		None	None		None	None	
"Medium"	$20	$23	$3 15%	$52	$65	$13 25%	$44	$69	$25 57%
"Low"	$64	$89	$25 39%	$140	$163	$23 16%	$152	$177	$25 16%

INFORMATIONAL NOTE: Assessed valuation of the school districts of the State, by level, divided by average daily attendance credited to the levels, yields an over-all state average assessed valuation per ADA. The data which are shown below (for informational purposes only) are for the 1955-56 Fiscal Year Assessed valuation includes "computed increments on account of federal aid and miscellaneous funds" Average daily attendance is exclusive of that credited to county school service funds, county school tuition funds, and that for "adults" defined in E.C. 9700.1.

Level	All districts in the state, 1955-56		
	Adjusted assessed valuation*	Average daily attendance*	Assessed valuation per ADA
Elementary (kindergarten—grade 8)	$20,404,132,975	1,863,683	$10,948
High school (grades 9—12)	$20,235,335,645	521,579	$38,796
Junior college	$13,733,999,800	100,486	$136,676

* Data abstracted from Appendix A and Appendix C-7 of "Apportionment of State School Fund for the Fiscal Year Ending June 30, 1957—Part I," California State Department of Education, December, 1956

INFORMATIONAL NOTE: The "breaking points" (in terms of assessed valuation per ADA) for equalization benefits of the existing and proposed apportionment formulas are:

	Present formulas			Proposed formulas		
	Elementary	High	Junior college	Elementary	High	Junior college
Foundation program	$15,333	$35,555	$86,667	$15,833	$37,000	$95,000
Alternate foundation program	10,000	23,333	----------	10,000	22,857	----------

INFORMATIONAL NOTE: The "breaking points" illustrated above may be calculated easily and quickly for other proposed formulas as follows:

A *Normal Foundation Program*—Divide the difference between the foundation program and basic aid by the computation tax rate.

Example. x = assessed valuation per ADA

$$\$212 - .0060x = \$120$$
$$.0060x = \$92$$
$$x = \$15,333$$

B *Alternate Foundation Program*—Divide the difference between the two foundation programs by the difference between the two computation tax rates.

Example: x = assessed valuation per ADA

$$\$232 - .0080x = \$212 - .0060x$$
$$.0020x = \$20$$
$$x = \$10,000$$

JUNIOR COLLEGE LEVEL STATE APPORTIONMENTS

The attached table has been developed to point up what appears to be a glaring inequity in the formula for distribution of state apportionment moneys to the junior college districts. The State Legislature, this year, will probably make many changes in the foundation programs, in the computation tax rates, and other factors which enter into the formulas for determining equalization aid to the districts of the State. *A reform in the basis for distribution of equalization aid to junior college districts is long overdue!*

At the present time, for junior colleges, the assessed valuation used in the junior college formula is actual assessed valuation *within the boundaries* of the district, plus "computed increments" on account of 40 percent of Public Law 874 entitlement and 75 percent of miscellaneous funds. However, the ADA used in the apportionment formula is the entire ADA regardless of where the students live. (Contrast this situation with the treatment of Grades 7-8 in junior highs where ADA is credited to the elementary district of residence before apportionments are computed).

Study of the attached table will reveal specifically the drastic inequities which result. (Pasadena and Santa Monica are outstanding examples in Southern California. There are districts in the central and northern parts of the State which would serve as equally "bad" examples).

1. The elementary level is perhaps the best index of the relative wealth per ADA of Long Beach, Pasadena, and Santa Monica. Pasadena has one-third more assessed valuation per ADA than Long Beach; Santa Monica has double that of Long Beach.

2. At the high school level, Pasadena has 3 percent more A.V./A.D.A. than Long Beach, Santa Monica 24.5 percent more.

3. However, at the junior college level, Long Beach has *twice* the A.V./A.D.A. of Pasadena, and almost *three* times as much as Santa Monica! *And, because of this relationship,* Long Beach receives only $120 per ADA while Pasadena receives $215.60 and Santa Monica receives $255.88!

This obviously unfair distribution of state funds can and does happen because of logical errors in the Education Code. (Of course, Pasadena and Santa Monica have a right to benefit from errors in the law as now written).

The case of Pasadena: Last year, 2,182 units of ADA resulted from attendance of students who are residents of no junior college district. They also billed other districts, under tuition contracts for about 114 units of ADA. Without this out-of-district ADA, for which Pasadena received tuition payments, the A.V./A.D.A. on which equalization aid is computed would be approximately $77,000. This would result in a unit rate of about $149 rather than the $215.60 rate shown in the table This loss of state apportionment moneys would not be a total loss to Pasadena since the rate of billing to the counties for residents of no junior college areas would be raised from the present $309 rate to about $376. This would cause taxpayers of areas which are not in a junior college district to pay some of the costs of junior college education which they now escape.

The case of Santa Monica: Last year, 2,316 units of ADA resulted from attendance of students under tuition contract who are residents of the Los Angeles Junior College District. Without this out-of-district ADA, for which Santa Monica received tuition payments, the A.V./A.D.A. on which equalization aid is computed would be approximately $90,000. This would result in a unit rate of basic aid of $120 rather than the $255.88 rate shown in the table.

There are several approaches to a rational basis for distribution of state apportionments to the junior college districts:

1. Use as the base for computing A.V./A.D.A. the assessed valuation of the district and only the ADA of residents of the district. (Because of the large number of residents of other districts who attend part-time under nontuition blanket permits, this alternative presents some difficult accounting problems.)

2. Use as the base for computing A.V./A.D.A. the assessed valuation of the district and net nontuition ADA of the district. This alternative would be the easiest to administer and possibly would be one of the most equitable solutions. This solution uses the method prescribed in the case of federal surveys for Public Law 874. The formula: Actual or statistical ADA in the district *plus* ADA in other districts for which tuition is paid minus ADA from other districts or no junior college areas for which tuition is received.

3. Adjust the assessed valuation of the district by calculating "equivalent assessed valuation" of tuition income received from other junior college districts or from counties for residents of no junior college district areas. Already, in the case of "miscellaneous funds" 75 percent of income must be converted into "equivalent assessed valuation," and in the case of Public Law 874 entitlements 40 percent must be converted. (However, in the case of junior college tuition, any such conversions probably should affect only assessed valuation for the junior college level in unified districts.) Public Law 874 moneys are in lieu of property taxes which cannot be collected by the district. Tuition income because of attendance of nonresidents is of the same nature. That is, the district of attendance cannot levy taxes on the property outside the district where the student resides. Why should these two sources of district income be treated differently in computing adjusted assessed valuation for apportionment purposes?

Of course, if these changes were to be made, there also would have to be drastic changes in the foundation program and/or computation tax rates in the junior college equalization formula.

ASSESSED VALUATION, ADA AND STATE APPORTIONMENT FOR 1955-56 SCHOOL YEAR

	Long Beach unified	Pasadena districts	Santa Monica unified
Elementary level			
Assessed valuation (adjusted)	$526,287,965	$246,916,470	$159,090,092
ADA	48,122	16,913	7,311
Assessed valuation per ADA	10,936	14,599	21,760
State apportionment	7,044,136	2,104,057	877,320
Apportionment per ADA	146 38	124.40	120 00
High school level			
Assessed valuation (adjusted)	526,287,965	286,636,660	159,090,092
ADA	12,386	6,498	3,007
Assessed valuation per ADA	42,491	44,112	52,906
State apportionment	1,486,320	779,760	360,840
Apportionment per ADA	120 00	120 00	120 00
Junior college level			
Assessed valuation (adjusted)	526,287,965	306,480,080	159,090,092
ADA (all others)	4,630	5,758	4,074
Assessed valuation per ADA	113,669	53,227	39,050
State apportionment	555,600	1,268,600	1,091,220
Apportionment per ADA (all others)	120 00	220 32	267 85
ADA (E.C. 9700 1 "adults")	2,769	1,741	873
State apportionment	332,280	348,200	174,600
Apportionment per ADA ("adults")	120 00	200 00	200 00
Total state apportionment	$887,880	$1,616,800	$1,265,820
Total apportionment per ADA	$120 00	$215 60	$255 88

CHAPTER II

ASSEMBLY BILL No. 1276

A. PURPOSE

Assembly Bill No. 1276, introduced in the 1955 General Session, proposed that the State School Fund shall consist of an amount not less than $180 per pupil in average daily attendance during the current fiscal year. This proposal would add to the minimum appropriation required by Article IX, Section 6, of the Constitution, and the present Education Code Section 5153 which provides that the appropriation is to be based upon ADA in the preceding fiscal year.

B. ANALYSIS BY THE STATE DEPARTMENT OF EDUCATION

December 15, 1955

To: Subcommittee Members, Interim Committee on Education

Subject: Assembly Bill No. 1276, 1955 Regular Session

Assembly Bill No. 1276 proposes through an amendment to Education Code Section 5153 to provide that the State School Fund shall consist of an amount not less than $180 per pupil in average daily attendance during the current fiscal year rather than $180 per pupil in average daily attendance during the preceding fiscal year. The objective of the proposal seems to be to provide that $180 be made available as state aid for each pupil in average daily attendance during the fiscal year the pupil is in school. To state the purpose in another way, it proposes to provide an amount in the State School Fund for each unit of average daily attendance in growth as is now provided for each unit of average daily attendance of the preceding fiscal year.

Because of constitutional requirements (Section 6 of Article IX) certain difficulties in administering such a law are apparent. Schools are maintained up to and including June 30th of any fiscal year. Summer schools and classes for adults are maintained between the closing and opening dates of the regular school year so that the attendance report of the district may not be made for the fiscal year until after June 30th. To administer the proposed change in the law would require either provision for a redefinition of average daily attendance as it relates to a fiscal year or a provision that would allow an apportionment to be made after the close of a fiscal year. Both of these requirements are likely to be inconsistent with out present concept of a fiscal year and with the provision of the Constitution that the total school fund "shall be apportioned each fiscal year."

Essentially this proposal is made to meet the problem in growth experienced by school districts. Over the past two years, the cost of the proposal, if it had been in effect, is as follows:

Year	Actual state school fund [1]	State school fund proposed by A. B. No. 1276 [1]	Addition proposed
1953-54	$366,690,420	$397,511,280	$30,817,080
1954-55	397,511,280	428,598,720	31,087,440

[1] Excludes apportionments for driver training

These additional costs closely approximate the actual requirements of the apportionments for growth presently effective.

Year	Additional cost of A. B. No. 1276	Actual growth requirement	Amount apportioned for growth
1953-54	$30,817,080	$28,072,027	$24,446,028
1954-55	31,087,440	28,042,440	24,500,752

It is to be noted that in each of the two prior years the amount of money allocated to growth ($12 per average daily attendance of the preceding year) has been insufficient to meet the actual requirements for growth by approximately 3½ million dollars each year. In spite of new legislation adopted which allocates formula surpluses to apportionments on a priority basis, giving growth second priority (foundation program has first) there will still be an estimated need in excess of 3 million dollars to meet the actual growth requirements as provided for in law.

In addition to the inability of the sums allocated for growth to meet the actual requirements of growth, the present formula as prescribed in law does not always provide, because of excessive growth, a full foundation program for all the new pupils in a district. The present formula provides for each new pupil in average daily attendance the same amount that was provided for each pupil in average daily attendance during the preceding year. Unless there has been an increase in assessed valuation equal to the increase in average daily attendance which is not often the case, the district aid portion of the foundation program is diluted and less than a foundation program is provided for all pupils. This may be illustrated * * * for a district that has an assessed valuation per pupil of $5,000 * * *. A district with $5,000 per average daily attendance in assessed valuation that in the current year has a 10 percent increase in average daily attendance and a 4 percent increase in assessed valuation has availble as a foundation program $212.36 per pupil in average daily attendance. (Chart omitted.)

These two factors: (1) insufficient money allocated to the growth apportionment; and (2) dilution effect of the present growth formulas, have had a definite effect on the educational program, especially in the rapidly growing, low assessed valuation districts. The pattern of growth in these rapidly growing suburban districts indicates its continuance. The problems attendant upon this type of growth have not been completely solved. They deserve more attention.

Since the major purpose of this bill is to provide for the problem of growth, it is suggested that the committee give sincere consideration to the following proposal that would in some measure correct present difficulties.

1. Change the present growth formula so that a full foundation program would be provided for each pupil in average daily attendance during the fiscal year. This may be achieved by recomputing each growth period a foundation program for the district, taking cognizance of the increase in average daily atendance and assessed valuation, and providing the district the difference between this computation and the amount apportioned on account of the average daily attendance of the preceding year, as an apportionment for growth.

2. Provide a source of funds that will allow a complete apportionment for growth. This will necessitate that the apportionment for growth should be provided for partially or in total in amounts in addition to the State School Fund.

This proposal if effected would guarantee as near as possible, provided that present foundation program levels may be financed with State School Fund moneys, a full foundation program for each pupil in attendance each year. Its cost to the State is likely to be less than the proposal contained in Assembly Bill No 1276 especially during the immediate future when percentages of growth are on the increase.

Should the committee desire further and more detailed information on this problem, the Department of Education will be glad to supply it.

Prepared by:
DIVISION OF SCHOOL ADMINISTRATION

BY THE OFFICE OF THE LEGISLATIVE COUNSEL, STATE OF CALIFORNIA

SACRAMENTO, CALIFORNIA
October 3, 1955

HONORABLE CARLEY V. PORTER
401 West Palmer Avenue
Compton, California

Analysis of Assembly Bill No. 1276 (1955 Regular Session)—#290

DEAR MR. PORTER: The bill would have amended Section 5153 of the Education Code to require that the State Controller annually transfer from the General Fund of the State to the State School Fund the sum of $180 for each pupil in average daily attendance during the current fiscal year, rather than during the preceding fiscal year.

The apparent purpose of such a change is to base the determination of the total amount available for apportionment for the public school system from the State School Fund on the current year's attendance rather than the attendance of the year preceding that in which the transfer of money to the State School Fund is made.

In order to fully accomplish this result it would be necessary to amend other provisions of law relating to the computing and reporting of attendance and possibly provisions relating to the apportionment of the State School Fund.

If such a bill became law, it would also be desirable to include in the bill a provision requiring that in no event shall the amount transferred to the State School Fund each year be *less than* $180 for each pupil in average daily attendance during the *preceding* fiscal year. The California Constitution requires that such minimum amount, based on the preceding year's attendance, be placed in the State School

Fund. (Cal. Const. Art. IX, Sec. 6.) While it is true that during the past few years the total attendance of all of the schools for any current fiscal year has exceeded that of the preceding fiscal year and that the various population predictions indicate that such increase will continue for some years, so that it is probably safe to assume that for some years to come an amount based on $180 times the current year's attendance will exceed the constitutional minimum amount based on $180 times the preceding year's attendance, it nonetheless appears advisable to maintain, in the law, this constitutional minimum amount as a floor on the amount which must be transferred each year to the State School Fund.

Very truly yours,

RALPH N. KLEPS
Legislative Counsel
By BARBARA COCHRANE CALAIS
Deputy

C. SUMMARY OF REPRESENTATIVE TESTIMONY AT COMMITTEE'S PUBLIC HEARINGS

Robert McKay, Assistant Executive Secretary, California Teachers Association (December 19, 1955, at Los Angeles)

Assembly Bill No. 1276 was introduced by Assemblyman Munnell at the request of the California Teachers Association. It was a means of placing before the interim committee the subject matter of what we considered to be one of the most urgent problems in school finance—that is the problem of providing in the current year sufficient money to meet the needs of the current year. If attendance state-wide were the same this year as last year there would be no problem. That is, we would have the full benefit of the money provided by the Constitution to educate each child—but that is not the fact in California. We are growing more rapidly in school enrollment than in population. It has been estimated that as many as 30,000 persons a month are moving into California from other states and that those 30,000 new residents include approximately 6,000 children of school age. When those 6,000 children are added to the increasingly high birth rate within the State, a situation has developed in which the school enrollment is growing on the average of something in excess of 6½ percent per year.

The difference between 1953-54 and 1954-55 was an increase of 7 8 percent. The following table shows the growth in average daily attendance from 1948-49 through 1954-55:

GROWTH OF AVERAGE DAILY ATTENDANCE IN CALIFORNIA SCHOOLS

Year	*Average daily attendance*	*Increase over previous year*	*Percentage increase*
1948-49	1,616,847	95,816	6 3
1949-50	1,718,267	101,420	6 3
1950-51	1,783,637	65,370	3 8
1951-52	1,904,926	121,289	6 8
1952-53	2,037,169	132,243	6 9
1953-54	2,208,396	171,227	8 4
1954-55	2,381,104	172,708	7 8

Over-all increase for six-year period—1948-49 to 1954-55—has been 764,257 or 47.27 percent of the 1948-49 ADA. The yearly increase has averaged 6.6 percent. If one year were omitted (1949-50 to 1950-51) the average increase would be much higher. It should be noted that the percentage increase for the last two years has been markedly above this average.

To translate this growth into what it means in terms of school finance, if it is assumed that $180 per ADA is placed in the State School Fund on the basis of the preceding year's ADA, as the Constitution requires, there would be appropriated for each 1,000 ADA a total of $180,000. But, actually we are educating 1,078 children on the basis of 7.8 percent growth, and that means instead of $180 per ADA, $166.98 is available. There is a watering down to that extent of the education program available to the children in the State. This is further complicated by the fact that growth among the school districts is not uniform. Certain areas, notably the so-called bedroom areas around the metropolitan districts, have low assessed valuation. Growth is coming predominently in the areas least able to finance the growth. A further complication is that in those same areas there seems to be a concentration of young veterans who very properly claim veterans' exemption and usually have relatively large growing families. The net effect in those areas is for the school districts to get poorer and poorer as the subdivisions develop. The local assessed valuation, instead of keeping pace with the increasing need, keeps falling off in relation to the number of children, and assessed valuation per child goes down.

The Little Lake Elementary District of Los Angeles County is an example of growth. This district grew from an ADA of 1,903 in 1951-52 to an ADA of 4,571 two years later. It grew 77 percent in one year and more than doubled the number of children in a period of two years. This example can be duplicated in many parts of the State.

The experience of elementary districts in recent years is just a prelude to that which is ahead in the high schools.

The problem is not limited to very rapidly growing districts because in order to meet the growth within the $180 it has been necessary to set aside $12 of that $180. When the $12 is multiplied by the ADA of this past year, it means that something in excess of $28,000,000 is being taken off the top and set aside for distribution, so that the foundation program available to all the districts in the State has been curtailed by that amount.

There is an interesting trend developing in the relationship of state and local support that preceded each of the constitutional amendments approved by the people. Traditionally, we have aimed for 50 percent division of the cost of running schools—ideally more than 50 percent from the State. Prior to the constitutional amendment of 1952, the districts had assumed considerably more of the cost than the State, but the increase from $120 to $180 brought it back into approximate balance.

Percentage distribution again is tending toward an increase for local districts. Figures for 1954-55 show that the State's subvention amounted to 47.62 percent, whereas local taxes provide 49.4 percent. Federal subventions and miscellaneous income account for the rest.

There is a trend toward a greater assumption of cost by the local districts.

If apportionment were to be placed on a current basis rather than the preceding year basis, it would involve an increased expenditure by the State of slightly more than $31,000,000 a year, which is quite a substantial amount. It is substantial when it is considered what the State would have to do to raise it, and it is also substantial when you consider that is the amount of money that districts are being deprived of, if you assume that they should have enough money this year to do the job this year.

Jack Rees, Superintendent, Hayward Elementary District, and President, California Teachers Association (April 20, 1956, at Bakersfield)

At the time the present apportionment law went into effect after Proposition 2 was enacted in 1953, the State was contributing slightly over 50 percent of the current operating costs of the school program in California. The first year under the money derived from Proposition 2, the State paid slightly over 50 percent of the operating costs. The second year the State's proportion dropped to about 47 percent of the operating cost. This year the best estimate is that we are down below 46 percent as the State's share and next year it will drop still further as far as that is concerned, because all of the increased costs and financing of our school programs since 1953 have had to be met from the local levels since there has been no change in the basic state aid program since 1953. That means that the schools will have to go four years without any increase in state aid if the Legislature in its wisdom at the next session decides to make some increase for the 1957-58 school year; and if no change is made in the next session of the Legislature the schools will then have to go at least five years without any increase in state support.

With all the increase that is coming from the local level and the only source of revenue for school districts at the local level as you know is the local property tax, one of the problems that we feel is the most important in our present apportionment program is the fact that the growth apportionment is not really what we call it We say we give the districts an apportionment for growth during the current year. However, we actually finance that growth apportionment out of the money raised on the prior year's average daily attendance. So this year's growth is paid out of last year's average daily attendance. We do not have a growth formula on a current basis. We are not providing $180 per pupil in the state school fund for the youngsters who enter school this year for the first time and represent additional average daily attendance.

So actually instead of providing $180 for all of the children in California schools during any current year, we are providing $12 less than $180 and using that $12 to finance the so-called growth program. We feel that growth should be put on a current basis, that we should not finance this year's growth out of last year's average daily attendance money.

Another problem in the present apportionment program, we feel, should be brought to the attention of the committee is the method of

financing the excess costs of the physically and mentally handicapped programs. I am sure that all of us recognize the tremendous value of those programs in providing opportunities to less fortunate children in our State, and yet there is a penalty for instituting such a program in a school district because the entire cost of the physically and mentally handicapped programs during the current year, during the first year for the inception of the program must be financed from the local level.

So, if a district wishes to start a program for handicapped pupils, it is necessary for the district to finance the program entirely the first year and then get on a reimbursement basis. We feel that, too, should go on a current basis.

It is also important in talking about the school finance picture in California to point out that we never have apparently been able to finance adequately the current transportation formula in the apportionment bill and this year again have a deficit of something like a million and a half dollars in the transportation formula. So the State is not picking up even the cost of a formula that is supposed to be financed through the $180 limitation.

Transportation unless adequately financed as an additional cost of education becomes a drain on the basic educational program in the school districts that have high transportation expense.

Now it is the belief of the California Teachers Association that we can make a significant improvement in the school apportionment program in California if we do several things, first put growth on a current basis above and outside the $180 program in the Constitution, so that we should appropriate $180 for each youngster in attendance during the current year and not finance that program from the prior year's average daily attendance.

Secondly we believe that the programs, both transportation and excess cost programs for the mentally and physically handicapped youngsters should be financed outside, over and above the $180 for the preceding year's average daily attendance.

Now, if we do these things, if we put growth, transportation, and the mentally and physically handicapped programs outside of the $180 as guaranteed in the Constitution on the preceding year's average daily attendance, and get them on a current basis, then we cannot only solve the problems in those areas that have the problem of growth, the problem of transportation, the problem of instituting programs for the physically and mentally handicapped, but we can also do something about providing higher foundation programs for the children in California, and by so doing greatly improve the present program of equalization.

At the present time we are using only $26 of the $180 to equalize the difference in wealth between the school districts of California, and if we really want to do a significant job of equalizing, we have got to put more money into the foundation programs, more money into the equalization fund.

(December 12, 1956 at Los Angeles)

I would like first of all to discuss with the committee some background information which we think points up the need for additional state support of the school program and then to get into our specific

recommendations which we feel would go a long way toward alleviating the kind of conditions that were described here this morning.

California's Public School System is in the middle of a financial crisis occasioned by growth, increased costs and a critical shortage of classrooms and qualified teachers.

Our staggering increase in population has been a fine thing for business and industry and a stimulus to the State's entire economy. It has made more business, more jobs and more clients for the professions. However, it has been a tragedy for thousands of children who have had to attend school in makeshift quarters, on half-day sessions, or in overcrowded classrooms and be taught by unqualified teachers. This year in the midst of an "economy of plenty" we are providing only half-time schooling for 201,000 pupils and are sending 345,000 children to classrooms staffed with teachers who have substandard qualifications.

The problems of growth in school enrollments are just beginning. It took California 90 years to enroll its first million children in school by 1940. It took only 13 years to enroll the second million by 1953. It will take only an estimated five years to enroll the third million by 1958, and we are certain to have four million enrolled by 1965. School enrollment will have quadrupled in the 25-year period from 1940 to 1965. Courageous statesmanship must be exercised to meet the problem of growth or we will produce a whole generation of subeducated citizens during this so-called "economy of plenty."

School operating costs have constantly increased due to growth in enrollments, increased cost of materials and services, and the increased productivity of the economy which has stimulated general salary increases in business and other governmental agencies. These have necessitated salary adjustments for all school personnel merely to keep them in line with adjustments granted other segments of the working force.

Although some school districts have adopted salary schedules that are somewhat realistic for professional personnel charged with the most important responsibility in the State most of the districts appear fiscally unable to make teaching financially attractive. Last year just about one-half of the total teaching force in California received less than $400 per month. The average beginning salary for a teacher with four years of professional college training was less than $320 per month.

California schools have 11,516 substandard teachers in their classrooms. Next year we will need 15,000 new teachers. We are training only 8,300 and many of those trained will not enter the teaching profession. Over the next 10 years we will have to have 170,000 new teachers or an average of 17,000 new teachers each year. How are we going to attract them?

This current so-called shortage of qualified teachers is largely due to the inability of school districts to compete for quality manpower even when the manpower has been specifically trained for teaching. The following facts are most significant:

1. Of those questioned who gave up teaching in 1955 many gave salary as the reason. One-half of the men listed salary as the chief reason.

2. Thirty-seven percent of the elementary teachers trained in 1955 did not enter the teaching field.
3. Fifty-five percent of the secondary teachers prepared in 1955 did not enter the teaching field.
4. There are 100,000 fully credentialed teachers in California who are not teaching.

One might well ask this question: Do we have a teacher shortage or a money shortage which prevents teachers from teaching?

Per pupil costs have increased every year since the present foundation programs were adopted, and they will continue to increase, yet there has been no increase in state apportionments per pupil since 1953. All of the added costs have had to be borne entirely at the local level largely by increased local property taxes even though local ability to support the educational program has decreased for almost a decade. The State Chamber's Tax Committee's "Report No. 1 of the Subcommittee on Public School Finance" points out that the assessed valuation per elementary pupil remained unchanged in California from 1947 to 1955 at $10,400 and that the dollar lost 13 cents in purchasing power during the same period. In other words, the ability of local districts to support their schools decreased 13 percent in the period from 1947 to 1955.

Total local property taxes for all school purposes now exceed $5 per $100 of assessed valuation in some of our impoverished communities. Rates in excess of $4 are now too common.

In 1955, 1,419,205 of the total 2,375,680 average daily attendance was in districts that had exceeded by a vote of the people the statutory maximums for operation of the school programs and many additional districts have voted rate increases since then.

Unless the foundation programs are substantially improved we can expect a continuation of local property tax increases even beyond the almost confiscatory rates which now exist in many communities. Districts unable to increase local property taxes further will find it necessary to raise class loads already to the breaking point, reduce already limited instructional materials and maintenance, and be satisfied with substandard teachers because of inadequate salary schedules.

We believe that California schools are confronted with a serious financial crisis and recommend the following solutions:

I. We recommend that the foundation programs should be adjusted as follows:
   A. Elementary schools
      (1) $305 foundation program with $1.35 computational tax;
      (2) $230 alternate program with 60-cent tax rate.
   B. High schools
      (1) $400 foundation program with 85-cent computational tax;
      (2) $320 alternate program with 50-cent tax rate.
   C. Junior college
      (1) $420 foundation program with 30-cent tax rate.

II. We recommend that basic aid be increased from $120 per pupil to $135 per pupil at all levels.

III. We recommend that growth be fully financed on a current basis over and above the $180 constitutional guarantee for the preceding year's average daily attendance. It obviously costs as much to educate a new pupil as it does to educate one who was in attendance during the preceding year.

IV. We recommend that the present transportation formula be adequately financed over and above the $180 constitutional guarantee. The cost of getting some pupils to school should no longer be permitted to water down the educational program for all pupils.

V. We recommend that the present formulas for the education of mentally and physically handicapped be fully financed over and above the $180 constitutional guarantee. These programs need to be fully financed and should not be financed at the expense of the regular school program.

We hope that our booming economy will make it possible to finance this new school $68,000,000 apportionment bill within the existing state tax structure. It represents a 15 percent addition to the state aid. It represents 15 cents more a day per pupil in California schools. We are now providing roughly $1 per pupil per day of state aid for the education of our youngsters in this State. The new proposal would require $1.15 per pupil per day. We might term this a 15-cent program.

In 1952 our CTA Research Department stood almost alone in predicting that the $67,000,000 increase in school support voted by the people could be financed without increasing state taxes. The subsequent four-year experience proved our department to be correct.

In the event the proposed program cannot be financed within the existing state tax structure, we think it far better to increase taxes at the state level rather than to permit further crushing increases in taxes on already overburdened local property and a continued deterioration of school services in many communities already overtaxed locally for school purposes.

Cecil D. Hardesty, Superintendent of Schools, San Diego County (April 20, 1956, at Bakersfield)

We are interested in the shift that is taking place right now in the percent of the school budget that comes from local taxes and the amount that is coming from the state level. School costs have been moving up. Our $180 per pupil has remained constant for a short period of time and even in that short period of time, the percentages are shifting. That is over such a short period of time, however, that we don't see any striking changes—matters of 2 or 3 or 4 percent. The thing that we wanted to say particularly in addition to what is in the material which has been placed in your hands, is that the school tax rates in our area and the general property taxes in general have gotten to a point where we feel that there is serious need for relief through substantially increased aid from the State for school purposes.

(Prepared Materials Follow)

From: The Association of San Diego County School Administrators and the Office of the Superintendent of Schools, San Diego County

Re: Selected Statistics About San Diego County Schools to Support Assembly Bill No. 1276.

Assembly Bill No. 1276 which would provide for apportionment of school funds on a current basis must be passed in order to re-establish the level of state support for public schools set in 1953 when the $180 per ADA apportionment became law.

School operating costs have continued to rise since 1953. Table I shows that the cost per ADA increased $6.08 from 1953-54 to 1954-55, and that it is estimated the cost will increase $8 59 in 1955-56. Local support of schools has increased because the level of state support has remained constant.

TABLE I

STATE AND LOCAL SUPPORT PER ADA TO GENERAL FUNDS OF ALL SAN DIEGO COUNTY SCHOOL DISTRICTS

	1953-54	*1954-55*	*1955-56 (estimated)*
State support per ADA	$167.47	$162 03	$159.74
Local support per ADA	123.75	135.27	146 15
Total cost per ADA	$291 22	$297 30	$305 89

The following table dramatically presents a drop of 2.4 percent in state support from 51.4 percent in 1953-54 to 49.0 percent in 1954-55.

TABLE II

SOURCES OF GENERAL FUND INCOME OF ALL SAN DIEGO COUNTY SCHOOL DISTRICTS

(Cents omitted)

	1953-54	*Percent of total*	*1954-55*	*Percent of total*	*1955-56 estimates*	*Percent of total*
Federal support	$3,425,387	8.7%	$3,594,116	8.2%	$3,165,766	6.5%
State support	20,231,869	51 4	21,526,759	49.0	23,354,998	47 9
Local support	14,950,699	38 0	17,972,036	40.9	21,366,985*	43 8
Transfer from other districts	732,529	1.9	841,463	1.9	862,525	1.8
Total income	$39,340,485		$43,934,375		$48,750,274	

* The total school district budget estimates of local tax support has been adjusted to reflect estimated total collections

The further deterioration of the percent of state support is noted in the 1955-56 budget estimate figures which show an additional drop of 1.1 percent or a total of 3 5 percent during the two-year period.

Growth in assessed valuation accounts for some increase in local support during the years 1953-54 to 1954-55. However, the rising costs of operating schools have required school districts to increase tax rates assigned to the General Fund.

TABLE III

ANALYSIS OF INCREASE IN LOCAL SUPPORT TO GENERAL FUNDS OF ALL SAN DIEGO COUNTY SCHOOL DISTRICTS FROM 1953-54 TO 1954-55

Increase due to growth in assessed valuation	$1,705,889	56.5%
Increase due to increase in tax rates	1,315,448	43 5%
Amount of increase	$3,021,337	100 0%

It should be noted that the increase of $1,315,448 due to increased tax rates in the foregoing table is 3 percent of the total income available to schools during 1954-55 as reported in Table II.

Reference has been made to the fact that local school districts have had to resort to increased tax rates in order to meet the rising cost of operating schools.

The 1956-57 school year tax rates will have to be increased as much as 6 cents for elementary and 6 cents for high school in order to provide funds for the new teachers retirement program.

The committee's attention is called to the need for a comprehensive study of the ability of the local property tax to continue to absorb the ever increasing costs of public education, especially as such increases must be met by high tax rates.

Assembly Bill No. 1276 is of special interest to equalization districts because the $12 per ADA for apportionment for growth is taken from the $60 equalization part of the $180. Passage of Assembly Bill No. 1276 would help provide funds to every district for enrollment increases as well as provide a higher level of equalization to districts having inadequate tax reserves

Assembly Bill No. 1276 will provide the State's schools with about 8 percent to 9 percent more ADA apportionment or about a 6 percent increase in the total funds available to schools.

School operating costs are continuing to spiral upward! Salary schedule adjustments in keeping with the general rise of wage scales in industry and government averaging 5 percent have been announced or are planned by most school districts in San Diego County for the 1956-57 school year. Since salaries account for almost four-fifths of the school budget, a 5 percent increase in salaries would be equal to an increased budget requirement of 4 percent. The anticipated 4 percent budget increase for salary adjustments and the 3½ percent deterioration of state support as established in 1953 more than justify the request for apportionment on a current basis with its resultant 6 percent increase in funds available to school districts.

Reginald M. Benton, Superintendent, Norwalk Elementary School District (December 12, 1956, at Los Angeles)

This question of financial support for many varying school districts in the State is a very complex problem. It is made complex for one reason because of the tremendous range of abilities locally that school districts have to support an adequate educational program. I would like to speak with reference to the school district that I represent, not because it is unique, but because it is typical of a great many school districts in this State.

We happen to be a rather large independent elementary school district. Our enrollment at the present time is in excess of 15,000 pupils. I would say that as a unit of organization we are well fitted to offer, if the financial base were there, a very adequate educational program We are large enough so we can offer the full scope of educational services. Our Board of Education desires to do this. We think we have the know-how, but we find ourselves coming up drastically short of finance to do this.

The only source of funds that our school district has is the local tax levy. Our citizens have on three occasions seen fit to raise the local tax rate in order to try to meet an adequate educational program. At the present time our voted maximum in our school district is $1.75

per hundred. Our actual operating tax is $1.93 because of the various overrides that are permitted under the law for retirement, for repayment of building loans to the State, and civic center activities, but even with this very high tax rate of $1.93 in our school district, we are not able within many, many dollars of coming up to the average amount spent per pupil by districts generally in this county. In fact, last year we fell short $25 per pupil.

This is in spite of the fact that we have made a much larger effort than is considered usual. In a school district in this county with an average wealth per pupil, a tax rate of $1 or $1.10 or $1.20 for elementary purposes—now I emphasize this—combined with the basic state aid that is received, allows that district, we will say, to spend somewhere in the neighborhood of $275 a pupil for elementary education. In our district, in spite of the present equalization provisions, and we do receive equalization aid, with a very high tax rate of $1.93, and with equalization we still can't spend more than $250 or $255 a pupil for the education of our children.

Our district is not unique. I would say it is more than typical. You may be familiar with the Norwalk area which has grown rapidly. This of itself is not the root of the problem. This has only compounded the problem. The problem is simply this, that in an area like Norwalk or Covina where housing is about the only taxable wealth, no matter how high you piled on the tax you can't raise enough money per pupil to finance an educational program of equal quality and equal scope to that of a district that has an assessed valuation per pupil that is considered average for the State. The average assessed valuation per pupil in the district I represent is less than $4,000. The state average, I believe, is somewhere around $10,000 per pupil.

What that simply means is this, that if, in an average district you levy a tax of a dollar, tax rate of a dollar, you will raise about $150 per pupil. In our district if you levy the same tax rate of a dollar you only raise about $38 per pupil. In theory this difference is supposed to be made up through the equalization law, the present existing apportionment law. However, even though we all subscribe, and our Legislature has on several occasions subscribed, to the theory of equalization, the present funds made available within the structure of the $180 constitutional guarantee doesn't provide enough money in the equalization fund to really equalize. It tends in that direction, but it does not equalize as borne out by the fact that even with a higher than average tax rate, we cannot come up anywhere near the average amount spent per pupil for school districts in this county.

Growth is only one of the symptoms that aggravates this problem. It isn't the basic problem. After we stop growing, which I think we will—our school district population has grown from about 4,000 to 106,000 since 1947 and I think we are about through because we are almost saturated. It is almost entirely built up into housing tracts, so we can't grow too much more; but even when we stop growing this problem will still be with us, this inequality of ability based on our local tax rate, our local tax effort to provide an adequate educational program.

The principle of equalization has been well established and I think needs no defense here. To implement it, additional funds must be provided and perhaps outside of the constitutional guarantee or if not outside at least some of the other things that are in there now that are taken out of this constitutional guarantee perhaps should be removed to provide more funds for equalization.

The property tax is collected and expended within the district where the property lies, but let's suppose that the job that is created is held by a man that lives in my school district. His children go to school there. They are deserving of a quality of education at least a foundation-type of program, and it is our responsibility to provide it, but the wealth that is taxable under the property tax doesn't come to our school district. Therefore, we say it is only just that through equalization funds, which are not property tax funds at all, but from the general revenues of the State, should be allocated to our district in sufficient amount to allow us to put on an educational program that at least comes up to what is considered a fair minimum, and that is not the case at the present time.

The farther a district is down the scale, the less adequate the equalization law works in its favor today. If you are near the average, then you are quite apt to come pretty close to providing an adequate educational program, especially if you make a little greater than average effort by your local tax rate. In our district even if we raised our extremely high tax rate now, if we raised it another 70 cents on top of our $1.93, we just barely come up to the county average per pupil. And some of the tax code areas in our school districts are now carrying a total tax rate of over $10. (We have tax code areas in our school district.) None is lower than $9.25 and the highest is over $10. Our Board of Education could hardly ask our people to put another 70 cents override tax on top of everything they are carrying.

One of the factors or one of the facets of our present apportionment law is a provision for an allocation for growth. This has been an immeasurable help to districts like ours that have had rapid growth and there will be others in the State that will benefit from it after we cease to benefit from it because, as I say, I think we are approaching saturation.

Unfortunately there has been consistently a deficit in this growth fund because it is set up in the apportionment law with a certain number of dollars based on last year's average daily attendance, taken out of the basic guarantee and set aside for growth so that districts apply twice a year for this money as they can prove a certain amount of growth. Now, that is fine, and again in theory it is perfect, but then when the applications come in there isn't enough money to cover it and so there is a deficit factor applied, which has run anywhere from 2 percent to as high as 19 percent. Well, you see the reason you need this money is to hire additional teachers because of the growth. So probably you have hired them in January or February and they are on your pay roll and then anticipating this growth you know that you need to employ them and you do in order to keep your class size from going out of control; and then at the end of the year, when you receive your apportionment, you find a deficit factor has been applied.

What I am telling you here today is simply an example of the operation of the present law which has in theory done two things. It has provided equalization; it has provided aid for rapidly growing districts. In actual practice we see some shortcomings in both of these phases, both in equalization and in the fund for growth, and we would hope that in the new apportionment bill that more adequate equalization would be provided for districts of less than average ability and a more adequate guarantee of the payment of growth moneys would be made where districts qualify for growth moneys.

Jack P. Crowther, Assistant Superintendent (Budget Division), Los Angeles City School District (December 12, 1956, at Los Angeles)

We are sympathetic, and extremely so, with the problems of districts such as that presented by Mr. Benton, (see above) and we know that some change in the present equalization program is inherent if an education program in the State of California which provides equal opportunities to all the young people in California is to be maintained.

We have made some projections that we will present to the Los Angeles Board of Education for consideration in a possible tax rate increase. In the five-year projection in the high school district alone we anticipate that in five years we would be 18 million plus in the red.

At the present time in our district, about 63 percent of the moneys are provided from the local district taxation sources, and 37 percent from State sources. Our 10-year projections indicate that in 1966 Los Angeles will be having three-quarters of a million students in the schools. We grow at the present time at the rate of about 25,000 students a year. In four and a half years, since we have a semester system, we actually grew a little over 100,000 students.

Jack Robinson, Superintendent, Paramount Unified School District (December 12, 1956, at Los Angeles)

I happen to be the Superintendent of a district that last year paid a school tax rate of $5.26. We are a unified district. We have elementary and secondary within the unified and then we are a part of the Compton Junior College District and our people paid that tax. In spite of the effort that our people make with the $5.26, we get one-fourth the amount of money that one-third the effort does in Beverly Hills. So equalization is good and if we didn't have it we would be out of business, but the difference between the rich district and the poor district is so great that the present degree of equalization is simply inadequate.

The average total tax rate in our school district last year was $9.14, so you see well over half of it goes to the schools, and in spite of that effort made by our local people, that only produces 38 percent of the amount of money it takes to run our school district, and 62 percent comes from the State.

Paul Borgfeld, Educational Statistician, Long Beach Unified School District (December 12, 1956, at Los Angeles)

The increasing share of higher school costs which has been borne by the school district property tax since 1953 is illustrated by the data in the two tables which follow. The data in the tables show the school tax rates in the 20 largest communities of Los Angeles County. The

data are presented in terms of communities because of the varying types of school district organizations to be found among the communities. Although the data are for Los Angeles County only, the picture of tax rates in excess of the statutory maximum, widely differing tax rates among the communities, and increasing tax rates since 1953, is typical of that for the entire State.

TABLE 1

SCHOOL TAX RATES FOR 1956 IN THE 20 LARGEST COMMUNITIES IN LOS ANGELES COUNTY

(Ranked According to Total School Tax Rate)

Community	Total school tax rate	Districts serving community	General purpose rates subject to statutory maximums			
			(a) Statutory maximums	(b) Rate actually levied in 1956-57	Actual excess rates for community (b-a)	Voted excess rates in effect for 1956-57
1. Redondo Beach	$5 1759	Elem. High J C.	$0 90 75 35	$1 4000 1 3500 5500	$1 3000	$1 30
2. Norwalk	5 0437	Elem. High J.C.	90 75 35	1 5483 1 4000 3500	1 2983	1 50
3. Bellflower	4 9971	U (K-12) J C.	1 65 35	2 8716 3500	1 2216	1 35
4. Paramount	4 7176	U (K-12) J.C.	1 65 .35	2 8500 3478	1 2000	1 20
5. Whittier	4 3161	Elem. High	.90 75	1 2500 1 5400	1 1400	1 14
6. El Monte	4 2950	Elem. High	.90 75	1 6860 1 1500	1 1860	1.45
7. Compton	4 2779	Elem. High J.C.	90 75 35	9000 1 6500 3478	9000	.90
8. Covina	4 2324	Elem. High J.C.	90 75 .35	1 5000 1 1000 .5500	1 1500	1 20
9. Inglewood	3 5765	U. (K-12) J C.	1 65 35	2 2100 .5500	.7600	.76
10. Arcadia	3 5297	U (K-12)	1 65	2 2500	.6000	.60
11. Alhambra	3 5248	Elem High	90 75	*1 2996 *1 3548	1 0044	1 35
12. Pomona	3 4618	U (K-12) J C.	1 65 35	1 8870 5500	4370	.50
13. Pasadena	3 4226	Elem. High J C.	90 75 35	*1 3921 *1 0663 * 2940	.8084	1 05
14 Long Beach	3 4124	U. (K-14)	2 00	2 3817	.3817	.95
15. Torrance	3 0945	U (K-12) J C.	1 65 .35	1 6500 5500	20	20
16 Glendale	3 0406	U (K-14)	2 00	2 3125	3125	50
17. Burbank	2 9817	U. (K-12)	1 65	*2 0356	3856	.75
18. Los Angeles	2 9580	Elem. High J C.	90 75 35	1 0838 8868 1874	3206	35
19 Montebello	2 5523	U. (K-12)	1 65	1 9000	2500	25
20. Santa Monica	2 4078	U. (K-14)	2.00	2 0000	None	None

* Rate calculated from budget data. Of the 19 communities which pay excess rates in 1956-57, the typical rate (median) above the statutory maximum is $0.8084 (Pasadena). The excess rates range from $0 20 in Torrance to $1.30 in Redondo Beach.

TABLE 2

TOTAL SCHOOL TAX RATES FOR 1953-54 COMPARED WITH 1956-57 IN THE 20 LARGEST COMMUNITIES IN LOS ANGELES COUNTY

(Ranked According to Total School Tax Rate in 1956-57)

Community	Total school tax rate	
	1953-54	1956-57
1. Redondo Beach	$3 9251	$5 1759
2. Norwalk	4 1691	5 0437
3. Bellflower	4 1842	4 9971
4. Paramount	4 7672	4 7176
5. Whittier	3 5776	4 3161
6. El Monte	3 4839	4 2950
7. Compton	3 6163	4 2779
8 Covina	3 8847	4 2324
9. Inglewood	3 6887	3 5765
10. Arcadia	3 6427	3 5297
11. Alhambra	2 6170	3 5248
12. Pomona	3 2936	3 4618
13. Pasadena	2 6700	3 4226
14. Long Beach	2 6723	3 4124
15. Torrance	2 9826	3 0945
16. Glendale	2 5868	3 0406
17 Burbank	2 9349	2 9817
18 Los Angeles	2 4288	2 9580
19. Montebello	2 5052	2 5523
20. Santa Monica	2 3074	2 4078

The average total school tax rate (including bonds, total operating rate and junior college tuition tax rate) increased from $3 2969 in 1953-54 to $3 7509 in 1956-57 This represents an increase of approximately 45 cents per $100 of assessed valuation, or an increase of 13 8 percent

D. FINDINGS

1. The contribution of the State General Fund to the support of the operating costs of the public schools has steadily decreased in terms of percentage since the adoption of the Initiative Constitutional Amendment of 1952 (Article IX—Section 6).

2. At the same time, the proportionate share of the operating costs of the public schools supported by taxation of property located in the school districts of the State has steadily increased.

3. As a result of this shift in the incidence of public school financing, local school district tax rates have increased so generally throughout the State that the majority of school districts have found it necessary to vote to exceed the statutory maximum rates authorized by the Legislature.

4. Also, as a result of this shift in incidence, the General Fund sources of revenue have escaped their equitable share of the responsibility for financial support of the public schools of the State.

5. The costs of special programs for the physically handicapped, the mentally retarded, and transportation, and allowances to the districts for growth in attendance from the preceding fiscal year to the present fiscal year—are deducted from the $180 constitutional minimum appropriation. Thus, only about $156 per ADA is available for basic aid

as required by the Constitution, and for equalization aid to school districts with insufficient assessed valuation.

6. Only about $36 per ADA is available to equalize the very great differences among the districts in their ability to raise local property tax revenues. This amount is insufficient to actually bring about equalization of educational opportunities for children of all of the school districts of the State.

7. As a result of attempting to provide their children with an adequate educational program, many districts of low assessed valuation have found it necessary to levy excessively high tax rates against the already overburdened property owner.

8. The existing statutes governing appropriations to the State General Fund for school support do not provide $180 for financing the costs of a pupil in attendance during a current school year. Because appropriations are based upon attendance during the prior year, and because attendance is greater this year than during the preceding year, actually only about $167 is available.

9. The special programs for the physically handicapped and mentally retarded children of the State, and the transportation of some children to and from school are essential services of our Public School System. However, the excess costs of these essential programs, when subtracted from the constitutional minimum of $180, result in a dilution of the amount available to support the costs of an adequate educational program for all the children of the State.

10. The costs of education have increased since the 1952 constitutional amendment because of the shortage of teachers, the general increase in competitive salary rates in other occupations, and a 13 percent decline in the value of the dollar. During the period of increasing educational costs, the amount of state funds appropriated and apportioned per ADA has not increased.

CHAPTER III

ASSEMBLY BILL No. 3072

A. PURPOSE

Assembly Bill No. 3072, introduced in the 1955 General Session, proposed that average daily attendance be redefined as average enrollment in order to effect a simplification of pupil accounting and reporting in the school districts of the State, and in order to effect a more equitable distribution of the State School Fund among the school districts. At present, average daily attendance is the basis for appropriation and apportionment of the State School Fund.

B. ANALYSIS BY THE STATE DEPARTMENT OF EDUCATION

December 16, 1955

To: Members of Subcommittee, Interim Committee on Education

Subject: Analysis and Review of Assembly Bill No. 3072—1955 Regular Session

Assembly Bill No. 3072 proposes legislatively to redefine average daily attendance as "average enrollment" and define "average enrollment" as the quotient obtained by dividing the total number of pupils enrolled at the end of each school month by the number of months schools were in session. Its purpose is undoubtedly to seek simplification of the present system of recording and reporting attendance for purposes of computing state apportionments to school districts.

The bill in its present form is by design incomplete and is unworkable. Serious doubts exist if a bill could be contrived that would be workable using enrollment or average enrollment as a basic concept. The Constitution which sets the level of minimum support for the Public School System does so in terms of $180 per unit of *average daily attendance.* It is questionable if legislative enactment could define average daily attendance in terms other than attendance. Average enrollment is not attendance and is not synonymous with attendance.

Present state support is based on attendance, not only in terms of being present, but in terms of being present for a specified period of time. The following are typical definitions of a day of attendance:

Kindergarten	180 minutes is a day of attendance
Grades 1- 3	200 minutes is a day of attendance
Grades 4-12	240 minutes is a day of attendance
Grades 13-14	525 hours of attendance is one unit of average daily attendance
Classes for adults	180 minutes is a day of attendance with a limitation of 15 hours per week in all classes except trade and industrial classes where 525 hours of attendance is one unit of average daily attendance
Home instruction of the physically handicapped	1 hour of instruction is a day of attendance.

From the above examples and because of the failure to consider time, it is evident that it is impossible to use enrollment especially in grades 13 and 14, in classes for adults, and in classes for special pupils as a basis for determining basic state apportionments and more impossible when attempting to determine the amount of excess costs to be apportioned for special classes.

The purpose of the bill—to simplify attendance and reporting procedures—is good. However, the purpose of the bill seems to be based on the premise that attendance recording and reporting is an end in itself. In fact, attendance recording and reporting is a by-product of the larger and more important function of pupil accountability. This function of pupil accountability would be necessary if average daily attendance were never reported. Teachers should know the pupils they are teaching, should recognize and record absences, and to help in the development of pupils, should know why absences occur. Without this knowledge it is impossible to fully understand the problems that are faced by a pupil. The requirements of teacher-time to handle the recording and reporting of average daily attendance beyond the necessity for maintaining pupil accountability are small. Should average daily attendance be abolished, the requirement that the teacher and school know which pupils were absent, and why, would still persist.

The present system of recording and reporting average daily attendance is intricate in its whole, but not complex when separated into the tasks that individuals must perform. Because it is the basis upon which state expenditures for public schools are determined, it must be fair and accurate to assure that state aid will be allocated with as high a degree of equity among districts as possible. This idea of equity should be paramount and should not be sacrificed for over-simplicity.

Constant review is being made of the present system of recording and reporting average daily attendance by the Department of Education in cooperation with committees representing the various levels of the educational system. The objective of these reviews is to provide for simplicity as far as possible within the framework of the law. Some progress has been made.

1. Procedures have been adapted to machine methods of accounting for attendance.

2. Regulations have been liberalized at the junior college level as to when absences must be reported to the principal's office.

3 The provisions permitting central attendance accounting and central register-keeping in elementary schools has been encouraged to relieve teachers of clerical tasks.

4. Exemption from the requirement of a teachers' annual report has been encouraged when district reports are rendered monthly to the county superintendent of schools.

5. Acceptable minimum forms and procedures have been suggested and adopted by many districts.

In addition to the above listed activities, further simplifications are under study and are likely to be adopted Among them are changes in:

1. Regulations to further simplify accounting procedures at the junior college level.

2. Changes in regulations to further simplify the use of machine accounting methods.

3. Changes in requirements of reporting to eliminate the separate reporting of absences due to illness, quarantine and medical services.

4. Changes in regulations to reduce time and work required in the now burdensome and costly procedure for verifying absences due to illness.

5. Revision of the elementary school register to require mandatory use of only those portions of the register that relate to attendance. Other portions may or may not be used at the discretion of the district.

Within the framework of the law there are few simplifications and clarifications possible Among them are the following to which attention may be given.

1. There is little reason why all attendance in classes for adults should not be uniform. The present limitation of 15 hours per week in classes other than in trade and vocational subjects places an unnecessary clerical burden on districts and is not justified from the standpoint of equity or cost.

2 The definition of attendance that may be counted for apportionment purposes needs clarification especially as it relates to on-the-job-training, and work experience classes. It is practically impossible under present law to interpret the intent of "immediate supervision" as stated in Education Code Section 6904.

3. The use of a common divisor to translate days of attendance to average daily attendance—set at the minimum school year of 175 days —would provide some simplification.

With the three preceding exceptions, present legal provisions defining attendance and average daily attendance are clearly stated and easily administered.

It should be recognized that the system of recording and reporting attendance for apportionment purposes is by necessity an extremely intricate system with many related parts. It is impossible to substitute another system for it unless such a system is completely worked out in detail so its different parts may be in harmony. The present system is working satisfactorily. It is an outgrowth of the necessary work required in maintaining pupil accountability within a school and a school district While it is intricate in design as a whole, it is not complex or overburdensome when separated into the component tasks required. Further simplification is possible and will be achieved. The strongest point in favor of the present system is that it has been devised as the result of long experience in this and other states and has proven itself as a device with which the total amount of state aid may be determined accurately, protecting the State's interest, and allocated among the districts with equity.

Prepared by the
DIVISION OF SCHOOL ADMINISTRATION

April 17, 1956

To: Members of Subcommittee, Interim Committee on Education

Subject: Statement on Assembly Bill No. 3072—1955 Regular Session

These are some of the problems involved in a change to enrollment as a basis of state apportionments. These suggestions are based on the premise that each school has the problem of pupil accountability and

should for instructional purposes, as well as purposes involving the enforcement of compulsory education laws, keep a record of pupil attendance. Under this concept, attendance or average daily attendance is a by-product of pupil accountability and not an end in itself.

Elementary Level

While there is a fairly constant relationship between enrollment and average daily attendance in regular day classes and enrollment with adequate controls could be used for apportionment purposes, it cannot serve as a basis for computing excess costs of special education where the present unit is average daily attendance. These questions may be asked:

1. How can enrollment be used to determine the support due a district for individual instruction at home or at bedside in an institution? How many days enrolled in individual instruction will be counted as a unit of support? (now $400 per average daily attendance with one hour of instruction equal to a day of attendance)
2. How can enrollment be used to determine the support due a district for remedial instruction? How many days, hours, or weeks enrolled should be counted as a unit of support? (now $400 per unit of average daily attendance as computed for regular classes)
3. How can enrollment be used as a basis for support in the transportation of physically handicapped pupils? How many days, weeks, or months of transportation is a unit of support? (now $350 per average daily attendance in attendance of cerebral palsied, blind, deaf, or orthopedically handicapped pupils in a special class for physically handicapped)
4. Many elementary pupils attend school outside the district of residence. Large numbers attend junior high schools maintained by high school districts. Tuition payments are made by the district of residence to the district of attendance. Average daily attendance is the present basis for such payments. If enrollment is used, how many days, weeks, or months of enrollment would constitute a unit of payment?

High Schools

1. The same problem of determining a unit for support in special classes exists at the high school level. How many days, weeks, or months of enrollment will constitute a unit of support for pupils in individual instruction, in remedial classes, in classes for the physically handicapped?
2. Cumulative enrollment is now used as a basis of support for driver training (the number of pupils trained). However, this type of pupil accounting has lost no complexity and is required to be controlled severely by statute and by regulations of the State Board of Education.
3. Tuition payments are more common at the high school level than at the elementary level. Payments are now made on a basis of average daily attendance. Tuition payments for nonresident high school pupils are raised from taxes in the nonhigh school territory. The use of enrollment for tuition purposes could and most likely would disrupt this system and result in inequities in such charges. How many days, weeks, or months of enrollment would be required to serve as a unit in charging for tuition? How many days, weeks, or months of enrollment would

be required to determine the unit for charging the $200 per average daily attendance now charged for use of buildings and facilities? Should a pupil enrolled for a week be considered 5/175 of a unit, or if enrollment is taken monthly, shall such a pupil be considered 20/175 of a unit for tuition purposes? One factor is four times the other and would have a very serious effect on tuition charges made.

Junior College Level

1. The use of enrollment in place of average daily attendance at the junior college level presents serious problems. At this level, hours of pupil instruction or attendance is the present unit with each 525 hours are equal to a unit of average daily attendance. Pupils are enrolled for a varying number of hours depending on the particular course taken. Should a pupil enrolled for 6 to 10 hours be counted the same as a pupil enrolled for 16 to 18 hours for apportionment? It is possible to use a factor such as "equivalent full-time pupil" for purposes of staffing and program building, but it is not precise enough to serve as a basis for apportioning state support and to my knowledge such a system is not in use by any state.

2. Because of the relatively small number of junior colleges in the State, there are many pupils in attendance that reside in nonjunior college territory whose tuition is paid by a tax levied on the area of a county not in a district maintaining a junior college. The unit for measuring this tuition is now average daily attendance. (that is, hours of attendance) A more precise measure than number of pupils enrolled must be used if the charges are to be equitable. The enrollment of a junior college is not a measure of the service it renders and the relationship between enrollment and service rendered (hours of instruction) varies widely among the junior colleges of the State, depending upon the type of program offered and the makeup of the student body.

Classes for Adults

Because of the wide variety of courses offered in classes for adults and because it all consists of part-time education, enrollment cannot be used. There is no definite relationship between enrollment in classes for adults and average daily attendance. The only acceptable measure of service rendered in this type of class is in terms of hours of attendance. No other measure is used anywhere as a basis for support by a state for this service.

The constitutional basis for public school support in California is average daily attendance. This concept implies actual attendance, not just being on the rolls, and attendance for a specified period of time. It is difficult to see that enrollment can satisfy this concept and directive.

Information presented to this committee previously has shown a relationship to exist between enrollment and attendance. These examples were limited to attendance in regular classes of the elementary and high school levels. No attention was given to the junior college level, classes for adults, special classes for the physically handicapped, and mentally retarded; or, to attendance on which tuition payments are based. These classes and purposes must be considered to provide for a complete attendance accounting system. They cannot be neglected

and they must be a part of and conform to the general accounting system.

Improvements have been made in the present system, and more improvements and simplifications are possible. School districts now have wide latitude in determining how they proceed to keep their attendance. Many districts are burdening themselves with unnecessary procedures that are not required by law or regulation.

These facts may be pointed out and emphasized:

1. The system of recording and reporting attendance for apportionment purposes is by necessity intricate with many related parts for California's system of support is more complete than in any other state and provides in addition to general support allocations for special programs and services.

2. The present system is working satisfactorily. It is an outgrowth, a by-product, of the necessary work required in maintaining pupil accountability within a school and school district.

3. It is certain that any system substituted for the present system would have to be worked out in detail so its different parts would be in harmony, and that no less law, regulation, or control would be required. It is conceivable that more rigid controls would be required to define enrollment as it applied to many and varied types of classes and services.

4. We have with school districts examined the claim of great savings in school funds suggested by simplification. The claims seem unsupported and the major costs of pupil accountability would continue were it not necessary to record and report average daily attendance.

5. The strongest point in favor of the present system is that it has been devised as the result of long experience in this and other states, and has proved itself a device to measure service with which the total amount of state aid may be determined accurately, protecting the State's interest, tuition charges may be computed fairly and state aid allocated among the districts with equity.

Prepared by the
DIVISION OF PUBLIC SCHOOL ADMINISTRATION

BY THE OFFICE OF LEGISLATIVE COUNSEL, STATE OF CALIFORNIA

SACRAMENTO, CALIFORNIA
October 3, 1955

HONORABLE CARLEY V. PORTER
401 West Palmer Avenue
Compton, California

Average Enrollment—#290

DEAR MR. PORTER:

You have asked for an analysis of Assembly Bill No. 3072 of the 1955 Session, relating to average enrollment.

The bill in effect would have substituted "average enrollment" for average daily attendance in all provisions of the Education Code in which the latter term is used.

Average enrollment for a school district would have been computed by determining the quotient arising from dividing the total number

of pupils enrolled on the last school day of each calendar month by the number of calendar months in which school was actually taught in the regular day schools of the district.

In lieu of receiving a certain amount of money per unit of average daily attendance, a district would receive the same amount of money per unit of average enrollment, under the various State School Fund allocations.

Under present law, average daily attendance is computed by counting each day or fraction of a day of attendance of all pupils of a district and dividing such total by the number of days school was actually taught in the district, not less than 175 in number, or in some cases by dividing by 175. For determining junior college average daily attendance, the total number of whole or partial class hours (50 minutes for a whole class hour) of pupils is divided by 525. Absences for illness, or dental appointments, or because of quarantine are not counted as absences. It is, of course, necessary for districts to keep daily records of attendance for determining average daily attendance.

It is also to be noted that the California Constitution requires that there be transferred to the State School Fund, each fiscal year, an amount which is not less than $180 for each pupil in *average daily attendance* in the various public schools during the preceding fiscal year, and that each district receive at least $120 for each pupil in *average daily attendance* during the preceding fiscal year (Calif. Const., Art. IX, Sec. 6). It therefore appears to us advisable to determine whether the substitution of "average enrollment" would meet the constitutional requirement. If not, the whole purpose of the bill would probably be defeated. We do not at this time express any opinion on this question but merely wish to indicate that it should be considered if the bill is to be adopted into law.

Very truly yours,

RALPH N. KLEPS
Legislative Counsel
By BARBARA COCHRANE CALAIS
Deputy

C. SUMMARY OF REPRESENTATIVE TESTIMONY AT COMMITTEE'S PUBLIC HEARINGS

B. W. C. Seaman, Certified Public Accountant, Compton (December 19, 1955, at Los Angeles)

Two years ago the State Department of Finance requested that all auditors engaged in school audits closely examine the attendance records of all school districts. In the course of our examination we found going from school to school that there was a vast amount of clerical work involved in school attendance accounting. In fact, the system is so complete and so almost perfect it just about overwhelmed us. We couldn't quite believe what we found. We concluded and we so reported that there need be little fear the records were inadequate. I feel, based on our work and those of the other CPA's in this field that the attendance records in the State are probably very reliable. However, just why do we have all this detail work? Well, first of all,

it is required to produce the average daily attendance factor. The ADA factor is required to apportion the state school funds as is provided in the Constitution and code.

But, is ADA the best basis for apportionment and why would we use it if it is so costly, and of course, that is what all this work boils down to, if it is so costly to produce it. Now, I submit that ADA is not the best basis and respectfully recommend that we replace ADA in our school system with average enrollment for several very good reasons.

First of all, average enrollment would be much less costly to develop. I have an estimate that roughly it would save $10,000,000 throughout the State annually by use of average enrollment. Secondly, average enrollment is a much more realistic figure. We justify ADA as a factor because it is objective and, of course, we need objectivity in apportioning money. It is not only desirable, it is practically essential that we have something so objective we can avoid a challenge that there is an inequitable distribution of the school funds.

However, ADA is not truly related to the needs of the district for various reasons, principally the fact that the school must maintain classrooms and pay teachers on the basis of the students enrolled in the school not the attendance. The fact that the student is absent, doesn't reduce the expense of the district. It does reduce the apportionment to the school. So we have an unrealistic element here. We are not dealing with the situation directly.

Thirdly, average enrollment is truly objective. In fact, it is more objective than ADA. It is more objective primarily for the reason it is easier to produce. It does not involve the multiplicity of calculations which inherently contain a potential margin of error that is definitely not measurable.

Average enrollment consists very simply of a determination of the number of students truly enrolled in the district. We now have all the paper work necessary to arrive at this figure. We don't need to start a new thing. It wouldn't increase any cost. We would merely need to establish some sort of administrative check or audit by the State Department of Education to know that we do have a true statement of the average enrollment. The average enrollment figure to be used as replacement of ADA could be determined either daily, weekly or monthly, as the Department of Education sees fit after some study.

Now, I would like to point out in all this discussion I haven't referred to the amount of money that the State is apportioning. That is not a matter in my province. I am dealing only with the method. It is up to the Legislature to determine the amount that is to be apportioned. I am not discussing that at all. I am simply saying that our method of apportioning the school funds is so costly that I feel we might give some consideration to the replacement of your method by this factor of average enrollment.

Frank Wright, Associate Superintendent of Public Instruction (December 19, 1955, at Los Angeles)

See analysis of Assembly Bill No. 3072 by the State Department of Education above.

Don T. Delmet, Attendance Consultant, Office of the Superintendent of Schools, Los Angeles County (December 19, 1955, at Los Angeles)

I visit quite a few districts in the county and I haven't found one district yet that tells me that this accounting procedure of recording is simple. They are all complaining about the required attendance records that they must keep.

I was appointed chairman of the research committee of the Child Welfare and Attendance Officers last year, and we made a study of enrollment versus ADA. We are quite interested in the proper wording of the bill, and I think we can be just as accurate on enrollment as we can on ADA.

We made a study last year, over the year, taking all the ADA of Los Angeles County as against enrollment and we found that there was less than 2 percent differential. It has been stated that maybe if we go on an enrollment basis we might get sloppy in our bookkeeping; and not account—in other words, that it would benefit the district to forget that that child hasn't transferred out and collect for his enrollment. I would say that would be pretty sloppy bookkeeping, but nevertheless that might happen. I do think that a school superintendent does not hire teachers or buy desks on the basis of ADA. He hires teachers on the basis of enrollment and he hires or buys desks on the basis of enrollment. He doesn't buy busses on the basis of ADA. He buys busses on the basis of enrollment.

There are certain limitations or certain cautions that we should take in regard to just simply counting enrollment. It should be pinpointed as to what constitutes an enrollment and how long after the child leaves he should be dropped and not counted as enrollment. That is something that has to be worked out My biggest complaint with ADA is that there is too much accounting for the money that we get from the State. It is a lot of money, but it is too complicated, too much red tape.

Fred Bewley, Superintendent, Whittier City School District (December 20, 1955, at Los Angeles)

I want to be on record as favoring the change from average daily attendance to average daily enrollment. I am convinced in my mind it would greatly simplify the record keeping and save the districts of the State a great deal of money and it would provide for money for the educational program which is now being spent in what seems to be unnecessary clerical work.

The statement was made here yesterday that there would need to be an extensive procedure set up to insure accuracy and honesty in these records. I think it should be noted that the present system is equally subject to dishonesty or inaccuracy and that a system based on average daily enrollment need not be any complicated system in order to remove those. It seems to me that collusion on the part of us school people could violate the intent of the ADA just as easily as we might the average daily enrollment, and after all, it is not the system that is set up that keeps me honest. It is my own personal worth And I don't think the worth of the school people is going to be lowered in the least by changing to average daily enrollment, and I would strongly

urge that that change be made because I am convinced in my own mind it would provide a more equitable education program for the children in the State.

(April 20, 1956, at Bakersfield)

At the meeting last December in Los Angeles, you asked me to gather together some data relating to the estimated costs of keeping attendance records on the basis of average daily attendance as against average daily enrollment.

We have stated on an hourly basis the amount that we are paying each of the types of employees which at sometime along during the year are connected with the matter of keeping records and average daily attendance, and we have analyzed the time spent and the approximate cost in keeping the necessary and required forms.

A summary of the cost of keeping average daily attendance records in our district leads us to the conclusion that it is approximately $15,000 annually. The estimated cost of keeping records on the average enrollment would be roughly $3,300 a year. This is slightly over a fifth of the cost of keeping the average daily attendance We might reduce our cost of keeping these attendance records to approximately 21 percent or 22 percent of our present cost if we changed from average daily attendance to average daily enrollment

Instead of taking $15,000 worth of time of teachers and administrators and secretaries and putting it into attendance records, we could use roughly $3,000 worth of it and have them free for educational work the rest of that time.

J. Milton Beck, Supervisor of Child Welfare and Attendance, Office of the Superintendent of Schools, Santa Barbara County (December 20, 1955, at Los Angeles)

Last year I was President of the Southern Section of the Child Welfare and Attendance Association. This year I am Vice-President of the State Association. And a year or two ago I made somewhat of a hobby of mine to study this problem because I felt there was a real need for a simplication, and we had had some experience also in trying to do some child accounting work also on J-31. We were advised by the State Department that on J-31 we should separate our child accounting from the fiscal accounting because we were keeping records not only of verified illness on the record, but we were also keeping record of all other absences, as we were studying the absence of students.

A separation was made and also we received permission from the county superintendent to make a study on average enrollment in Santa Barbara County. I took the actual enrollment as is obtained each year in October and in March, and to that I also took the actual enrollment at the close of school, which gave three samples throughout the year. I took the average enrollment, compared it with the ADA. I found that I can take three samples a year and end up with the same answer that a teacher would have by taking 180 samples a year. The comparative data are actually available in state and county offices

Paul Borgfeld, Educational Statistician, Long Beach Unified School District (December 20, 1955, at Los Angeles)

Since 1942 I have seen an enormous increase in the complexity of attendance accounting in the State. We have discussed this matter in

Southern California for two years now. We have had a committee representing most of the larger districts of Southern California. Last year, the committee asked me to draft a brief based upon our discussions. The intent of our meetings was to attempt to simplify the accounting procedures necessary for the accumulation of data for apportionment, and we came up with the following resolution which represents the thinking of quite a large number of people who were directly involved in this problem in Southern California.

> "That the State Department of Education submit legislation to the California State Legislature which will simplify attendance accounting for apportionment purposes;
>
> "That this legislation shall include a definition of average daily attendance in regular elementary and high school classes during the academic year as the average of the active enrollment at the end of each of the 10 school months;
>
> "That this legislation shall include a definition of average daily attendance in junior college classes and classes for adults during the academic year as the average of student hours enrolled (on an academic year basis) at the end of the first and sixth months divided by 525."

Assessed valuation is a very important factor in figuring equalization allotments to the districts. We know that there are wide discrepancies in the assessment practices of the various areas of the State, yet we use those inequitable assessments as a factor in calculating equalization money to the districts. We know that an inequity therefore exists in the distribution of these equalization moneys. Yet at the same time we become very meticulous in the derivation of the number of units of average daily attendance on which the apportionment to a district will be based. We become so meticulous that we add up hundredths of days of attendance. We accumulate, in other words, fractions of days of attendance, in some cases down to the one-hundredth of a day of attendance, and in regular classes in units of five-hundredths of a day of attendance. I just put those two things side by side. I think there is an inconsistency here; that is, the detailed meticulous accounting in terms of days of attendance which later on is converted into units of average ADA and at the same time the use of this only approximate index of the wealth of a district which enters into the equalization formula.

The objective of this committee was to attempt to bring about some simplification of this terrifically complex attendance accounting system. We began our discussion with two basic ideas. The purpose of the collection of the attendance data is twofold. The first is to determine the mandatory number of dollars the Legislature must appropriate under the Constitution, $180 per unit. The second purpose is to distribute these appropriated amounts in an equitable manner among the various districts of the State according to an equalization formula that the State Legislature desires to adopt. That is the reason we are going through all of this paper work. Unless you have actually seen the paper work involved, I don't believe you could imagine it.

At the elementary level there is a state register with all the names of the students listed. The data in the register must be subdivided into days not enrolled, days of absence other than illness, days of

absence, verified absence due to illness and days of attendance. These must be added up at the end of the month. Then all of the registers go into a principal's office.

In the principal's office the data are accumulated by a clerk or two clerks, at the end of each month. The principal's report is a result of the addition of all of these teachers' reports, and these principals' reports are then fed into a central office where other processes and checking are necessary.

At the high school level, perhaps the most common procedure is to have a Kardex file in the principal's office with a card for each individual pupil. Reports come in from each teacher, a little slip of paper denoting whether that student has been absent. Then you have to alphabetize and accumulate these slips for each student. Then you have to figure how many minutes this high school student was absent from the apportionment day established by the Legislature. Then you have to convert that into the percentage of absence from the apportionment day which is then recorded on the Kardex card.

At the end of each month in a high school such as one of our high schools with 3,200 students, it is necessary for two clerks to spend some days adding across on the Kardex cards, then accumulating all of the columns on the Kardex card: days not enrolled, days of absence other than illness, days of absence due to illness, and attendance, and then proving it all—adding up these 3,200 cards.

In a junior high school, it gets a little more complicated because there it is necessary to have separate files for grades 7 and 8, and grade 9 because high school consists of grades 9 to 12 and elementary consists of kindergarten through grade 8. So you have to have two accumulations and, of course, you have to be very careful to keep the two separate.

That is part of the story faced by clerks, teachers, principals, vice principals, counsellors, nurses, all of whom get into this act of accumulating these days and fractions of days of absence due to illness and attendance. It becomes a major operation within any large school, a major clerical and administrative operation. With that background, the committee wanted to attempt a simplified method of first of all arriving at the number of units as a basis for the Legislature's appropriation, and then as a basis for distributing the money equitably.

We arrived at this idea which we have in our resolution: that the best way to do it for regular classes during the academic year is to simply report the enrollment, what is called active enrollment, at the end of each month, add it up for the 10 months, move the decimal point over one and have the average enrollment for each of the 10 months of the school year.

It has been mentioned the average enrollment is a larger figure than ADA including absence due to illness, and that is true. The data on a state-wide basis are available in the state office.

The following data were abstracted from publications of the Education Research Department and the Bureau of Apportionments and Reports of the State Department of Education to show the relationship between "average enrollment" and "average daily attendance" during an academic year in regular classes, kindergarten through grade 12 only:

STATE-WIDE ENROLLMENT AND AVERAGE DAILY ATTENDANCE, 1953-54

	Enrollment		
	October, 1953	March, 1954	Average
Kindergarten—grade 8	1,668,211	1,687,730	1,677,971
Less kindergarten	—212,809	—210,984	—211,897
	1,455,402	1,476,746	1,466,074
Plus 150/180 of kindergarten enrollment (To adjust for typical double-session of 150 minutes)	177,340	175,819	176,580
Average adjusted enrollment			1,642,654
Average daily attendance			1,618,942
Ratio ADA to average enrollment			9856
Grades 9—12 (Excluding "adults")	463,061	449,737	456,399
Average daily attendance			436,569
Ratio ADA to average enrollment			.9565

Comparative data for 1953-54 and 1952-53 indicate the following very consistent relationships:

	Kindergarten-grade 8	*Grades 9-12*
1952-53	.9839	.9641
1953-54	.9856	.9565

It is clear in my mind, from the standpoint of kindergarten through grade 12 at least, that it would be a very simple thing to switch over to average enrollment from average daily attendance by using a percentage knock-off factor established by a statistical study at the state level.

Theron L. McCuen, Superintendent, Kern County Joint Union High School District (April 20, 1956, at Bakersfield)

This matter of average daily attendance is complicated, to be sure. I see no better way to make an equitable summary and determination for the distribution of state moneys under the present program. My experience has been limited to the secondary level.

I have reviewed the testimony of this committee at your December meeting in Los Angeles and may I say that I concur in the statements that Dr. Frank Wright made to you there on this subject. We have a variable method of determining average daily attendance at the various levels, a certain number of minutes a day constitutes average daily attendance for apportionment purposes on the kindergarten level, a different amount for grades 4 to 12, and an entirely different basis for junior college. And it is regarding the high school and junior college part and their varied programs that I would like to speak. On the junior college level where 525 hours per year counts as one unit of ADA, I don't see how you could take average enrollment in determining your average daily attendance or whatever basis you want to use.

On the adult level you have a different formula for determining average daily attendance, and your adults are not registered for a

full program as your elementary or even your high school youngsters are. For example, in our own district I have a copy here of our seventh school month attendance report, and we would like to have this report whether it is required by anybody or not This is the internal report we have for our own purposes. We had in the seventh school month, February 20th to March 16th actual enrollment in the adult program, and this is separate from the extended day and junior college, 8,161 different individuals with an average daily attendance yield of 641. How you can develop any mathematical relationship that would be constant from one attendance period to another, I am not sure.

In the junior college, the figure was 3,646 present actual enrollment including some extended day, and the average daily attendance for that period was 2,348.82. And there again you would have a very real problem, and added to that the problem of home instruction, which is a minor factor, but it is a problem there. You have continuation classes where they attend four hours a week and you have many schools, some high schools have summer schools and there again you would have a problem. Now, I am not prepared to say how much detail might be eliminated on the elementary level. Surely you would have to keep records to know where the youngsters were and who were there and who weren't.

On the high school level we doubt that very much can be eliminated because we want to know where those people are. They are with a different teacher each period and we think we have to keep control on those people and we think the only way we can keep the control is to know where they are and have a system where information feeds into the offices where we keep individual records and the counselor knows the truancy records of individual students. Over-all, as a matter of principle, I think it is extremely important that we draw the attention of the people to the importance of good attendance at schools, and we think the present methods at least on the high school level emphasizes that.

I think it important we know where the students are and I think the student knows it is important, that we are checking up on him. Delinquency starts with truancy and we want to know about the attendance habits of each individual.

Jack Rees, Superintendent, Hayward Elementary School District (April 20, 1956, at Bakersfield)

I think without any question the elementary school register is one of the burdens of the classroom teachers at that level, and anything that can be done to simplify the teacher's job, particularly in keeping records of attendance, is going to benefit the instructional program of California schools. I think personally that the whole concept of average daily attendance as a basis for the apportionment of money is unsound because we have to educate the enrollment and not the attendance. We have to be prepared to educate the total enrollment that is going to be at the school and not the average daily attendance, and they are two quite different things.

I think it is important that we get the idea that it is the enrollment, the peak enrollment that we have to educate. We have to have desks

and books and teachers for the enrollment and not for this average which is merely a mathematical figure. I think that ought to be considered by the committee.

If we used average daily enrollment in lieu of average daily attendance and used the same forms and everything else, it would still be better because it reflects enrollment rather than attendance.

Average enrollment would have to be defined and would have to be accountable and so forth, but I think we shouldn't throw it out because somebody says that you can finagle with it I think we have to set up an organized program if we are going to use average daily enrollment, and see if we can't come out with a figure in terms of what we need educationwise, and also see if we can't do something about simplifying the records.

D. FINDINGS

(Assembly Bill No. 3072)

1. The use of average daily attendance as the basis for the appropriation and apportionment of the State School Fund has resulted in the development of a complex and time-consuming bookkeeping and accounting system in the public schools of the State.

2. Over a period of some years—as a consequence of changes in the Education Code and the rules and regulations of the State Board of Education, and administrative rulings of the State Department of Education—there has been a steady increase in detailed bookkeeping and accounting requirements for the accumulation of days and fractions of days of attendance in the public schools of the State.

3. Effective July 1, 1956, revised rules and regulations of the State Board of Education and the Superintendent of Public Instruction resulted in simplification of procedures for the verification of absence due to illness and the elimination of some of the unnecessary requirements for bookkeeping in the State School Register for elementary schools.

4. The substitution of the concept of average enrollment for average daily attendance in the regular classes of the elementary schools and high schools (approximately 91 percent of the total) would eliminate a portion of the bookkeeping and accounting activities now required of school personnel.

5. The use of average enrollment instead of average daily attendance would result in a more realistic distribution of funds to the school districts of the State, since budgeting for schools is related more closely to the number of pupils enrolled than to the number of pupils who may be in attendance.

6. The use of average enrollment instead of average daily attendance does not seem to be feasible for the following categories:

a. Classes held outside the academic year
b. Classes for exceptional children for which excess cost reimbursement is claimed
c. Compulsory continuation schools and classes
d. Classes for adults
e. Junior college classes
f. Any part-time enrollments

7. The use of the concept of average hours enrolled for classes for adults and junior college classes would result in simplified bookkeeping and accounting; the use of the concept of flat grants of the state minimum teachers salary for full-time qualified teachers of remedial classes for physically handicapped would allow these teachers to devote to teaching much of their time now spent on bookkeeping.

8. A shift from the use of average daily attendance (as a measure for the appropriation and apportionment of the State School Fund) to average enrollment would need to be worked out in detail by the State Department of Education in cooperation with committees from the school districts, or by a commission appointed by the Superintendent of Public Instruction.

9. There is a substantial legal question as to whether the Legislature could define average daily attendance (as provided in Calif. Const. Art. I, Sec. 6) as average enrollment. Neither the Legislative Counsel nor the Attorney General has ruled on this question

10. The existing definitions of days and fractions of days of attendance and annual units of ADA have grown up over a period of years. The three following are examples of the many which might be cited:

a. One hundred and eighty minutes is a day of attendance for both kindergarten and classes for adults, while 240 minutes is a day of attendance for grades 4-12;

b. Using these unequal units as a basis, 5 percent of a day is required to be deducted for each full nine minutes of absence in kindergarten, for each full 12 minutes of absence in grades 4-12, and one-fifth of an hour is deducted for each full 12 minutes of absence in classes for adults.

c. Annual units of average daily attendance, which are the basis for appropriation and apportionment of the State School Fund, are computed by dividing days of attendance (variously defined) by "number of days taught" (which varies from district to district) for classes other than compulsory continuation classes, classes for adults, and junior college classes. For the last mentioned classes, 175 is used as a constant divisor.

Units of ADA which are not comparable from level to level of the Public School System are all "added" together to determine the number of $180 units which the Legislature must appropriate and then apportion to the districts of the State.

E. SUGGESTED RECOMMENDATIONS

1. That the State Superintendent of Public Instruction be requested to report to the Legislature on or before March 4, 1957, for recommendations concerning the simplification of attendance accounting.

2. That the State Department of Education be requested to present necessary remedial legislation and to present proposed drafts of changes in state board regulations to effect the recommendations.

CHAPTER IV

ASSEMBLY BILL No. 857

A. PURPOSE

Assembly Bill No. 857, introduced at the 1955 General Session, proposed that extensive changes be made in the Education Code sections that relate to the effect of organization and boundary changes upon the liability of territory to be taxed to pay school bond debt. The proposed changes are designed to simplify and make consistent and equitable Education Code provisions which have been added and amended over a long period of years to take care of specific situations which have arisen in the school districts of the State.

A more comprehensive statement of the background and purposes of Assembly Bill No. 857 by the author of it, Dr. A. Bruce Hawk, Special Services Coordinator, Office of the Los Angeles County Superintendent of Schools, follows:

A STUDY OF THE CALIFORNIA SCHOOL BOND LIABILITY LAWS AND PROPOSED IMPROVEMENTS

The purpose of this study was: (1) to determine the importance and effect of court decisions in the matter of bond liability of school districts; (2) to determine how present statutes of California which govern bond liability, particularly where boundary changes or other school district reorganization occurs, are interpreted and administered in the several counties of California; (3) to ascertain, insofar as was possible, what type of statutes other states in the United States have enacted to help solve this complicated problem; (4) to establish criteria which should be used as the basis of an adequate bond law; and (5) to suggest a new law governing bond liability or to proposed legislative amendments to present statutes, so that they could be easily understood and uniformly interpreted, would be equitable to the taxpayers and school districts, and economical to administer by the county auditor and assessor, and would not discourage boundary changes or school district reorganization where needed or desired by the people.

It was assumed in this study that the major purposes for statutes dealing with bond liability of school districts should be: (1) to protect the bond buyers and assure repayment of the obligations thereby obtaining lower interest rates; (2) that all taxable property should pay its fair share of the district's bonded indebtedness; (3) that school districts do not exceed the statutory limitations on bonded indebtedness; (4) it was not the intent of the Legislature that these statutes would retard school district reorganization; and (5) since education is a state function it was not the intent of the Legislature to penalize the taxpayers of territory transferring from one school district to another or the school districts affected by such a transfer, but rather to regard reorganization and boundary

changes as being a comprehensive treatment of a state problem rather than the solution of a purely local problem.

The Courts and School District Bond Liability

The following findings pertaining to bond liability were accumulated from a study of judicial cases: (1) court decisions have had a most important influence upon school bond liability laws; (2) the courts have been in general agreement in the application of the rule of common law and to a lesser extent, constitutional law; (3) little uniformity of court decisions was found in other areas of litigation involving school bond liability of school districts; (4) in general, courts have considered annexation of a portion of a district to another district differently than the annexation of the entire district. In the absence of constitutional provisions to the contrary, the courts have generally held that the annexed territory was subject for taxation for a proportionate share of the outstanding bonded indebtedness of the district to which it had been annexed.

Interpretations of California Bond Liability Statutes

A California study disclosed little uniformity of interpretation among the counties of the State, of present laws governing the bond liability of school districts affected by boundary changes. In addition, great variation was found in the authority, or Education Code section used for the same interpretation. There was general agreement among the counties of California that a newly-created school district had a new bonding capacity and that petitions requesting a change of boundaries or annexation of an elementary school district to another constituted affirmative action within the meaning of Education Code Section 1597.1.

National Study of Bond Liability Statutes

The following is a summarization of the findings of a national study of school bond liability: (1) approximately 75 percent of the states reporting stated that territory transferring from one school district to another remained liable for a proportionate share of the outstanding bonded indebtedness of the original district. It made little difference whether or not territory transferred contained school property; (2) in the event that an entire school district was annexed or consolidated with another school district the statutes of 50 percent of those states reporting maintain the old district in existence for purposes of continued liability for the outstanding bonded indebtedness of the district; (3) in only five states did the type of district to or from which territory was annexed affect the school bond liability of the annexed territory; (4) one-third of the states reported that present statutes governing bond liability of school districts were designed to maintain the status quo of present school district organization; (5) 11 states reported that the bond liability statutes in their states encouraged school district reorganization if needed, whereas 10 states felt that their statutes did not encourage reorganization; (6) 16 states reported that present statutes were equitable to the taxpayers of areas affected by a change of boundaries; (7) in 15 , or 54 percent of the states

reporting, territory annexed to another school district automatically assumed, by operation of law, a pro-rata share of the outstanding bonded indebtedness of the district to which it had been annexed. In most of these states it made very little differene whether the territory annexed was an entire district or a portion thereof.

Proposed Criteria for School Bond Liability Laws

The following criteria were presented to a jury of experts for their consideration: (1) school district reorganization and boundary changes should be regarded as comprehensive treatment of a state problem as well as a solution of a local problem; (2) an adequate school bond liability law should encourage school district reorganization and boundary changes if needed; (3) all taxable property should pay its proportionate share of the bonded indebtedness in the school districts in which it is located; (4) an adequate school bond liability law should be so written that it will be equitable to the school districts and taxpayers affected by reorganization or boundary changes; (5) the law should be uniform in its application to all districts regardless of type or organization; (6) the law should protect the bond buyer by provision of proper safeguards; (7) the law should be so written that it can be easily understood and uniformly interpreted; (8) the law should be so designed that it can be administered by designated governmental agencies as economically as possible; (9) the law should provide that, where a portion of a school district's bonded indebtedness is assumed by another district as the result of reorganization or boundary changes, the amount assumed should be deducted in the determination of the bonded indebtedness of the original district; (10) the law should provide that where a district assumes a portion of the bonded indebtedness of another district by reason of reorganization, or a change of boundaries, the amount assumed shall be added to, and considered a part of, the district's outstanding bonded indebtedness; (11) the law should provide that in the determination of the amount of indebtedness to be assumed by another district as the result of reorganization or boundary changes the assets of the original district should be considered as well as the bonded indebtedness; (12) since it is almost impossible to design a law in such detail as to adequately provide for all possible situations, the law should provide needed flexibility by the use of an arbitration board where necessary; (13) the law should consider all of the above listed criteria and be placed in one area in the Education Code; (14) properly written legislation based upon the criteria should provide any state with excellent school bond liability laws. Care should be taken to prevent the enactment of special bond laws to solve an individual problem. If special legislation is needed it should be so worded that it will apply solely to the special type of case and should be effective for a specified minimum period of time. The jury dissented to any degree at all, only on criteria No. 12 dealing with the arbitration board.

Conclusions

It was concluded from a review of many court cases that: (1) in the determination of school bond liability in districts affected by a change of boundaries, great inequity to the taxpayers or districts was apparent in a great many cases; (2) courts were interested in equity, but due to statutes or in the complete absence of statutes were not always able to render a decision that was equitable to the taxpayers and districts involved; (3) courts in general treated annexation of a portion of a district differently than the annexation of an entire district.

Due to the nature, type, number, and codification of present California statutes governing bond liability of school districts, affected by a change of boundaries or reorganization, it was considered unlikely that any large degree of uniform interpretation among the counties of the State could be expected. Present California statutes governing the bond liability of school districts are inequitable to the taxpayers and the districts involved and serve as a deterrent to school district reorganization. It was concluded that if the present statutes were properly interpreted and applied, county agencies charged with the administration of bond liability would find it very expensive and almost impossible to administer the special tax districts, that would result from tremendous growth and badly needed school district reorganization.

It was concluded from a national study of school bond liability laws, involving school districts of the several states that: (1) in general every effort had been made to protect the bond holder; (2) undue emphasis in the laws to protect the bond holder or the status quo had resulted in grave inequities to the taxpayers of the districts affected by boundary changes or reorganization; (3) the statutes in a majority of states did not encourage school district reorganization, if needed, because they were deemed inequitable; (4) there was obviously no general agreement on what constitutes equitable school bond liability laws; (5) school bond laws were very complex and confusing. Very few people except those working with school bond laws rather continuously had any real understanding of them.

From the development of criteria for an adequate school bond liability law it was concluded that legislation could be devised which would protect the bond holder, would be easily understood and administered, would be equitable to the taxpayers and districts affected, and would encourage school district reorganization if needed.

B. ANALYSIS BY THE STATE DEPARTMENT OF EDUCATION

December 16, 1955

To: Member of Subcommittee, Interim Committee on Education

Subject: Analysis of Assembly Bill No. 857 (as amended in the Assembly April 22, 1955).

Assembly Bill No. 857 as amended is based in general on two ideas:

1. That territory transferred from one school district and made part of another school district is relieved of the bonded indebtedness of the

original district and assumes the indebtedness of the district of which it is made a part. There are three exceptions:

a. If such action should leave the original school district with a bonded debt in excess of 5 percent of its remaining assessed valuation the transfer cannot take place. (Section 1 of the bill.)

b. If the territory transferred includes school buildings or realty the county board of supervisors determines the proportion of the outstanding bonded indebtedness of the district from which the territory is transferred incurred for acquisition or improvement of the property or the construction of the buildings. The district to which the territory is transferred then assumes the liability for the amount so determined. (Sections 5 and 11 of the bill.)

c. If a portion of a district becomes part of a new school district and such action would leave bonded indebtedness in the former district in excess of 5 percent of its remaining assessed valuation, the transferred territory continues to be liable for the bonded indebtedness of the former district until the indebtedness outstanding at the time the new district was formed is reduced to 5 percent of the assessed valuation remaining in the former district.

2. The bonded indebtedness of any school district included in whole in another school district either by annexation, merger, or the formation of a new district becomes the liability of the district of which it is made a part, and the territory of the former district is also liable for the bonded indebtedness of the district of which it becomes a part. (Section 16 of the bill.)

Sections 12 and 13 of the bill define the outstanding bonded indebtedness of a district which has either assumed the indebtedness of another district or has had some of its indebtedness assumed by another district. (Reference to Code Section 4965 is erroneous.)

Section 14 of the bill provides that a district of any type may assume all or any part of the bonded indebtedness of any or all of its component districts.

Sections 17, 18, 21, 26, and 28 remove language in certain code sections referring to bonded indebtedness which language would not be needed or consistent with the general idea of the bill.

Sections 19, 20, 22, 23, 24, and 25 delete the provisions of the code referring to the powers of governing boards to agree on the terms of annexations.

An evaluation of the provisions of this bill follows section by section:

(a) Sections 1 and 2 are essentially the provisions now in existence in law with only clarifying changes in wording.

(b) Section 4 is limited by the provisions of Section 1 which limitations prevent transfer of territory which otherwise might be advisable.

(c) Section 5 of the bill could easily result in a bonded indebtedness on the part of the district to which territory is annexed in excess of 5 percent of its assessed valuation and, in some circumstances could, by the transfer of some territory from one district

to the other, completely relieve the former district of its bonded indebtedness, and transfer it to the district to which the territory is annexed. This would occur in instances where a district has built and paid for one or more schools and then bonded itself again to build an additional school located in the territory which is transferred.

(d) Sections 7 and 9 of the bill do not make it clear in the event a portion of a district is included in a new district, and if the portion continues to be liable for the bonded indebtedness of the former district, whether or not the former district can issue additional bonds until such time as its total outstanding indebtedness is decreased below 5 percent of its assessed valuation remaining after the transfer of territory takes place. This provision could very well hamper a building program in some districts.

(e) Section 11 has essentially the same objections as Section 5 in that it could result in a new district having outstanding indebtedness in excess of 5 percent of its assessed valuation.

(f) Sections 12 and 13 contain essentially the same provisions of law as present code Sections 7431.1 and 7431.2, which code sections are repealed by Section 29 of the bill. These provisions are needed regardless of the disposition of the balance of the bill. The reference in Sections 12 and 13 to Code Section 4965 should be deleted.

(g) Section 14 of the bill is an important needed provision regardless of the disposition of the balance of the bill.

(h) Section 16 of the bill is one of the key sections, and if the idea that a new district should automatically assume the bonded indebtedness of its component districts is acceptable, the language of this section should be expanded to clearly include the formation of all types of new districts.

(i) Sections 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, and 28 of the bill involve necessary amendments to various sections of the code which are acceptable if the general idea of the bill is to be followed.

(j) Section 29 of the bill repeals several sections of the code which would be consistent with the general subject matter of the bill. One additional section should be included in this last Section 4961.1.

The automatic handling of bonded indebtedness in the cases of annexation, change of boundaries, or the formation of new districts, would simplify procedures. However, the provisions of this bill, particularly Sections 5, 9, and 11, will not permit in all cases the equitable division of assets and liabilities among districts affected by transfers of territory. It would seem just that consideration should be given in such cases to assets of school districts in addition to those included in territory being transferred to another district.

There is a serious question as to the effect of Section 9 on the ability of a school district, from which territory has been transferred, to continue with the necessary building program.

Prepared by:

DIVISION OF SCHOOL ADMINISTRATION

BY THE OFFICE OF THE LEGISLATIVE COUNSEL, STATE OF CALIFORNIA

April 20, 1955

Analysis of Proposed Amendments to Assembly Bill No. 857—#9217

Revises general provisions relating to the liability of territory for outstanding indebtedness upon the creation, dissolution, annexation, or change of boundaries of a school district, and eliminates exceptions to such general provisions in portions of law relating to particular types of school districts.

Makes general provisions re liability to taxation for outstanding bonded indebtedness of district applicable when a school district is annexed as well as when it is created or abolished or its boundaries changed. Also makes such general provisions applicable to territory affected thereby (Ed. C. Sec. 1597).

Provides that when territory is taken from a district and annexed to another district and such territory contains no buildings or realty, such territory ceases to be liable for outstanding bonded indebtedness of the district or districts of which it was formerly a part and becomes liable to taxation for the bonded indebtedness of the district or districts to which it has been annexed (Ed. C. Sec. 1598).

In section providing that when territory is taken from a district and annexed to another, such territory becomes liable to taxation for the bonded indebtedness of the district to which it is annexed, provides that if territory is taken from a district and annexed to another district, and such territory contains school buildings and realty, such territory becomes liable for taxation for bonded indebtedness of annexing district (Ed. C. Sec. 1599).

Provides that when a new district is formed from a portion of the territory of one or more existing districts and the new district contains no school buildings or realty, the territory in the new district ceases to be liable for outstanding bonded indebtedness of the district or districts of which it was part if the withdrawal of the territory does not leave the remainder of the original district or districts bonded beyond the legal maximum (Ed. C. 1600). Provides that if such withdrawal would leave the original district or districts bonded beyond the legal maximum the county auditor shall determine, as of the effective date of the withdrawal, the ratio that the current assessed valuation of the withdrawing territory bears to the assessed valuation of the remainder of the district and continues liability to taxation of withdrawing territory for payment in accordance with such determined ratio until the net bonded indebtedness as of the time of withdrawal has been reduced to the legal limit. Provides for deduction of unencumbered funds in building fund of original district in determination of bonded indebtedness of such district to establish net bonded indebtedness (Ed. C. Sec. 1601).

Provides that if a new district is formed from a portion of the territory of one or more existing districts and the new district contains school buildings or realty, the board of supervisors shall within 60 days after the formation of the new district, determine what portion of the outstanding bonded indebtedness of the district or districts out of which the new district is formed was incurred for the acquisition or improvement of school lots or buildings or fixtures or equipment of a permanent nature situated in the new district. Makes the new district liable for the portion of such indebtedness so determined. Provides for method of determination in joint districts (Ed. C. Sec. 1602).

Provides that for purposes of determining the legal maximum of bonded indebtedness of a school district the portion of the bonded indebtedness of another district or districts for which the former district is liable shall be included and deemed to constitute outstanding bonded indebtedness of said district (Ed. C. Sec. 1604).*

Provides that the voters of any school district of any type may authorize by a two-thirds majority of those voting at any election called for such purpose the assumption of the outstanding bonded indebtedness of any or all component districts or any portion thereof (Ed. C. Sec. 1605).†

Repeals Education Code Section 1597.1, providing that no territory comprising the whole or part of a district, which territory is made part of another district or of a new district through proceedings involving affirmative action taken by the residents of such territory shall be liable for any of the then outstanding bonded indebtedness of the district of which it becomes a part unless such liability is specifically authorized by a vote of two-thirds of the electors of the territory or district voting at an election called for that purpose.

Repeals Education Code Section 1597.2, concerning the manner of holding such election.

Repeals Education Code Section 1597.3, which provides that when territory comprising the whole or part of a district, which territory

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* Education Code Sections 1603 and 1604, to be added by the amendments, refer to Education Code, Sections 4714, 4965, and 7431 Sections 4714 and 7431 provide the legal maximum of bonded indebtedness for school districts and certain unified school districts. Section 4965 relating to bonded indebtedness of certain unified districts was repealed by Statutes 1951, Chapter 1574, and should not be included with the references Education Code Section 7431.03, relating to bonded indebtedness of school districts, was added by Statutes 1953, Chapter 1085, and was probably intended to be included with these references.

† The addition of this section by the amendments and the repeal of Education Code Sections 1597 1 and 1597 2 raises a constitutional question which we do not attempt to answer herein The California Constitution, Article XI, Section 18, requiring an approval of two-thirds of the school district electors, voting at an election for such purpose, before a school district may incur (or assume) bonded indebtedness in excess of a certain amount, has generally been regarded as requiring a vote of the people as a prerequisite to the assumption of an indebtedness, if such assumption of indebtedness was by an "affirmative action" of the electors of the district. Such a vote is not required if liability for such indebtedness is imposed on the district or portion thereof by the "operation of law" The question raised by these amendments is whether the assumption of liability for indebtedness by districts, or a portion thereof, which have by voluntary action of the electors become a part of another district, is an imposition of liability by "operation of law" so that no election is necessary. If Sections 1598-1604 added by the amendments impose liability "by operation of law," no election is necessary, and the Constitution would not apply But if the action of the electors in annexing to another district constitutes "voluntary action," then an election is necessary, and the amendments might be unconstitutional, insofar as they purport to impose liability without an election.

is made a part of a unified district before annexation of such territory to the city in which all or part of such unified district is situated by means of an election, such election constitutes affirmative action within the meaning of Section 1597.1.

Repeals Education Code Section 1599.1, which requires a school district taking territory from another school district which territory includes real property or fixtures of such district, to pay such district for the use of such property.

Renumbers Education Code Section 1598 to be Education Code Section 1606.

Repeals Education Code Section 1600 which provides that when a new district is formed from a portion of the territory of one or more existing districts and the territory of the new district does not continue to be liable for the outstanding indebtedness of the district or districts from which it was transferred, incurred before the transfer, the board of supervisors shall determine what portion of the outstanding bonded indebtedness of the districts from which the new district is formed was incurred for the acquisition of school lots or buildings or fixtures and equipment of a permanent nature situated in the new district in making the new district liable for the portion of such indebtedness so determined.

Repeals Education Code Section 1601 which provides that when territory withdraws from a union elementary or union high school district the territory withdrawing shall continue to be liable for such portion of the indebtedness of such union district incurred before the withdrawal as it would have been liable had it not withdrawn.

Repeals Education Code Section 1602 re effect of repeal of School Code Section 2.75.

Repeals Education Code Section 1606 which provides that when a junior college district purchases or leases for more than a year any uninhabited real property such property shall be automatically excluded from any other junior college district and become a part of the district purchasing or leasing the property under certain conditions.

Deletes from provisions relating to the uniting of elementary school districts and the annexation of districts to elementary school districts provisions which are inconsistent with the general provisions above analyzed (Ed. C. Secs. 2563 and 2576).

Deletes from provisions relating to the annexation of a union high school district to a city high school district, the annexation of elementary school districts to high school districts on petition of electors, the annexation of high school districts to junior college districts upon the petition of electors and the annexation of high school districts upon petition of junior college boards, and the change of boundaries by merger or annexation of unified school districts provisions inconsistent with the general provisions analyzed above with respect to liability for outstanding bonded indebtedness (Ed. C. Secs. 3722, 3729, 3761, 3762, 4281, 4282, 4318, 4669 and 4962).

Repeals various sections and provisions relating to the creation or change of boundaries of particular types of districts which are inconsistent with the general provisions.

Also repeals Education Code Sections 7431.1 and 7431.2, relating to determination of what is outstanding indebtedness of a district for purposes of determining maximum indebtedness of a district.

RALPH N. KLEPS
Legislative Counsel
By BARBARA COCHRANE CALAIS
Deputy

C. SUMMARY OF REPRESENTATIVE TESTIMONY AT COMMITTEE'S PUBLIC HEARINGS

Bruce Hawk, Coordinator of Special Services, Office of Los Angeles County Superintendent of Schools (December 12, 1956, at Los Angeles)

There are 46 sections of the Education Code dealing with school bond liability. Many of those sections are ambiguous. Five of them start with the terminology "Notwithstanding any provision of the code to the contrary." To say that there is confusion is an understatement.

We made a state study to find out what the 58 counties in the State of California were doing with the present 46 sections of the Education Code, and discovered that most of the counties are ignoring many of the provisions. We also found that the interpretation of the code varied as the number of counties. Some counties were doing one thing and other counties using the same section were doing exactly the opposite.

We feel that if it could be simplified, all sections dealing with bonded liability could be placed in one article and chapter in the Education Code. When the occasion arose, the county counsel or attorney involved could go to the 14 sections there and could determine the one that would apply.

The first statutes dealing with school bond liabiltiy were enacted in 1907 in the old Political Code, Section 1888(a). As they started they did a very good job. They had three sections. Since then, by an additive process these many sections have been added. Many were added to solve one particular problem, but they remain in the statutes to confuse and contradict and generally lose the thing which was there in the first place—equity to the school districts and taxpayers involved in school district reorganizations and boundary changes.

We have new communities developing, and freeways and highways and changed community interests. The State has been embarked upon a trend toward unified districts for the last 10 years This has resulted in a wish to change boundaries, to create new districts This has led to confusion. Our attempt has been to see if we couldn't simplify this matter.

There have been quite a few meetings since the bill was introduced in the 1955 Session. There doesn't seem to be any opposition to it.

(Mr. Hawk introduced the following letter from O'Melveny and Myers, the bond firm which approved all school bond issues sold in Southern California.)

O'MELVENY & MYERS
433 South Spring Street
Los Angeles 13

December 10, 1956

Dr. Bruce Hawk
Office of County Superintendent of Schools
808 North Spring Street
Los Angeles 12, California

Dear Dr. Hawk: You have advised us that you will suggest a bill be introduced and passed at the coming session of the Legislature making extensive changes in the provisions of the Education Code relating to the effect of organization and boundary changes upon the liability of territory to be taxed to pay school bond debt. We understand that the changes you are suggesting are set forth in Assembly Bill No. 857 of the 1955 Session as said bill was amended April 22, 1955.

You have asked that we comment upon the suggested changes particularly in light of our work in giving legal opinions upon school bonds.

In the first place we heartily agree with you that the present provisions of the Education Code on this subject are far from satisfactory and that some sort of extensive change is indicated. The present provisions did not arise from any comprehensive study and analysis of the over-all problem but came about over a long period of years as a result of independent enactments meeting individual desires on special situations as they arose. As a result the present provisions on the subject in question provide, without apparent reason, different rules for different types of school districts. Sometimes they provide even different rules for the same type of school district depending upon differences in original formation or differences in the method whereby boundary changes came about. While the code contains in one place most of the basic rules which apply, other provisions which supplement or change these basic rules are spread throughout the code making it difficult to find and apply the entire statutory law.

We have examined the above mentioned Assembly Bill No. 857, as amended, and we certainly believe that it points the way to a logical and sensible solution of the problem. We are not prepared to say that the bill is perfect in its present form No doubt many changes will have to be made before it could be finally enacted. Any sort of extensive change from existing law, no matter how logical and valid, creates problems. All these problems (some of which we have pointed out to you orally) must be carefully considered. However, there must be some starting point for proposed legislation and we believe that your bill will provide that starting point.

Very truly yours,

O'Melveny & Myers
By /s/ Ray H. Lindman

Roscoe Hollinger, Chief Deputy Auditor, Los Angeles County (April 21, 1956, at Bakersfield)

Our primary concern is the complexities we are encountering in administering this law. The school districts themselves vote bonds and

the bonds are sold and they spend the money and they are out of the picture entirely as far as bond liability is concerned. It is the duty of the County Auditor each year to determine what the annual requirements are in the way of principal and interest, and to fix the tax rates that are required to see that the principal and interest is paid as it becomes due.

Our school districts in Los Angeles County, because of the tremendous growth and because a large number of them are under the state program, have found it necessary to be continually floating bond issues each year, and in most the districts, the assessed valuation goes up to a point where they are not bonded to capacity and that means if they are in need of additional building, they have to have a new bond issue, and in many cases in our district they have voted bonds far in excess of the amount they can sell at any particular time, and so it isn't even necessary for them to have an election, as their assessed valuation goes up. They have bonds which have already been authorized, and so they can have the bonds that are sold. Now, that is not a particularly complicated matter, if it were not for these various territories that are being withdrawn from one district and added to another, because we would simply add the requirements for all the issues; we would subtract any cash that is on hand at the end of the year, and when the Assessor gives us the assessed valuation, we determine the rate and the money which is received from that rating would go into a fund that is used to pay those interest and principal maturities. However, we are faced with this problem: That because of the fact that the districts are continually voting new issues, and the same districts year after year have territory that is withdrawn and added to other districts, that we have to first determine what portion of these requirements are the liability of the particular area that is involved. We first have to know the assessed valuation of each of those sections that has been withdrawn, which is the Assessor's problem, and it is no simple one. Then we have to find some way, how much of the net requirements have to be raised by taxes, which will be a liability of each of those particular areas.

Since taxes come in at a different period than our fiscal year, we have to levy in advance to cover the requirements during that dry period. That means each year then, we have a certain amount of cash that is left on hand. We must also apportion that to a reduction of the requirements, and that has to be done more or less arbitrarily, because the cash that is left on hand is not always evenly divided between the particular issues of bonds that are outstanding.

I have made a list of all of the levies that we make on special sections of the county that have these bond liability laws, and I have compared that with the amount of interest and sinking fund requirements of those districts. You find that in most of the areas, that the total amount of money which is received by a school district, by a levy on this area which is withdrawn is less than 1 percent of their total requirements. In many cases, we find that we have to make an annual levy that would be only a matter of a few dollars on the particular area, and yet, since that is the legal requirement, we could be faced with a tax suit if we failed to spread that liability on that basis.

Los Angeles, which is our largest school district, we might use as an example. We find there that we have 23 different withdrawals, boundary

changes that affect their bond liability, and there haven't been additional bonds sold in between in Los Angeles City as in our smaller school districts so we can lump those boundary changes into seven different categories, but have to establish a different rate that is placed on those seven different areas.

The total amount of money received by the elementary school districts for those levies is around $15,000, but that is compared to a total annual levy for their bond requirements of over $6,000,000—or it is less—just about equal to one-quarter of 1 percent of their total levy. We do have certain levies that are spread to these particular areas that are higher, percentagewise, but in those cases, in most of those cases, there are other things involved. A school building has gone with the transfer of territory, and there would be other provisions to take care of a problem where a part of the plant facilities have been transferred from one district to another.

We agree with most all of the provisions of Mr. Hawk's bill (Assembly Bill No. 857), but we feel that there is one thing that hasn't yet been adequately covered, and that is some consideration as to whether we should make any bill that is passed retroactive. We feel the amount of money involved here requires more in the way of administrative expense than is involved in it. In addition to the principle of the equitableness of the situation, we feel that in most cases, the amount of effort that is required in order to keep these levies on a legal basis involves more work than is actually required.

Homer G. Livingston, Chief Public Service Agent, County Assessor's Office, Los Angeles County (April 21, 1956, at Bakersfield)

The following letter from John R. Quinn, County Assessor, Los Angeles County, is presented to show the complexity and confusion in the administration of "Bond Levy Only" districts which would be alleviated by Assembly Bill No. 857:

COUNTY OF LOS ANGELES
JOHN R. QUINN, Assessor
LOS ANGELES 15, CALIF.

Assembly Interim Committee on Education

GENTLEMEN: The accompanying compilation showing assessed valuations and tax levies on the 79 "Bond Levy Only" districts in Los Angeles County for 1955 is presented for your study and analysis. So far as we know these are the only figures accumulated by any assessor in the State dealing with this type of district

It is noteworthy that only 58 of the 79 "BLO" districts have a levy in excess of $100; 38, almost one-half, are under $500.

"BLO" districts affect the operation of the assessor in four ways:

1. They are an expense to set up when originally formed Each parcel of real property within the district must be separately coded so that it will bear the applicable I and S rate.
2. The "BLO" districts must be reflected in the maps and other records until the bonds are retired. In many instances this will be 20 years or more.

3. They add to the complexity of the "code area" problem In Los Angeles County a code area is one which is contiguous and in which all property bears a common combination of tax rates There are now 2,400 such code areas in Los Angeles County.
4. It is almost impossible to explain to the public the difference in school tax rates necessitated by these districts.

In view of the expense and confusion, as well as the relatively small amount of revenue, we believe some legislative action is desirable. We have analyzed Assembly Bill No. 857 as introduced before the 1955 Session and believe legislation along this line will, if adopted, do much to alleviate an expensive and annoying administrative problem and that it will affect the interest of bond holders only in a very minor degree.

JOHN R. QUINN, County Assessor

(The compilation of tax levies referred to in the above letter are in the records of the subcommittee.)

Paul J. McMahon, Interdistrict Agent, Los Angeles City Schools (April 21, 1956, at Bakersfield)

We think that this bill is very good in principle. There are some situations, "extreme" cases, that will exist. We feel that there should be some provision to take care of these extreme cases. They might be handled in a number of ways. Rather than have them taken care of by automatic provisions of the bill, they could be taken care of by joint approvals of the governing boards affected, or they could take effect automatically unless there was disapproval by one of the governing boards.

Louis G. Norris, Assistant Interdistrict Agent, Los Angeles City Schools (December 12, 1956, at Los Angeles)

We concur in the general principles of the bill at the present time.

R. F. Flickwir, Deputy County Engineer, Los Angeles County (December 12, 1956, at Los Angeles)

The work of the county engineer in setting up the mapping for the county assessor for these numerous school areas that are necessary under the present law is laborious and if the bill was adopted it certainly would materially reduce our work. We work with the county auditor's office and the county superintendent of schools and the assessor in trying to analyze the numerous county counsel opinions. We then come up with a code area setup that will reflect these proper levies. If this bill were enacted, we would have fewer code areas. It would simplify our work.

Harold M. Manell, Assistant County Counsel, San Bernardino County (December 12, 1956, at Los Angeles)

I have had the proposed amendments to Assembly Bill No. 857 for three weeks and I have had a chance to go over them carefully and check them and compare what they propose to do with what we have now in the Education Code. I have discussed them with the county counsel of our county and want to give our wholehearted support to

these proposed amendments because we recognize there is a real need for them.

We have had many school district boundary changes in our county in the last six or eight years. We have a large increase in population and in working with these boundary changes as the present laws affect them, we recognize many inequities, lack of uniformity and a lack of uniformity in opinions among the various counties on the legal level, and we believe that these changes will bring uniformity and bring equity to a picture that is quite muddled and unfair now.

Linton T. Simmons, Superintendent of Schools, Orange County (Excerpt from letter introduced into the record April 21, 1956, at Bakersfield)

We wish to be on record as being favorable to a study of statutes pertaining to school bond liability in California. The lack of uniformity in interpretation of present laws, the duplicity of Education Code sections dealing with this subject, and, in many ways, the retarding effect of bond liability on reorganization of school districts makes such a study timely and necessary.

I am acquainted with the proposed legislation program presented to the 1955 Legislature. Personally, I believe the program most worthy of support, and I believe hearings on this subject will be supported by school people throughout the State.

Ray W. Johnston, Superintendent of Schools, Riverside County (Excerpt from letter introduced into the record April 21, 1956, at Bakersfield)

We feel that Bruce Hawk's proposed bond (liability) legislation will remedy a serious situation facing California, and urge favorable support by your committee.

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1955-1957

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LOBBYING

REPORT OF SPECIAL ASSEMBLY COMMITTEE ON LEGISLATIVE REPRESENTATION

House Resolution No. 66

MEMBERS OF COMMITTEE

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REX M. CUNNINGHAM, *Vice Chairman*
RALPH M. BROWN
J. WARD CASEY
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LESTER A. McMILLAN
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WILLIAM J. WILKIN, *Consultant*
HELEN N. WILKIE, *Secretary*

January, 1957

Published by the
ASSEMBLY
OF THE STATE OF CALIFORNIA

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Speaker

HON. CHARLES J. CONRAD
Speaker pro Tempore

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Majority Floor Leader

HON. WILLIAM A. MUNNELL
Minority Floor Leader

ARTHUR A. OHNIMUS
Chief Clerk

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Appendices (to be included at a later date)

I. Lobbying Regulations of Other States.

II. Recommendations of Federal Congressional Committees.

III. Text of Sections 9900-9911, Government Code.

LETTER OF TRANSMITTAL

SPECIAL ASSEMBLY COMMITTEE ON LEGISLATIVE REPRESENTATION

ASSEMBLY CHAMBER, STATE CAPITOL, January 24, 1957

HONORABLE L. H. LINCOLN,
Speaker of the Assembly; and
MEMBERS OF THE ASSEMBLY
Assembly Chamber, Sacramento, California

GENTLEMEN: Your committee, in carrying out its responsibilities under House Resolution No. 66, has investigated the operation of state law relating to attempts to influence legislation.

Inadequacies and inequities in the existing law (Sections 9900 to 9911, California Government Code) have been brought to the committee's attention by persons charged with the administration and enforcement of the law; by interested outside observers; and by legislative advocates affected by the law.

In submitting the findings of this investigation, the committee unanimously recommends passage of remedial amendments included in this report, which is

Respectfully submitted.

CHARLES W. MEYERS, Chairman
REX M. CUNNINGHAM, Vice Chairman
RALPH M. BROWN
J. WARD CASEY
(Not signed)
LESTER A. MCMILLAN
SETH J. JOHNSON
H. ALLEN SMITH
(Not signed)

SUMMARY

Scope of the Report

The committee's purpose has been to determine the effectiveness and fairness of the eight-year-old law regulating activities intended to influence legislation.

In making this determination, it has been necessary to review and restate the purposes of the law and to measure those purposes against the actual results.

Findings

1. The State has been well-advised in requiring the advocates of legislation to identify themselves and whom they represent and in requiring the solicitors of funds used to influence legislation to similarly identify themselves and their purposes.

2. The language of the existing statute is ambiguous, however, partly because of confusion of intent; but it can be redrafted to maintain and strengthen the disclosure requirements.

3. There has been almost no enforcement of the law and little attempt to publicize it. Certain sections of the law have been almost universally ignored, making it awkward for enforcement officers to single out known violators for prosecution.

4. Administration of the law has been left to an office that does not have staff or funds to investigate the validity of statements filed by legislative advocates.

5. Inequalities result almost inevitably from the requirement that advocates report all expenses, including the cost of living; but no adequate criteria for separating living expenses from lobbying activity were presented to the committee. It would appear desirable that legislative advocates should continue to report all major items of expense.

6. Legislative salaries appear to have a general bearing upon the susceptibility of a minority of legislators to the influence of lobbyists. This is an intangible point, however, and was considered outside the purview of the committee.

7. Rules for preparing expense reports have been misunderstood.

8. Improved laws regulating campaign contributions would minimize the influence that lobbyists could bring to bear upon legislators.

9. Establishment of an office of legislative research, analogous to the Legislative Auditor and Legislative Counsel offices, would minimize the reliance of legislators upon legislative advocates for factual information.

10. Attempts to restrict the activities of legislative advocates to certain areas, such as committee hearings or the submission of written petitions, do not appear enforceable or desirable.

11. Paper work, expense and public inconvenience are caused by requiring representatives who spend small sums on brief appearances in Sacramento to register as legislative advocates.

12. The Senate and Assembly Committee on Legislative Representation have been overlapping in functions.

Recommendations

In general, the lobbying statutes of the Government Code, Sections 9900-9911 should be amended with the objective of forcing increased disclosure of the source, amount and uses of money spent to influence legislation; of requiring revelation of the identity of individuals, firms, institutions and associations attempting to influence legislaton; of maintaining a high standard of ethics among professional legislative advocates.

1. Groups or indivduals that spend less than (a fixed minimum) in advocating legislation should be added to those exceptions (Section 9906) from the requirement to register and report expenses.

2. Persons (except political committees) who "spend," as well as those who receive, solicit or collect money to influence legislation should be required to register and report (Section 9905).

3. The Senate and Assembly Committees on Legislative Representation should hereafter undertake jointly to review the applications for registry of legislative advocates.

4. The two committees should jointly undertake a program to gain compliance with the Lobbying Act, including publication of legislative analysis, promulgation of rules for filing expense accounts, etc.

5. Radio and television stations should be granted exemption from registration on the same terms as newspapers are—that is, for their editorial statements for or against legislation and for their appearances before committees of legislators in support or opposition to legislation.

6. Legislative advocates should be invited to file 30 days before the opening of a Legislative session, a notice of intention to appear as a legislative advocate. (This would enable the Legislative Auditor to prepare a list of advocates earlier in the session.)

7. The Legislative Auditor should be allocated funds adequate to establish and maintain an administrative staff capable of investigating possible infractions of the disclosure rules.

8. Language in all portions of the existing law should be re-drafted to conform with recent Supreme Court decisions on Federal lobbying statutes and with other State laws in the same field.

THE REPORT

I. Foreword

Before starting this review of the state law on legislative representation, its strengths and its weaknesses, this special committee should make known several of its fundamental assumptions.

First of all, the committee does not regard the advocacy of legislation as a reprehensible practice; to the contrary, it would strongly oppose any attempted abridgement of the right of individuals, associations, institutions and business firms to legitimately petition the legislature—whether in person or through a hired representative.

The committee further realizes that there are expenses in sending representatives to the Capital, in preparing and presenting information on pending legislation and in contacting legislators.

Finally, the committee recognizes that advocating legislation is a reputable profession for hundreds of competent, serious and highly scrupulous Californians.

It has not been the intention of this committee to search out ways to restrict political freedoms or curtail the proper practices of a profession.

But, like other democratic processes, the right to petition the Legislature is subject to regulations to prevent abuses. For example, the strictures on criminal lobbying, bribery, intimidation, etc.—are written into the State Constitution and the Penal Code, and their wisdom has never, to our knowledge, been questioned.

Furthermore, legislative representation, as a profession, needs and deserves rules that will maintain high standards of integrity.

There is, moreover, an increasing need of vigilance in forcing full public disclosure of the amounts and sources of money spent to influence elections and legislation. This has been the committee's basic position.

The object of this study was to make workable those sections of the existing code that have not functioned, to make clear what has been vague, to make simple what has been complex.

To these ends, the committee has found it essential to re-examine the purposes of the law.

II. Origin and Nature of the State Laws on Lobbying

The California Lobbying Act was signed into law in 1949. It has been slightly amended since—in 1950 and 1955.

Impetus for its enactment came from a widespread public suspicion that the "Third House" was putting undue pressure on the Legislature. This suspicion, well founded or not, had seemed to find confirmation when a lobbyist, publicized nationally as "The Secret Boss of California," was quoted as bragging that he did, indeed, control the Legislature.

Humiliated, the Legislature acted quickly to put lobbying activities under regulation. Yet, it is now apparent that the nature of the problem was not recognized as clearly as it now can be with longer perspective.

The act itself was a hastily-prepared replica of the Federal Lobbying Act, and it incorporated from that act certain ambiguous language that has only recently been interpreted—in the case of the federal law—by a Supreme Court decision. (U. S. vs. Harriss, 347 U. S. 612 1954).

The basic requirements of the State act are clear and fall into two categories:

The first set of regulations, governing the soliciting or receiving of funds for the purpose of influencing legislation, require the keeping of detailed accounts of contributions and expenditures; the rendering of detailed reports to the principal on the contributions and expenditures.

The other regulations, covering legislative advocates who are paid for their work, require the advocate to register with the Legislative Auditor; file monthly reports listing the bills he has been employed to support or oppose and the money he has received, along with each expenditure of over $25 he has made.

(The Legislative Counsel's analysis of the Law, Sections 9900-9911, Government Code, was published by this committee jointly with the

Senate Committee on Legislative Representation in September, 1956. The pamphlet is distributed through the registration office for legislative advocates, maintained by the Legislative Auditor in Room 304, Capitol Building, Sacramento.)

As Professor Frank C. Newman of the University of California School of Law noted in an article on lobbying in the May-June 1956 "Journal of the State Bar of California": "The most troublesome question since the enactment of the California Lobbying Act has been, 'Exactly what does the act mean?' Many of its provisions are ambiguous, and many citizens and lawyers have been troubled in their efforts conscientiously to discover what the statute requires of them."

In its three public hearings—On February 23, and September 26, 1956, in San Francisco and on March 22, 1956, in Sacramento—the committee heard this opinion echoed by legislative advocates, administrators of the law, enforcement officers and outside observers.

III. The Law as the Advocates See It

Vagueness, ineffectuality, unfairness, distortion — these were the charges legislative advocates brought against the law that regulates their activities.

Yet, a minority of the legislative representatives who addressed the committee were actually in favor of the law and felt it needed only to be amended to further restrict certain practices.

The most common complaint was that the monthly statements of expenses give a distorted picture of the advocates' activities.

Some men, it was pointed out, live in Sacramento whereas others take hotel rooms, have heavy living costs during the legislative session.

Published by newspapers, expense statements including living and secretarial costs give the public the impression of heavy spending by the "Third House."

In the words of Frew Morton, representative of Foster and Kleiser: "I don't think it's fair to you people, because the impression that the public has, in my mind, is that it looks as if we're doing a terrific lot of stuff—that we must be spending it and throwing it around and everything else, and they can't figure that . . . I have no objection whatsoever, never have had, but I do think that to have to declare all of this, it makes it look like a tremendous thing when not 25 per cent of it is for lobbying."

Morton suggested that in Section 9900 (b), the definition of a reportable expenditure be amended to include the words: "Provided, however, the term 'expenditure' shall not include payments or contracts to pay any sum or sums which represent the personal living expenses of any person required by the provisions of Section 9906 of this Code to register with the Clerk of the Assembly and the Secretary of the Senate."

A similar provision, Morton testified could be inserted in the definition of "expenses" in Section 9906.

In his desire to eliminate personal living expenses from the reportable outlays of legislative advocates, Morton was supported by Edward D. Landels, representative of Bankers Association of California (and others); Donald W. Cleary, representative of the City and County of San Francisco; Vincent Kennedy, representative of the California

Retailers Association (by mail); from Charles E. Gibbs, representative of the Associated Farmers of California; from Wesley E. Robbins, representative of the California State Nurses Association; from Bert Trask, representative of the California Motor Transport Association; from George F. Meredith, of Meredith and Company; and from John R. Chelew, representative of the Merchants and Manufacturers Association.

A slightly different but related problem of interpreting the law was reported by Goscoe Farley. As representative of the State Bar Association and administrator of Bar Examinations, Farley reported difficulty in differentiating between his functions as an advocate of legislation and his functions as an administrator.

In his report of expenses, he divides his salary between his two activities, Farley said, but this distinction of purpose is lost when the report is summarized and published.

William Hadeler of the California Grocers Association complained of a similar difficulty in separating his salary between his functions as an association manager and as an advocate.

Farley raised another point of practical annoyance in complying with the law:

"We have five or six or seven committees who work on legislation, and many times when a particular bill of ours comes up, I have a committee chairman of a committee that's worked on that bill come up and help me with the presentation. All the chairman gets is his bare traveling expenses. We don't register him as a representative, as I don't think we need to. He appears and explains the bill at a hearing, but you can't keep these just black and white. After the hearing breaks up, well, then a few members of the Legislature may stay around and ask him questions . . . Yet, I don't think it was the purpose of the Legislature to require registration in such a case . . . If that could be clarified, it would ease our mind a little bit . . ."

Landels had also suggested that this problem be clarified by amending the law.

It was the consensus of the legislative advocates who attended the committee hearings that the act of reporting, while an annoyance, was not intolerable. A chronic problem appears to be distinguishing between expenses for lobbying and for non-lobbying activities.

As an instance of this difficulty, Landels cited one of his trips to Los Angeles, taken primarily to attend a directors' meeting, which also included an interview with a legislative committee chairman to discuss a pre-legislative program.

"Now, I'd like to ask the members of this committee what portions of the expenses of that trip I should report, if any? I don't know . . ."

Several witnesses appeared to feel that the law should have restricted or terminated unsavory lobbying tactics that have been unaffected by it.

H. G. Stevens, who represents several small boat manufacturing associations, asserted that many actual lobbyists who did not appear before legislative committees did not register or report their expenditures; that some legislators had encouraged advocates to stimulate campaigns of letters and telegrams in support of bills that the advocate

had not had time to study and appraise; and that the committee should investigate cases where large fees were paid for short-term legislative representation.

Cleary, the San Francisco representative, was asked if he thought enactment of the Lobbying Act had "improved the situation in Sacramento any?"

"Well, I don't want to be facetious," he answered, "But the same people are there today that were there when the act was drawn, and I think . . . 99 percent of the lobbyists I have encountered are thoroughly honest and reputable men . . . Like all these laws, they tend to penalize the honest, while not turning up the dishonest . . . I don't think it does what you want it to do; that is, get at the man who is up there with a slush fund, as Mr. Landels said, trying to improperly influence legislation."

A minority view was that of John B. Long, general manager of the California Newspaper Publishers Association: "The Act should be repealed."

"I think the man that is capable and fit to be a State Senator or an Assemblyman should have the courage to stand up under any kind of pressure," Long said. "I don't care what kind of lobbying it is. If he's fit to represent his district and his county and his people, he's going to have the courage to stand up and vote his conscience . . ."

The variety of interpretations that advocates themselves place upon the Act and its purpose gave added significance to a later comment from A. C. Morrison of the Legislative Counsel's Office:

"There has been a determination on the part of the California Legislature as to what conduct they want to regulate, what conduct they want to prohibit . . . and then we could write an act that would put into words what you want."

IV. The Law as the Administrators See It

The same areas of ambiguity that have confused legislative advocates have troubled State agents charged with administering the Lobbying Act.

Margaret Smith, who is in charge of the office for legislative advocates maintained by the Legislative Auditor, made two appearances before the committee, each time offering practical suggestions for improving the operations of the law.

She suggested that monthly expense reports from registered legislative advocates be filed "under penalty of perjury," as are income tax returns, rather than under oath.

This would save the time and effort of having each form notarized, Mrs. Smith said.

She believed, further, that cost to the State and inconvenience to individuals could be eliminated if persons visiting the Capital on rare occasions at small expense could be exempted from the requirement to register and file expense statements.

Morrison declined to advise the committee on this suggestion, holding that means of administering the law would follow naturally from a policy determination as to the desired results.

"This statute was never intended to stop what might be called corrupt practices," he said. "What is intended by this act is to provide a means whereby people, as I see it, will know who is representing whom before the Legislature."

The committee made what it regarded as two important administrative steps.

1. In its 1956 supplement to the 1955 List of Legislative Advocates and Organizations, representatives who had terminated their connection with former clients were listed as having done so; and

2. An analysis of the laws on influencing legislation was prepared by the Legislative Counsel and published jointly by the Assembly and Senate Committees on Legislative Representation in September, 1956.

V. The Law as Enforcement Officers See It

The lack of prosecutions during eight years under the Lobbying Act was a subject of concern to the committee, and the third public hearing, in San Francisco on September 26, 1956, was chiefly devoted to remarks and suggestions from law enforcement officers

The vagueness of the act, in both purpose and detail, was again a cause of complaint. Attorney General Edmund G. Brown reported only two cases in recent years involving apparent infractions of the law; in neither of those did the State attempt to prosecute because there has been no active compliance with the law by any other persons subject to the provisions that had been violated.

The apparent violations of the act, according to Brown, were the case of an association that did not report it was financed by oil interests to oppose the Shell-Cunningham bill and the case of another group that did not report it was financed by a gas company to advocate the Allen bill to give Long Beach tideland oil royalities to the State.

Failing to report in these instances was, in Brown's opinion, a violation to Section 9903 of the Government Code—the section requiring any person except a political committee that solicits, collects or receives money to influence legislation to register and report the sum collected and the lobbying expenses.

The Attorney General had not acted on these cases, however, because his staff reported that there had been no filings under the section of the statute since the lobbying regulations were enacted.

Publicity of the regulations had also been insufficient, Brown reported. In neither case were the principals aware that the activities of such "front" organizations were restricted by the Lobbying Act.

Roy Gustafson, District Attorney of Ventura County, suggested the Legislature might create an enforcement agency for the lobbying regulations or assign the task to the Attorney General; might tighten the language of the statute.

As a general defense against the blandishments of the "Third House," Gustafson suggested, the Legislators should have higher salaries and be provided a legislative research department analogous to the Legislative Counsel and Legislative Auditor.

District Attorney J. Francis O'Shea of Sacramento County said he had heard of only one alleged violation of the lobbying regulations in his seven years in the home county of the Legislature.

In that case, the lobbyist was sought by former clients for possible grand theft, and this charge—if it were true—implied that he was also in violation of the registration requirement for legislative advocates.

O'Shea suggested the committees of the Legislature might police their own chambers by demanding indentification of witnesses, then checking with the Legislative Auditor's office to be sure the representative had credentials.

VI. The Law as an Outside Observer Sees It

Dr. Frank C. Newman, a professor of law at the University of California, author and lecturer on lobbying and the legislative process, began his testimony to the committee by discounting the continued existence of a thriving "Third House" as evidence that the Lobbying Act has failed.

"I'm glad that the lobbying act has scared no people away from Sacramento," Dr. Newman said. "It seems to me that we may have too few lobbyists In fact, it seems to me that the State has benefited from the fact that these fellows now have to identify the interests they represent, and I think they ought to identify those interests proudly."

Dr. Newman's thesis was that more disclosure, rather than more regulations, of lobbyists was required.

"We have bribery laws now. We have laws against false statements, and it seems to me that in general those laws that prohibit lobbyists from doing certain things are adequate. On the other hand, it seems to me that the disclosure provisions of our statute are not adequate at the present time."

His suggestion was that the Legislature concentrate on improving the disclosure requirements of the Lobbying Act, ignoring the obvious fact that there have been many past violations of the statute.

The law should be clarified, he said. Language changes in the statutes covering campaign contributions should be reflected in the Lobbying Act, for example; the definition of legislation should be sharpened; a definition of "contact with the legislature" should be included.

The committee might consider narrowing the law so that it would not apply to persons who spent only a small sum to make a single appearance in Sacramento, Dr. Newman said.

He went on to suggest that the reporting requirement be extended to persons "spending" (as well as merely "soliciting and receiving") funds to influence legislation; that there be an educational campaign to gain compliance with the law; that all forms of present reporting be continued.

"First of all," Dr. Newman concluded, "there are a lot of people that come to Sacramento and argue that what they are proposing is in the public interest, and they may believe it, and it may be in the public interest. Nonetheless, it seems to me relevant that we know whether it's also for their personal profit, or whether they are being paid to put forth this idea.

"Second, I think it's important that we know when large sums of money are being spent. The mere fact that large sums of money are being spent doesn't mean that the legislation is bad . . . But it's one

thing if a group goes out and spends $57 for stamps and a letterhead. It's another thing if they spend $57,000 for a major public relations program.

"Third, it seems to me that with a good disclosure law, we can help avoid a good deal of what we call 'legislative corruption.' . . . I think that many years ago, Justice Brandeis made this point clear when he said that it's sunlight that's the best disinfectant, it's the electric light that's the best policeman. And that's he purpose of a disclosure law, to keep these things out in the open—to run government in a goldfish bowl."

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1955-1957

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CALIFORNIA'S NEW DEPARTMENT OF ALCOHOLIC BEVERAGE CONTROL

A Report of the

ASSEMBLY INTERIM COMMITTEE ON GOVERNMENT ORGANIZATION

to the

CALIFORNIA LEGISLATURE
(House Resolution 181, 1955)

February 8, 1957

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LETTER OF TRANSMITTAL

February 8, 1957

The Honorable Speaker of the Assembly
The Honorable Members of the Assembly
State Capitol, Sacramento, California

SIRS: In accordance with the provisions of House Resolution 181 of the 1955 General Session, the Assembly Interim Committee on Government Organization has reviewed the organization and administration of the new Department of Alcoholic Beverage Control and herewith submits its report.

The committee is gratified to report that the department has made excellent progress in its efforts to administer alcoholic beverage control honestly and effectively. The Legislature and the people may be justly proud of the improvement that has occurred since the formation of the new Department of Alcoholic Beverage Control.

The committee wishes to express its sincere appreciation to the many persons, both within and without California's Government who participated in the hearings and gave the committee the benefit of their views, and especially to the representatives of the Department of Alcoholic Beverage Control, the Legislative Counsel's Office, and the Legislative Auditor's Office for much detailed information and technical assistance in conducting this review and preparing the report.

Respectfully submitted,

JACK A. BEAVER
CHARLES J. CONRAD
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CASPAR W. WEINBERGER, *Chairman*

INTRODUCTION

In 1953 a subcommittee of the Joint Interim Committee on Governmental Reorganization examined into alcoholic beverage control in California and concluded that there were "grave doubts whether alcoholic beverage control could be less responsive to public needs and less uniform throughout the State * * *" than it was at that time.

That subcommittee made recommendations that alcoholic beverage control be divorced from the State Board of Equalization and placed under a department headed by a director appointed by and responsible to the Governor. The subcommittee further concluded "that never again should 20 years be allowed to elapse without a thorough legislative investigation of problems as important as liquor control administration," and expressed the hope "that never again will the standards in any department of California's government be found to be as low as we have found to be the case with alcoholic beverage control"

The Assembly Interim Committee on Government Organization, three members of which were the Assembly members of the Subcommittee of the Joint Interim Committee on Governmental Reorganization which examined alcoholic beverage control in 1953, has re-examined alcoholic beverage control administration and the activities of the Department of Alcoholic Beverage Control which was established by constitutional amendment pursuant to recommendations growing out of the 1953 investigation.

The committee held open public hearings as follows:

San Bernardino, November 13, 1956;
Los Angeles, November 14, 1956;
San Francisco, November 19, 1956;
Sacramento, November 20, 1956.

Many persons and organizations, including state and local governmental officials as well as civic, labor, industry and professional groups, were advised of the hearings and were invited to appear before or otherwise communicate with the committee.

The committee was concerned primarily with the following:

1. Internal organization and procedures of the new Department of Alcoholic Beverage Control;
2. Relationships between the department and local peace and law enforcement officials;
3 Accomplishments by the new department during the past two years; and
4. Major problems yet to be resolved in alcoholic beverage control in California.

In addition to public testimony, the committee received and reviewed information from many other sources including peace officers, persons in the alcoholic beverage industry and interested citizens.

The committee heard 56 witnesses in the various public hearings and took approximately 800 pages of testimony. It was always emphasized that the hearings were public and open. No session of the committee was ever adjourned until everyone in the hearing room who wished to make a statement had been heard. In addition to these hearings, the committee met several times to draft its proposals and this report.

The report of the committee, consisting of its recommendations in the form of prepared legislation, descriptive materials and excerpts from committee transcripts, is presented herewith.

On the basis of the hearings held, the reports submitted to it, and the committee's lengthy discussions, the committee has unanimously reached conclusions and unanimously makes the recommendations set forth hereafter.

The committee wishes to express its sincere appreciation for the persons, both within and without California's state and local governments, who gave such invaluable assistance in this re-examination of alcoholic beverage control which, only three years ago, under the State Board of Equalization, was described by the committee then as follows:

> "It is hardly conceivable that ignorance, lack of training, inexperience, or the difficulties of the job could account for the near failure of the administrative and enforcement machinery and the apparent ineptness of certain employees in the present liquor control system.
>
> "It must be concluded that the astonishing failures of the Board of Equalization encountered by our committee can be understood only by many additional facts which were not forthcoming, despite rigorous questions on the part of the committee."

The committee is most happy to report that the ineptness and duplicity characteristic of alcoholic beverage control administration under the Board of Equalization have been largely eliminated by its successor, the Department of Alcoholic Beverage Control. The Legislature, because of its firm and decisive action, and the people, by their support at the polls, may be justly proud that they have established a machinery under which alcoholic beverage control administration may be carried on openly, honestly and in the best interests of all the people.

FINDINGS

The committee's findings concerning organization and administration in the Department of Alcoholic Beverage Control are set down hereafter. Excerpts from transcripts of hearings held in San Bernardino, Los Angeles, San Francisco, and Sacramento are identified by hearing location and page number as follows, San Bernardino hearing, p. 17.

The hearing transcripts are on file at the committee's office in Sacramento, and are available should anyone desire to consult them. The cost of printing the transcripts in full in this report would substantially add to the cost of the report, but would not, in the committee's opinion, materially increase its value.

The appendix of the report contains selected documents and statements submitted to the committee by various officials and organizations.

PUBLIC APPROVAL

1. Administration of alcoholic beverage control under the new Department of Alcoholic Beverage Control has met with great and apparently general approval by the public, including law enforcement officials, labor, and persons in or allied with the alcoholic beverage industry. In fact, virtually no one who appeared before the committee was in any way critical of the new Department's work. The integrity and honesty now generally apparent in alcoholic beverage control administration constitute a dramatic and thoroughly praiseworthy change from the practices previously reported before the Joint Interim Committee on Governmental Reorganization during the 1953-54 hearings.

The 1954 report on Alcoholic Beverage Control in California, by the Joint Interim Committee on Governmental Reorganization, was a scathing indictment of the Board of Equalization's administration. That committee doubted that alcoholic beverage control administration under the Board of Equalization could have been less responsive to the public needs. Each equalization district was found to be a principality where alcoholic beverage control was subject to the whims of the particular board member. Pretentions at the existence of a uniform state-wide system of administration and enforcement were a mirage. The board's tolerance of and acquiescence in, the obvious and sometimes corrupt speculation in liquor licenses practically eliminated any semblance of public confidence. Protests against the issuance, or transfer of licenses by local law enforcement agencies, in many instances, were ignored. Generally, the enforcement program was in a deplorable condition. Persons with an unsavory past received licenses and arrest reports by local law enforcement agencies concerning licensed premises were not acted upon by the board. Blights such as the "Main Street" area of Los Angeles, and various sections of San Francisco, and elsewhere

were a corrupting influence upon the general public, but were allowed to flourish with impunity.

As a result of the 1953-54 committee hearings strong public opinion developed against these abuses and two types of corrective action were initiated: legislative and penal. Thirty-three indictments, including six against Board of Equalization personnel and two other public officials, charging such offenses as grand theft, bribery, perjury, and violations of the state election laws, were obtained by the district attorneys of San Diego, Los Angeles, Orange and Riverside Counties. Of those indicted, 12 were sentenced to the state prison, a former member of the Board of Equalization is a fugitive from justice, four cases were dismissed, and seven were acquitted. Information on the remaining cases is not readily available.

The legislative corrective proposal was a constitutional amendment which divorced liquor control from the Board of Equalization and established a new Department of Alcoholic Beverage Control with a director appointed by and responsible to the Governor. This measure was placed on the ballot in November of 1954, as Proposition No. 3, and over 65 percent of the voters approved the proposition.

The record of the new department is in direct contrast to the abuses previously mentioned. Testimony presented before this committee, the pertinent portions of which are summarized in the subsequent findings, indicates that a significant improvement has taken place during the last two years in alcoholic beverage control administration.

The new department has a sound organizational pattern which permits uniform state-wide administration and enforcement. The liquor industry no longer operates under different policies in different equalization districts. Another commendable innovation has been the establishment of a state-wide training program for supervisors and agents, which is designed to raise the caliber of the personnel assigned to enforce the Alcoholic Beverage Control Act. Also, the department has the best working relationship with other law enforcement agencies that has existed since the repeal of prohibition. No longer are protests by these enforcement agencies ignored. Public confidence in alcoholic beverage control enforcement appears to have been largely restored as a result of the department's actions against blighted areas and the adoption of preventive measures designed to eliminate speculation in liquor licenses.

Virtually no one who appeared before this committee during its four days of public hearings was in any way critical of the department's work. Testimony from law enforcement officials, industry and labor representatives, and members of the general public, praised the new department. Finding No. 6 summarizes the views of law enforcement officials, and excerpts from the testimony of other witnesses follows:

A. Industry Representatives

> "I am the President of the Retail Liquor Dealers Association of San Bernardino and Riverside Counties, and I would like to state that * * * (the) new Department of Alcoholic Beverage Control has been very satisfactory, and I think they have done a

very good service to the people of the State." (Joe Charlebois, San Bernardino hearing, p. 184.)

"I would like to say * * * that the department has, in our opinion, done a tremendously sincere and strenuous job and the enforcement has been stringent and certainly we feel, the licensees are very much alerted to the fact that there is an implacable desire on the part of the department to see the law obeyed to the letter." (Harry L. Tarnoff, California Retail Liquor Dealers Institute, Sacramento hearing, p. 204.)

"* * * I would like to state that we have received the greatest cooperation, and that we hold him (Munro) in high respect because of his impartial manner in which he is conducting his office" (Sidney Hoedemaker, Past President of Southern California Restaurant Association, Los Angeles hearing, p. 66.)

B. Labor Representatives

"We would also like to compliment the Department of Alcoholic Beverage Control on their administration of the law and the way they have cooperated with our people when they have appealed to the department for advice and counsel." (M. R. Callaghan, Executive Secretary, California State Council of Culinary Workers, Bartenders and Hotel Service Employees, Sacramento hearing, p. 166.)

"* * * Mr. Munro * * * has done a wonderful job * * *." (Kenneth J. Ryan, Secretary, Local (Sacramento) Joint Executive Board, Bartenders Union, Sacramento hearing, p. 218.)

UNIFORM STATE-WIDE ADMINISTRATION

2. Uniformity of alcoholic beverage control administration is being brought about under the Department of Alcoholic Beverage Control, and represents another significant improvement from the previous scandal-ridden administration of the Board of Equalization.

Governor Earl Warren focused attention on the ineptness of the Board of Equalization's administration of alcoholic beverage control when he stated:

"One of the evils of the present system is that the State has been divided into four principalities and there are no over-all standards of law enforcement which reach into all parts of the State. Each principality is a law unto itself." (Sacramento *Bee*, May 12, 1953.)

This basic weakness was corrected when the voters of California, in November of 1954, adopted Proposition No. 3, which established the Department of Alcoholic Beverage Control under a single director responsible to the Governor. To insure uniformity in the department's administrative and enforcement programs, regular monthly staff meetings, at department, area and district levels, are held. The policies are established at the department staff meetings, which are attended by

headquarters staff and the three area administrators. The area administrators in turn conduct meetings with their district supervisors, and the policies are finally disseminated to the agents at district meetings. Semiannual state-wide meetings of supervisors and the issuance of bulletins and memorandums by the director are two additional methods of maintaining communication between the director and his subordinates.

The department's legal counsel and the seven hearing officers, also hold regular monthly meetings to discuss decisions issued by the director, the Appeals Board or the courts. These conferences tend to produce uniformity among hearing officers' proposed decisions on departmental disciplinary actions.

That this uniformity of enforcement is recognized favorably is demonstrated by the following:

> "* * * the uniform enforcement program which the department has developed and is developing on a state-wide basis is greatly appreciated by us, and certainly in the interests of public welfare." (Sidney Hoedemaker, Past President of the Southern California Restaurant Association, Los Angeles hearing, p. 66.)

3. The Department of Alcoholic Beverage Control generally has a sound organizational pattern, with lines of communication and authority clearly defined and understood. This has been accomplished without a substantial increase in cost.

This is a commendable change from the situation that existed under the Board of Equalization. Table 1 compares the total cost of alcoholic beverage control administration for the last full year under the Board of Equalization (1953-54), and the past full year under the Department of Alcoholic Beverage Control (1955-56).

While the total cost increase is approximately 10 percent, much of this is not directly attributable to the creation of the new department. For example, on July 1, 1955 (six months after the department came into existence), all employees were granted, pursuant to a recommendation of the State Personnel Board, a one-step salary increase. During 1955-56, this amounted to a total of $101,899 in the department's expenditures. Other salary increases, including the higher salaries of top positions established by the constitutional provision creating the department, accounted for another $50,606.

An indeterminate part of the $80,281 increase in operating expense is accounted for by rentals the department incurred in separating its personnel physically from quarters occupied by the Board of Equalization. Of the 23 alcoholic beverage control offices now in existence, 12 are removed from their former cohabitation with the Board of Equalization, while 11 have not been moved because of prior state leases or the unavailability of new quarters. In the committee's opinion this separation of facilities represents a wholesome change of environment, the benefits of which far outweigh the small added cost.

Of the $24,631 increase in equipment expenses, approximately 75 percent is accounted for by fixtures and furnishings for the headquarters office. This is essentially a nonrecurring expenditure consisting

TABLE 1

COMPARISON OF COSTS, PERSONNEL AND NUMBER OF FIELD OFFICES, ALCOHOLIC BEVERAGE CONTROL ADMINISTRATION, 1953-54 AND 195-56

	Board of Equalization 1953-54	*Department of Alcoholic Beverage Control 1955-56*	*Increase or decrease*	
			Amount	*Percent*
Cost	$2,444,615	$2,691,708	$247,093	10.1
Personnel (filled positions)	428 6	418 2	—10.4	—2.4
Number of field offices	53	23	—30	—56 6

NOTE: The costs shown are exclusive of the State's contribution to the Employees' Retirement System and do not include the Alcoholic Beverage Control Appeals Board, since the latter represents a new function which was not in existence during 1953-54.

largely of an intercommunication system, mailing machinery, dictaphones, desks, typewriters, carpeting, etc.

The decrease in the number of field offices from 53 to 23 has not only tended to reduce costs but has given the new department greater control over the activities of its field force through closer supervision.

One of the main criticisms against alcoholic beverage control under the Board of Equalization was that a uniform and consistent state-wide administrative policy did not exist. Each board member determined the policy that would be followed in his district.

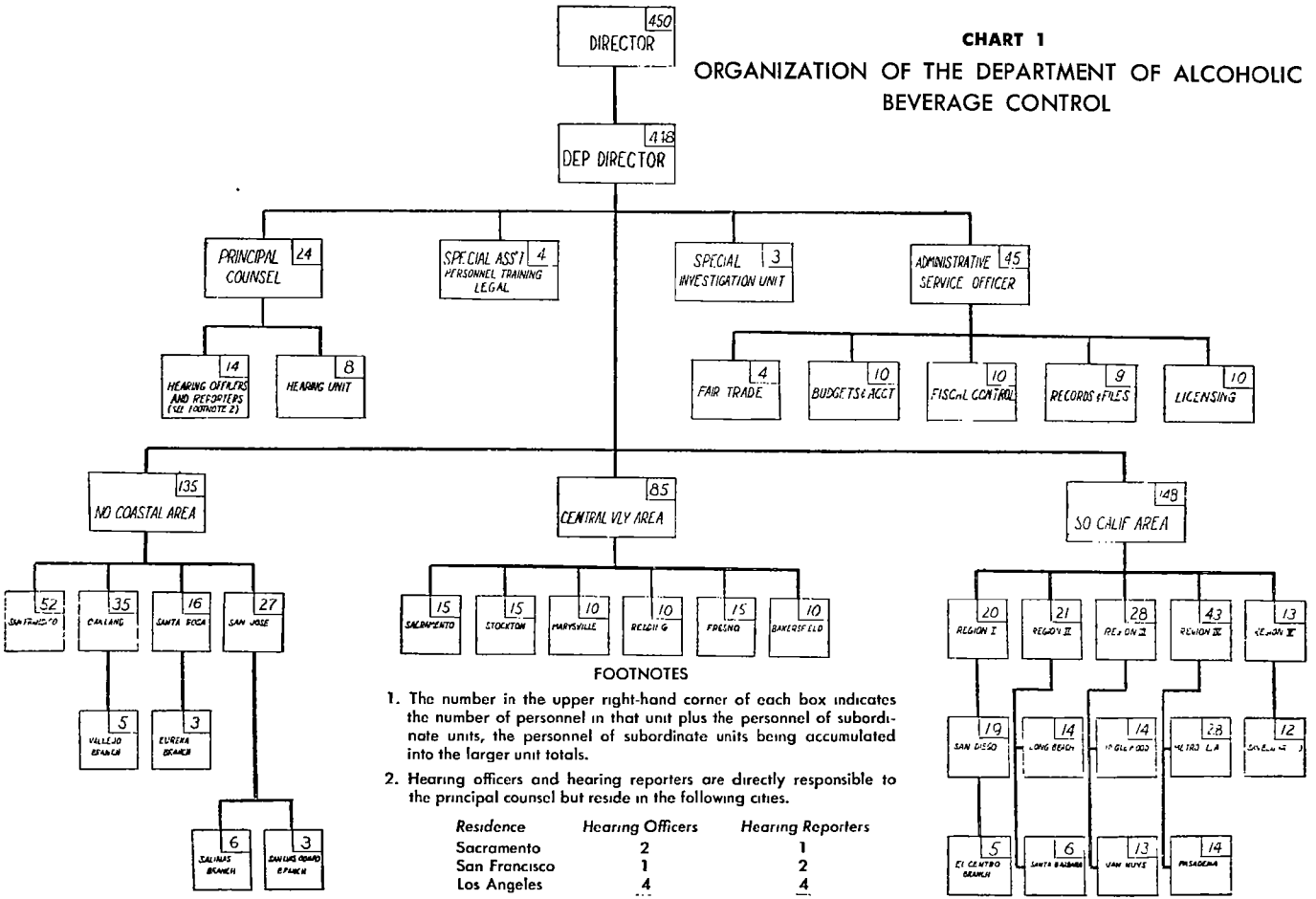
The Department of Alcoholic Beverage Control has replaced this diffusion of authority with centralized administration. The main organizational pattern of the department consists of a headquarters staff plus a field force which is divided into three administrative areas. These are: Northern Coastal with headquarters in San Francisco, Central Valley with headquarters in Sacramento, and Southern California with headquarters in Los Angeles. Under departmental directions, each area administrator has full responsibility for matters of administration in his area including the assignment of personnel. He is, in turn, directly accountable to the department director.

Chart 1 shows the existing organizational structure of the department.

Beginning on July 1, 1956, the southern area established an experimental organizational pattern which differs from that in the other two areas. Under this pattern supervising agents, grade II, were made regional supervisors normally in charge of two district offices, San Bernardino being the exception. The regional supervisors have both administrative and staff duties, and the department hopes that this organizational structure will result in more uniform administrative and enforcement policies among the nine district offices in the area Under this plan it is anticipated that the districts will exercise more authority and responsibility in performing their duties, thus relieving the area administrator of many time consuming, but minor, tasks.

CHART 1

ORGANIZATION OF THE DEPARTMENT OF ALCOHOLIC BEVERAGE CONTROL



FOOTNOTES

1. The number in the upper right-hand corner of each box indicates the number of personnel in that unit plus the personnel of subordinate units, the personnel of subordinate units being accumulated into the larger unit totals.
2. Hearing officers and hearing reporters are directly responsible to the principal counsel but reside in the following cities.

Residence	*Hearing Officers*	*Hearing Reporters*
Sacramento	2	1
San Francisco	1	2
Los Angeles	4	4
Total	7	7

EMPLOYEE TRAINING PROGRAM

4. The Department of Alcoholic Beverage Control, with assistance by the State Personnel Board, has developed and instituted a training program for supervisors and agents which is designed to improve the performance of the staff and which is being put into effect throughout the department.

The Board of Equalization did not have a formal training program for its liquor control officers. Such training as existed was carried on by district offices without any apparent supervision or guidance from the headquarters staff

The Department of Alcoholic Beverage Control has recognized the need for a highly trained field force, as the basis for establishing efficient and uniform state-wide alcoholic beverage control. In October, 1955, department representatives held a meeting with the training officer of the State Personnel Board and a state-wide training program was formulated. Under this program, training was to be conducted at three levels: department, area, and district. Committees consisting of administrators and agents were formed at each level to implement this program The interrelationship of these committee activities is indicated by the following:

> "The State (department level) Training Committee develops materials that are presented at those (district) meetings, such * * * as discussions of department policies, personnel, rules and regulations, pay roll procedures, rules of evidence, laws of arrest, techniques of report writing, (and) public relations * * *. They (the district meetings) are not just classroom meetings. * * * they are more round-table discussions where the officer has a chance to lay * * * his practical problems out on the table so that the whole thing is job-related." (Malcolm Harris, Deputy Director, Sacramento hearing, p. 52.)

In addition to the regular department training program, the State Personnel Board conducts an annual eight-day "supervisors' in-training" course designed to give district and regional supervisors the most effective methods of training subordinates. The department publishes a monthly news bulletin as a means of communication between management and employees

The establishment of the state-wide training program, the committee believes, is another indication of the real effort by the department to give California better and more efficient alcoholic beverage control administration.

SOUTHERN AREA ADMINISTRATOR

5. The position of area administrator in the Los Angeles area should be filled at the earliest opportunity.*

Of the three administrative areas in the Department of Alcoholic Beverage Control, the southern area, with 45 percent of the State's licenses and 40 percent of the department's field personnel, is probably

* As this report goes to press, the Department of Alcoholic Beverage Control announced that Mr. Golden Jensen, a former undersheriff of Riverside County, and more recently the Assistant Chief of Police of Salt Lake City, Utah, assumed the duties of southern area administrator on Febraury 4, 1957.

the most important. The liquor scandals associated with the Board of Equalization, and the subsequent loss of confidence in alcoholic beverage control administration by law enforcement agencies, industry representatives and the general public, make it imperative that a full-time southern area administrator of the highest caliber be appointed as soon as possible.

Since March 7, 1956, the special assistant to the director, in addition to his normal duties, has acted as southern area administrator. The temporary expedient of having one person fill two important positions, each requiring his presence in different geographic locations, i.e., the staff position in Sacramento and the area position in Los Angeles, has created a serious organizational problem of which the director is well aware.

In an attempt to fill this position on a permanent basis, the director has interviewed and made firm offers to 13 people. Another 10 have been considered and interviewed, and five others have been considered. So far the position still remains open.

COOPERATION WITH LAW ENFORCEMENT OFFICIALS

6. There is a high degree of cooperation and an excellent working relationship between local peace and law enforcement officers and the Department of Alcoholic Beverage Control in matters relating to enforcement of alcoholic beverage control.

During the 1953-54 alcoholic beverage control hearings, there was ample evidence that the Board of Equalization did not cooperate with local law enforcement officials in protecting the public welfare and morals. This condition has been changed by the Department of Alcoholic Beverage Control.

The comments of the District Attorney of San Francisco are typical of the relationship the Department of Alcoholic Beverage Control now has with other law enforcement agencies:

> "In all my experience we have never had the cooperation we are presently receiving and the entire atmosphere of enforcement has radically changed for the better My observation is that the enforcement officers presently acting in this area are doing an outstanding job, and I am very glad to give them my highest commendation." (Thomas Lynch, San Francisco hearing, p. 77.)

Excerpts from other testimony by chiefs of police, sheriffs and district attorneys follow and collaborate the contention of the Director of Alcoholic Beverage Control that the new alcoholic beverage control administration is enjoying the best cooperation with local law enforcement agencies that has existed since the repeal of prohibition (see also Finding Number 8).

A. Testimony From Police

> "* * * We have * * * practically a perfect relationship." (Francis J. Ahern, Chief of Police of San Francisco, San Francisco hearing, p. 43.)
>
> *(Question by Assemblyman Weinberger, answers by Charles Stanley, Captain of the Los Angeles City Police Department.)*

Q. "Do you have any general impression that you'd care to give as to the comparative type of enforcement—the comparison between the situation now in this field and as it existed three years ago as far as your office is concerned?"

A. "Well, it is entirely different. There was almost a complete lack of any coordination prior to the formation of the A. B. C. and as I have already stated, at the present time there is a good cooperative, working relationship." (Los Angeles hearing, p. 76.)

"* * * May I say that we couldn't ask for better cooperation than we are receiving from the office of Mr. Fullenwider (Northern Coastal Area Administrator) and from Mr. Pendergast (District Supervisor) in Oakland * * *." (Wyman W. Vernon, Chief of Police of Oakland, San Francisco hearing, p. 50.)

"First, I want to go on record as being highly pleased with the work which has been done by the Alcoholic Beverage Control Department. Our relations with the department have been cordial and cooperative. We could not ask for a better working relationship." (A. E. Jansen, Chief of Police of San Diego, letter to the committee, dated November 6, 1956.)

B. *Testimony From Sheriffs*

"* * * I am happy to say that my office and the new State Department of Alcoholic Beverage Control have a very harmonious relationship * * *." (John D. Ross, Sheriff of Santa Barbara County, letter to the committee, dated October 29, 1956.)

"Relationship with the Alcoholic Beverage Control and the sheriff's office is very good in this district." (Frank Bland, Sheriff of San Bernardino County, San Bernardino hearing, p. 37.)

"* * * We enjoy close cooperation with the A. B C. officers in our county, * * *." (Sergeant Glenn E. Anderson of the Alameda County Sheriff's Office, San Francisco hearing, p. 132.)

C. *Testimony From District Attorneys*

"* * * This office is satisfied with the operation of the State Department of Alcoholic Beverage Control. Our working relationship has been excellent." (Randall J. Presleigh, District Attorney of Shasta County, letter to the committee, dated October 31, 1956.)

"* * * I would like to state that this office has had a good working relationship with the new State Department of Alcoholic Beverage Control * * *." (Robert Kneeland, District Attorney of Orange County, San Bernardino hearing, p. 183.)

"* * * The cooperation between the personnel of the department and the District Attorney's Office in San Joaquin County has been very, very good." (Bradford Crittendon, District Attorney of San Joaquin County, Sacramento hearing, p. 127.)

ACTION AGAINST BLIGHTED AREAS

7. The Department of Alcoholic Beverage Control is taking effective action by strict enforcement and close cooperation with other law enforcement agencies to prevent an increase in the number of licenses in many locations considered problem areas by local peace officers, thus easing the enforcement problem.

The heavy concentration of licenses in a small area almost invariably causes a police problem. The committee, during the 1953-54 hearings, found this to be true. Additional testimony to this effect was presented to this committee by the District Attorneys of Sierra and Modoc Counties, and is summarized in Finding Number 21.

One of the first tasks the new department undertook was to clean up the alcoholic beverage control problem areas that existed in many of the large metropolitan centers This was accomplished in two ways: first, no new licenses were issued, or allowed to be transferred into these heavily saturated areas; and second, by strict and concentrated enforcement activity, disciplinary actions were taken against existing licensees who were in continual violation of the law. In doing this, the department received the assistance of, and work in conjunction with, police departments, sheriff's offices, the military police, and other law enforcement agencies.

The accompanying charts demonstrate the success of this effort. Charts 2, 3 and 4 show the "Main Street" area of Los Angeles Between January 1, 1955, and November 1, 1956, a 35 percent reduction of licenses in this area was accomplished.

Charts 5 and 6 indicate what has happened to the "International Settlement" section of San Francisco. The local Alcoholic Beverage Control Office gave top priority to the task of cleaning up this notorious area, and, as is indicated by Chart 6, the job is almost completed.

Charts 7 and 8 show the so-called "Tenderloin Area" of San Francisco. The department believes the task of cleaning up this section is only about half completed.

Charts 9 and 10 describe the "Howard Street" or "skid row" section of San Francisco Most of the success in this area, to date, has been achieved along Third Street. Since most of the troublesome spots in this area are off-sale wine shops, and historically law enforcement agencies have encountered considerable difficulty in apprehending violators in these premises, the job of cleaning up this section will be long and arduous (see Finding Number 24).

Charts 11 and 12 depict the "skid row" section of Sacramento. Chart 12 indicates that the department has been more successful at imposing suspensions than at revoking licenses in this area

Chart 13 shows the "skid row" section of Stockton. Two licenses were revoked and 16 premises are no longer in business. The latter category includes licenses that were transferred out of the district, and others, mainly on-sale beer and off-sale beer and wine, which simply closed their doors.

PROTESTS NOW HONORED

8. Objections by local law enforcement officials to the issuance of new licenses or the transfer of licenses to other premises or owners are honored by the Department of Alcoholic Beverage Control.

During the 1953-54 alcoholic beverage control hearings, many law enforcement officials testified that their protests against the issuance of licenses were ignored by the Board of Equalization. The following illustrations are typical of the testimony received by the committee at that time:

> "On two occasions the County of San Diego has issued its protests to the issuance of additional licenses * * * and on both of these occasions the licenses have been issued regardless of protests." (San Diego County District Attorney, Evidence Section, 1954 Report, p. 63.)

The Chief of Police of San Francisco also indicated that protests by his office against transfer applications were frequently denied (Evidence Section, 1954 Report, p. 64).

However, by 1956, when this committee held its hearings, these same officials or their successors, gave a completely different picture of their relationship with the new department. The District Attorney of San Diego County stated that:

> "During the period since the administration has been in the Department of Alcoholic Beverage Control, I have * * * been gratified by my observations of the work, the efforts and the sincerity of Mr. Munro and Mr. Harris (the deputy director), and members of his staff." (Don Keller, Los Angeles hearing, p. 67.)

The Chief of Police of San Francisco echoed these sentiments with the statement that, "* * * we have absolutely no complaint with Alcoholic Beverage Control under Mr. Fullenwider (Northern Coastal Area Administrator). It has been a pleasure working with him." (Francis J. Ahern, San Francisco hearing, pp. 44-45.)

The committee received testimony or communications from 10 district attorneys, eight chiefs of police or their representatives, and four sheriffs or their representatives, and all stated they have confidence in and good working relations with the new Department of Alcoholic Beverage Control (see Appendices I and II). Protests by local law enforcement agencies now are honored by the department.

LICENSE SPECULATION APPARENTLY ENDED

9. Liquor licenses are no longer issued to vacant lots or to favored persons concerned only with the speculative value of the licenses, as was so often the case under the Board of Equalization.

Fifty-six witnesses appeared before the committee during the four days of public hearings. They consisted of department personnel, district attorneys, chiefs of police, sheriffs, industry representatives, and others. In no instance did anyone indicate that the Department of Alcoholic Beverage Control has issued licenses to other than bona fide persons.

To assure the issuance of licenses only to bona fide licensees, the department has established the following procedure: first the applicant is investigated to determine his fitness to be a licensee; second, any plans for construction or improvement of the premises are reviewed; and third, if the applicant qualifies, then the license is issued only after the premises qualifies.

Commenting upon the above procedure, Russell S. Munro, Director of the Department of Alcoholic Beverage Control, stated:

> "In that way no one gets a license into his name, or into his possession until he is ready to actually use it, and as a result we cannot be accused of issuing licenses to vacant lots." (Los Angeles hearing, p. 13.)

This, in the committee's opinion, constitutes a wholesome change from the conditions that prevailed under the Board of Equalization in which licenses were issued to vacant lots and to questionable structures, in one instance consisting of two house trailers and a chicken coop.

10. There is no evidence at this time of speculation in new on-sale general or off-sale general licenses such as characterized the administration of alcoholic beverage control under the Board of Equalization.

As a basis for preventing speculation in licenses, Russell S. Munro summarized the department's policies as follows:

> "* * * we laid down the condition that any new license could not be transferred for a period of one year. We insisted that the applicant demonstrate through his financial ability his intention to go into the business and actually engage in the business rather than speculate in the value of that license.
>
> "I don't think that we have a single speculator in the picture at the present time, either in connection with new off-sale general licenses in Orange County or in new on-sale general licenses in the southern 10 counties where we now have licenses available." (Los Angeles hearing, p. 12.)

It is the director's opinion that the increased fees for new on- and off-sale general licenses has materially reduced the problem of speculation in licenses.

No testimony or information was given to the committee which would indicate that there is outright speculation in licenses such as was found to exist under the Board of Equalization.

While the committee has been greatly concerned with the undesirable features of license transferability as it was practiced in the past, and favors legislation prohibiting transferability, the department's testimony that the increased fees for new general licenses has greatly improved the situation indicates that the present laws should be given further trial. If, however, there should arise the slightest evidence of speculation in licenses in the future, transferability of licenses should be ended permanently and immediately.

UNDESIRABLES STILL LICENSED

11. While the Department of Alcoholic Beverage Control appears to have been diligent in screening all applications for new licenses and transfers of existing licenses in order to eliminate undesirable licensees, there are still some undesirables throughout the State who were granted licenses by the Board of Equalization.

The committee's attention has been called to several persons who were licensed by the Board of Equalization, and whose desirability as licensees is questionable. These licensees generally fall into three categories; first, those who own, but do not manage, premises that constitute a police problem; second, those who, by their own actions or those of their immediate subordinates, either violate the law or permit violations to be committed with frequency on the premises; and third, those who stay just within the law, but because of their association with underworld figures the premises become a rendezvous for undesirables.

Two premises in San Bernardino County, which are owned by the same licensee, are examples in the first category. One hundred and forty-eight arrests occurred at one of these premises between January 1, 1955, and November 1, 1956. The other premises, during a five-month period in 1955, had 19 arrests, involving such offenses as fights, strong-armed robbery, sex perversion, assault with a deadly weapon, car burglary, stabbing, and serving liquor after hours. When this licensee appeared before the committee, he testified that:

> "* * * regardless of the record before you, I have run these places honestly, legitimately and fairly to the customers. I have paid my bills, I have maintained my credit and I conduct myself above-board in a good business manner, and fair and honest to everyone." (Los Angeles hearing, p. 189.)

In view of the arrest record of these establishments, it would be naive for the committee to accept the licensee's testimony at face value. As so often happens in these cases, i.e., where the owner does not actually operate the premises, the licensee tries to explain away the facts by either claiming persecution or else trying to shift the blame to others. The committee believes that these premises should be closed, and, therefore, will follow with considerable interest the department's disciplinary proceedings against them.

The 326 Club in Los Angeles, which is described in Finding Number 13, is an example of a premises where the licensee has displayed brazen contempt for the law. Testimony concerning three other Los Angeles establishments, which are gathering places for homosexuals, was also presented to the committee. Six vagrancy and lewdness arrests occurred at one premises during a two-month period in 1956. The department has filed disorderly premises accusations against all of these establishments.

Normally the department is able to discipline violators in the first two categories, because licensees that permit penal violations at their premises are generally negligent about sales to minors, drunks, and after hours. However, the lack of overt actions by licensees in the third category makes the department's efforts at revoking their licenses extremely difficult.

The majority of the undesirable licensees in the first two categories are negligent or venal, but not necessarily corrupt. The same cannot be said for members of the third category, many of whom obtained their licenses by fraud and are fronts for underworld characters. Some examples of this category are as follows:

A. A manager of a licensed premises in Burbank is an ex-convict whom the California Crime Commission report of 1953 referred to as a former member of the "Detroit Purple Gang."

B. Another Burbank licensee, in the fall of 1956, allowed a fugitive from a criminal indictment to use his automobile for a two-week period. Evidence indicates the automobile was driven to Nevada. The fugitive, an ex-convict, has an arrest record dating back to 1928, and now faces an indictment charging assault with a deadly weapon, burglary, and conspiracy. The licensee's brother also is an ex-convict

C. A brother of the fugitive mentioned above is a licensee in the Burbank area While there is no evidence to indicate that the licensee has committed any violations, the continual presence of the ex-convict brother and his associates in this premises constitutes an unwholesome atmosphere. The ex-convict brother is suspected of having a secret financial interest in this licensed premises.

D Two liquor licenses in the San Francisco area, which are owned by a former brothel madam, were recently ordered revoked by the Director of the Department of Alcoholic Beverage Control The director found that this individual was the secret owner of one license, and that she concealed part of her police record when applying for the other.

The committee believes the department should intensify its actions, such as surveilance, undercover activity, and ownership investigations, to assure that licensees falling into these three categories operate their premises in accordance with standards established in law and regulations and that revocation proceedings be started where sufficient grounds exist.

COMMERCIAL REGULATION VS. ENFORCEMENT

12. While the Director of the Department of Alcoholic Beverage Control testified that he considers the department's primary duty to be the issuance of licenses, rather than law enforcement, the committee believes the department should be mainly concerned with the protection of the public welfare through vigorous and uniform law enforcement. The detailed regulation of common commercial practices tends to divert the department from this principal task, and, therefore, the committee has recommended elsewhere that thorough study be given to these commercial practices now required by our statutes.

At the committee's Los Angeles hearing, the Director of the Department of Alcoholic Beverage Control stated that:

> "* * * licensing is our primary obligation, and * * * enforcement is a secondary obligation.

"I reasoned in this way, * * * we are the only agency in the State that has anything to do with licensing. * * *"

"On the other hand, enforcement of the A. B. C. Act is concurrent with all law enforcement agencies." (p. 15.)

The committee does not agree that the department has a primary and a secondary function Licensing is a part of enforcement, and the people of California are vitally interested in good, vigorous, uniform and strict enforcement of the laws. Therefore, the department should, by cooperating with local law enforcement agencies and use of its own enforcement personnel, direct its total efforts toward achieving the best enforcement possible.

Initially the purpose of the committee hearings was to investigate the internal functioning of the Department of Alcoholic Beverage Control, determine the effectiveness of its enforcement program, and judge the efficiency of its working relations with local law enforcement agencies. However, considerable testimony was received concerning proposed changes in the laws regulating the commercial activities of the liquor industry. Recommendations were submitted to decrease the hours of sale and to enforce compulsory Sunday closing of off-sale premises, to increase the number of off-sale licenses, and to repeal the department's Rule 28 which establishes certain standards for distilled spirits wholesalers.

The committee is of two minds on the subject of commercial regulation. First, it realizes that this activity consumes a significant portion of the department's time and manpower which could be more profitably employed in protecting the public welfare by concentrating on licensing and enforcement.

Second, many of these regulations and statutes, both existing and proposed, are conflicting, ambiguous and represent a deep invasion by the State of private enterprise. The existing statutes in this field were adopted nearly always at the request of one or another segment of the industry itself. A cursory review of existing law discloses numerous disparities in the treatment of various branches of the liquor industry. The importance of this subject demands that careful consideration be given to the ramifications of these regulations before any specific proposals for changing existing law are enacted.

At the present time, the committee does not have sufficient information to propose a comprehensive plan for remedial legislation. Therefore, rather than introducing piecemeal recommendations which might solve certain problems, and perhaps create others, the committee believes the best solution would be to have a comprehensive and thorough study of all the problems connected with commercial and economic regulation of this industry made by the Legislature. The results of such a study could be available to the next session of the Legislature. Pending this study, the committee recommends that the department not adopt new rules or regulations increasing this commercial regulation, and specifically, that the effective date of Rule 28 be postponed until April, 1958.

DELAYS IN ENFORCEMENT

13. Because of delays inherent in the hearing process and the multiple remedies and appeals provided by law, more than two years may elapse between the filing of an accusation and final revocation of a license.

The inability of the Department of Alcoholic Beverage Control to enforce a serious disciplinary action, such as revocation, within a reasonable time interval constitutes one of its most pressing problems. The multiple delays inherent in the hearing and appeal process, in the opinion of San Diego County's District Attorney, "* * * indicate an entire breakdown of the intent and purpose of the control provisions of the Alcoholic Beverage Act." (Don Keller, Los Angeles hearing, p. 72.)

During 1955-56, a normal revocation action consumed over 14 months from the time the department filed an accusation until the Appeals Board rendered its decision. A licensee receiving an adverse decision from the Appeals Board still has recourse to the courts, and because of the crowded calendars and the granting of stays, another year or more elapses before the case is finally settled During this entire period, which may extend over two years, the licensee remains in business.

These extended delays in enforcing penalties have affected the department's prestige and its enforcement powers have suffered. No matter what violations are committed, licensees can be certain that swift penalties, under present procedures, will not be forthcoming. The delays afford them an opportunity to operate beyond the law for a long time and with no fear of the consequences. A license can only be revoked once. As a result, local law enforcement officials tend to lose their incentive for strict enforcement because of the long delays in punishment.

Table 2, based upon statistics furnished by the Appeals Board, indicates the typical delays that have occurred in processing accusations which resulted in revocations.

TABLE 2

TYPICAL TIME INTERVALS IN REVOCATION PROCEEDINGS AGAINST ALCOHOLIC BEVERAGE CONTROL LICENSEES

At Department Level	
Between filing the accusation and holding the hearing	152 days
Between the hearing date and the proposed decision	42 days
Between the proposed decision and the final decision of the director	27 days
Total time lapse in the department	221 days
Between director's decision and filing of the appeal	32 days
At the Appeals Board	
Between the filing of the appeal and the receipt of the transcript	37 days
Between the receipt of the transcript and the date of the hearing	79 days
Between the hearing date and the board's decision	55 days
Total time lapse at the Appeals Board	171 days
Total interval to process a revocation accusation at administrative level	424 days

SOURCE Appendix III.

These multiple delays occur at three different levels, department, Appeals Board, and the courts. Some reasons for the delays are:

A. *At the Department*

After the accusation is filed, the hearing date is set. Because of a backlog of cases and the requirement that hearings be held in the licensee's county, a delay of as much as three months frequently occurs. Delays beyond this interval are usually the result of continuances that are requested by the licensees. In Appeals Board Case 323, for example, 442 days elapsed between the filing of the accusation and the final hearing.

The hearing officer, after receiving all testimony, prepares a proposed decision and this normally takes from one to two weeks. However, if the licensee's attorney indicates that a written brief will be filed by the licensee after the hearing, the writing of the decision is postponed until the contents of the brief have been reviewed, and this causes a further delay.

After a review of the proposed decision, the director of the department renders his decision. Table 2 indicates that approximately 7½ months elapse between the filing of the accusation and the issuing of the department's decision. If the time consumed in preparing the accusation before its filing is considered, then from 8½ to 10½ months have elapsed since the violation was committed.

B. *At the Appeals Board*

After the department issues its decision the licensee has 40 days within which to file an appeal. The Appeals Board will not schedule a hearing until it has received the department's hearing transcript. In Appeals Board Case 234, the transcript ran about 675 pages and took 4½ months to prepare.

Normally the Appeals Board holds hearings three days a month in Los Angeles, two days in San Francisco, and one day in Sacramento. Since licensees are normally given only 10 to 15 days' notice of the hearing, frequently there are requests for continuances. In Appeals Board Case 234, 5½ months elapsed between the receipt of the transcript and the date of the hearing.

During the first three or four months of the Appeals Board's existence, its decisions consisted of short, concise statements either affirming or overruling the department's position However, during the last year and a half, the decisions have been in the form of legal opinions, some quite lengthy, and from one to two months now elapse before an opinion is rendered.

C. *In the Courts*

After the Appeals Board's decision, the department and licensees have 30 days in which to file with the superior court an appropriate petition for review. Because of crowded court calendars and the accepted practice of granting stays of execution while the case is pending, frequently a year or more elapses before a decision is rendered. In Appeals Board Case 165, where the charge was prostitution, the petition was filed with the superior court on January 3, 1956, and as of January 1, 1957, the case was still pending. Another example would

be Appeals Board Case 208, where the charge was solicitation by "B-girls." The petition was filed on March 7, 1956, and it is still pending.

After the superior court's decision, the case can be taken to the district court of appeal and eventually hearing may be sought in the Supreme Court.

Conclusion

During the 1953-54 hearings on alcoholic beverage control enforcement, the committee's attention was focused on many premises that local law enforcement officials considered detrimental to public welfare and morals because of repeated arrests and violations which were frequently ignored by the Board of Equalization. Now, three years later, after the department filed accusations, held hearings, and issued revocation orders, many of these establishments are still operating because the revocations are on appeal at the Appeals Board or in the courts.

The 326 Club in Los Angeles typifies this problem In June, 1950, the Los Angeles Police Department protested the transfer of this license because "the establishment is definitely a police problem." The protest was not honored by the Board of Equalization. On May 6, 1955, the Los Angeles City Council, under a little used section of the law, initiated an accusation charging this establishment with being a disorderly premises. Sixteen months later, September 6, 1956, the department issued an order revoking the license but the case is now before the Appeals Board. During 1956, three additional accusations were filed against this licensee, charging such violations as narcotics, disorderly premises, and selling to minors. The license was revoked for the second time on the disorderly premises charge, and, again, an appeal is in process. The other two accusations are still pending before the department In spite of the four accusations, two revocation orders, and the 56 police arrests that occurred at this establishment between August 19, 1955, and January 4, 1956, covering such offenses as robbery, drunks, vagrancy and lewdness, grand theft money and begging, the 326 Club is still operating.

Every law enforcement official that appeared before the committee agreed that something must be done to shorten the interval between the date of the offense and the final imposition of the penalty. It seems abundantly clear to the committee that this should be done.

14. The jurisdiction of the Alcoholic Beverage Control Appeals Board and the superior courts is identical in scope of review. This results in what appears to be unnecessary delays in terminating disciplinary proceedings, and provides unnecessary duplicate remedies.

After the department issues its order either suspending, revoking, or denying the license, the applicant or licensee may appeal the decision, first to the Appeals Board, and then to the courts. However, both the Appeals Board and the superior courts have identical jurisdictions, i.e., their review is upon the testimony contained in the transcript of proceedings before the department. Neither the Appeals Board nor the superior courts can accept new testimony or evidence, but must decide the matter on questions of law alone.

This duplicate process delays the final adjudication of the disciplinary action without apparently adding any new legal safeguards to the rights of the licensee.

The entire activity of the Appeals Board is concerned with the review of appeals from decisions of the department. Review of Appeals Board orders constitutes only a small portion of the cases before superior courts. From January 1, 1955, to November 1, 1956, 459 cases had been filed with the Appeals Board, but only 83 had been filed in the superior courts throughout the State. The time necessary to render a decision also varies. Finding Number 13 demonstrated that a typical revocation action was before the Appeals Board 171 days, while the same type of case was before the superior courts nearly a year.

The committee feels strongly that this existing duplication of appeals available to a licensee results in undue delays in assessing a penalty against violators of the Alcoholic Beverage Control Act and, therefore, is detrimental to the department's enforcement program.

15. In numerous instances the Alcoholic Beverage Control Appeals Board has not rendered its decision within the time limit specified by law, i.e., 60 days after the filing of the appeal.

Section 23086 of the Alcoholic Beverage Control Act requires that, in all appeals from decisions of the Department of Alcoholic Beverage Control, the Appeals Board "* * * shall enter its order * * *" affirming or reversing the department's decision "* * * within 60 days after the filing of an appeal."

According to data presented to the committee by the department, the average time required by the board to issue an order during 1955 was more than 70 days. During the first 11 months of 1956, this average time had increased to more than 112 days, or almost double the time required by law.

In a report to the committee, dated December 7, 1956, the Appeals Board states that it has "* * * construed Section 23086 as permissive and not mandatory." The committee questions the validity of such a construction in view of the concise wording of the section.

The board defends its position "upon grounds of necessity" and justifies it upon the following factors:

A. The Appeals Board exercises an administrative appellate function and it is, therefore, necessary to have a transcript of the department's hearing before the director's decision can be reviewed. The submission of a transcript by the department is sometimes delayed. Finding Number 13 demonstrated that in revocation accusations, normally 37 days elapsed between the date of the appeal and the delivery of the hearing transcript to the Appeals Board. In Appeals Board Case 295, almost four months elapsed before the transcript was delivered.

B. The board follows closely the procedure of the superior and appellate courts in granting continuances of oral argument and extensions of time in which to file briefs for such reasons as conflicts with other cases previously scheduled by the attorney, scheduled vacations, illnesses and additional time for preparation because of unusually long transcripts. The board points out that

"no continuance granted by the board has ever been opposed by the department or its attorney, the Attorney General's Office."

C. The board's practice of normally scheduling only six days of hearings per month—three in Los Angeles, two in San Francisco, and one in Sacramento—adds to the delay because if a case is not finished on the appointed day, it is carried over to the next month. During 1955, the board, on an average, received 18 appeals per month and rendered 16 decisions, but in 1956 the appeals increased to 24 and the number of decisions declined to 14. The more complex and lengthy decisions issued by the board during 1956, partially accounts for the decrease in the number of decisions.

16. The requirement of the Alcoholic Beverage Control Act that hearings before hearing officers be held in the county in which the premises or licensees are located delays both the scheduling and completion of the hearing.

The Department of Alcoholic Beverage Control has seven hearing officers. Four are stationed in Los Angeles, one in San Francisco, and two in Sacramento. Their normal work pattern consists of one week of hearings followed by a week of writing proposed decisions. At the Sacramento hearing, the department's legal counsel submitted statistical information showing that the average number of hearings per officer-month was 34.7. This average would be higher were it not for Section 24300 of the Alcoholic Beverage Control Act which requires the hearing to be held in the county where the licensees or premises are located.

The problems encountered by the two hearing officers in the Central Valley area, operating out of Sacramento, are excellent illustrations as to why delays occur in holding hearings. The Central Valley area comprises 33 counties, ranging from Kern in the south to Modoc in the north. The distance from Sacramento to Bakersfield is about 275 miles, and from Sacramento to Alturas in Modoc County, 300 miles. In order to eliminate as much travel time as possible, the department postpones scheduling hearings until there are sufficient cases to warrant the expense of sending a hearing officer. This practice not only applies to the individual counties, but also to a general region. For example, the department normally would not schedule hearings in Bakersfield unless there are cases ready to be heard in Visalia, Fresno, Merced or Modesto. In this way all the cases in a certain region are heard at about the same time. This practice has the advantage of reducing unnecessary travel time, but it causes delays of from 60 to 90 days, in some instances, in holding hearings.

In addition to the delay in scheduling hearings and the waste of traveling time, Section 24300 has another disadvantage. Most rural counties have few licensees and, as a result, few accusations. Therefore, even when the hearings are scheduled, the number of cases are insufficient to occupy a hearing officer, in many instances, for even a half a day.

The committee believes that the enforcement process would be expedited with a resultant saving in time and expenses if hearings could be held in a few central locations rather than in the licensee's county.

17. Serious enforcement problems can be created for local peace officers if proposed transferees of on-sale general licenses are allowed to operate bars before the fitness of those license applicants is examined.

For many years it has been an accepted practice in alcoholic beverage control administration for the transferee to assume control of the business while the transfer application is being processed. The Chief of Police of San Diego, in a letter to the committee, recommended that this practice be prohibited until the department has had an opportunity to conduct a preliminary investigation into the transferee's fitness. The chief believes that existing law does not give local law enforcement agencies sufficient power to handle situations where the transferees may be undesirable.

After exploring the numerous ramifications of this problem, the committee has concluded that the Department of Alcoholic Beverage Control, within the framework of existing laws and regulations, has sufficient power to cope with this situation. The public is protected because, under the Constitution, the licensee is still fully accountable for any violations committed on the premises until the transfer is complete, and the transferee is responsible for any of his own infractions of the law Therefore, the committee believes that no additional legislation on this subject is needed at this time.

18. The continued operation of a number of premises in the San Bernardino area upon which numerous arrests had been made by local peace officers for violations of the Penal Code appears to have been due largely to staff deficiencies in the San Bernardino office of the Department of Alcoholic Beverage Control prior to July 1, 1956. This appears to have been corrected since that date and appropriate action against these premises is currently being taken by apparently well qualified new top officials of the department in that region.

During January and February of 1956, the San Bernardino County Sheriff's Office, working in conjunction with the State Bureau of Narcotic Enforcement, made a series of arrests for narcotic violations. Many licensed premises, and in a few cases employees of licensees, were involved. The committee's attention was directed to this situation when, after the grand jury rendered its indictments, no action against the licensees seemed to be forthcoming from the Department of Alcoholic Beverage Control.

At the San Bernardino hearing the committee questioned department officials concerning 24 premises in which many violations had occurred for assorted offenses including narcotics and bookmaking. At one establishment, for example, 206 assorted arrests had occurred between July 22, 1948, and October 4, 1956.

The department explained its slowness to act against many of these premises because of the following:

A. A serious personnel shortage, especially at the supervisory level, existed in the San Bernardino District Alcoholic Beverage Control Office from February 1, 1955, to July 1, 1956. Three supervisors should have been the normal supervising complement of this office

—a supervising agent, grade 2, in charge, and two supervising agents, grade 1, one handling administration and the other enforcement. However, during this period the supervising agent, grade 1, in charge of administration, acted in all three capacities.

B. Local law enforcement agencies requested the district alcoholic beverage control office to postpone filing disciplinary action against some of the premises where narcotic and bookmaking violations had occurred until the courts had heard and acted upon the criminal complaints. The stated reason for the request was that the local law enforcement agencies did not want to disclose their sources and the extent of their information at an administrative hearing until after the criminal cases had been decided.

C. In August of 1956, the department gave public notice that 186 new on-sale general licenses would be available in the two counties, i.e., San Bernardino and Riverside, which are in this district. The processing of these license applications has placed an additional work load on this district office. The regional supervisor summarized the situation as follows:

> "As it stands at the moment, we are working almost on an emergency basis, trying to keep up with follow-ups, on conditions and reports, and catching up on back-logs * * *." (Harry S. Knust, San Bernardino hearing, p. 131.)

During the latter part of 1956 the committee is advised that the department has stepped up its enforcement activities in the San Bernardino area and has instituted accusations against several violators. It appears to the committee that the personnel problems have been resolved in San Bernardino at least to the degree that enforcement will be greatly improved in that area.

LIGHTING STANDARDS NEEDED

19. Minimum lighting in many bars hampers effective enforcement of the law by both local peace officers and agents of the Department of Alcoholic Beverage Control.

Law enforcement officials agree that improved lighting conditions inside on-sale premises would be conducive to better law enforcement. Los Angeles County Sheriff Biscailuz, at the 1953-54 hearings, stated, "I have always maintained that bars and cocktail lounges have never had enough light * * *." (Evidence Section, 1954 Report, p. 52.) San Francisco's Chief of Police Ahern said, "* * * it would assist law enforcement in all circles to a great extent if they (on-sale premises) were properly lighted." (San Francisco hearing, p. 47.) Manteca's Chief of Police, Vernon E. Jeffries, concurred and said it would also improve the "* * * demeanor within the place itself." (Sacramento hearing, p. 140.)

Stockton has a local ordinance which makes the issuance of dance permits contingent upon the premises being adequately lighted. No specific candlepower is required, but the establishment must be approved by the police department. Jack A. O'Keefe, Stockton's Chief

of Police, stated that, "In the area where we have our problems it (the local ordinance) definitely has helped us." (Sacramento hearing, p. 142.)

Regarding a specific recommendation as to what constitutes adequate lighting, San Francisco's Chief of Police Ahern stated, "I believe myself six candlepower would be all right * * *." (San Francisco hearing, p. 47.)

The committee concurs with the views expressed by law enforcement officials and recommends that a specific minimum standard of lighting be established for all on-sale premises.

FALSE IDENTIFICATION CARDS

20. Many minors are presenting false identification materials to licensees and their employees, thus creating a major problem in alcoholic beverage control enforcement.

Fifty-five percent of the accusations filed by the Department of Alcoholic Beverage Control since its establishment, have been for sales to or consumption of alcoholic beverages by minors. The deputy director of the department estimates that in better than two-thirds of these cases the licensees or their employees did not require the minor to furnish proper identification. In some instances identification apparently was not requested because the licensee either did not want to embarrass the patron, or else thought the age had already been established. On the other hand, there are licensees who intentionally violate the law by serving to known minors.

However, in about 30 percent of the cases, minors have presented false identification cards which have the appearance of validity. The prevalent use of these cards jeopardizes legitimate businessmen and hampers alcoholic beverage control enforcement. Licensees attempting to abide by the law, under present conditions, are compromised because they never know when an identification card is valid or fraudulent.

The director of the department stated that false identification materials "* * * are used to deliberately defraud a legitimate businessman and frankly my sympathies go to the licensee in those kind of cases." (Russell S. Munro, San Bernardino hearing, p. 25.)

The committee believes that enforcement will be improved and legitimate businessmen protected, if severe penalties are imposed against persons issuing, carrying or presenting false identification materials. The committee has not at this time agreed to recommend the issuance of official identity cards.

EXCESS LICENSES

21. The prohibition against the transfer of on-sale and off-sale licenses from one county to another tends to maintain an excess of licenses in proportion to population in some areas and to aggravate the police problems therein.

After the end of prohibition and until 1939, no restrictions on the number of liquor licenses existed in California. In 1939, the Board of Equalization adopted a rule, effective August 10th of that year, which

provided for the present limitation of one license per 1,000 population in each county. However, there was a "grandfather clause" which protected existing licensees in counties where the limitation was exceeded. In 1945, this rule was superseded by the enactment of Sections 23816 and 23817 of the Alcoholic Beverage Control Act. Section 23816 provides that no additional on-sale general licenses shall be issued in any county where the number of all on-sale premises, other than beer licenses, exceeds one license for each 1,000 inhabitants. Section 23817 is identical except that it governs off-sale general licenses.

Based upon the number of licenses in existence on April 1, 1956, and the estimated population as of July 1, 1956, the over-all state-wide ratio of on-sale licenses is slightly below the maximum fixed by law. Off-sale licenses, because of the "grandfather clause," still exceed the legislative policy by about 40 percent. However, the concentration of licenses varies considerably among the counties. Eighteen counties have two or more on-sale licenses per thousand population, while 10 counties have less than one license per thousand. A similar situation exists with off-sale licenses. Sixteen counties have more than three licenses per thousand population and three counties have less than one license per thousand population.

Tables 3 and 4 list the counties, by types of licenses, where the ratios are at least twice the state-wide average.

TABLE 3

LIMITED ON-SALE LICENSES

Per 1,000 Population in Selected Counties

County	*Number of licenses per 1,000 population*
Sierra	6.52
Mono	5.71
Amador	5.28
Plumas	4.58
Calaveras	4.11
Lake	3.64
Nevada	3.52
Tuolumne	3.27
Mariposa	3.17
Modoc	2.68
Yuba	2.43
Colusa	2.41
Siskiyou	2.24
Sonoma	2.24
El Dorado	2.16
San Francisco	2.15
Santa Cruz	2.14
Lassen	2.00
State-wide average	.94

SOURCE For data on all counties, see Appendix VIII-A

TABLE 4

LIMITED OFF-SALE LICENSES

Per 1,000 Population in Selected Counties

County	*Number of licenses per 1,000 population*
Mono	13.81
Alpine	10.00
Sierra	7.83
Mariposa	7.56
Lake	6.27
Plumas	5.59
Trinity	4.46
Inyo	4.07
El Dorado	3.98
Tuolumne	3.79
Colusa	3.66
Calaveras	3.47
Siskiyou	3 36
Yuba	3.30
Shasta	3.27
Modoc	3.09
State-wide average	1.41

SOURCE: For data on all counties, see Appendix VIII-B.

The saturation of licenses in many rural counties, combined with a continual decline in population, has created serious law enforcement and economic problems. One district attorney gave the following summary of the situation:

> "The economic pressures on these licensees to violate (the law) by sales to minors, by sales to drunks is something that just can't be overcome by any kind of law enforcement procedures." (Winslow Christian, Sierra County, Sacramento hearing, p. 86.)

At approximately the same time the Board of Equalization established, by rule, a limitation on the number of certain types of licenses, it also adopted a policy of preventing intercounty transfer of these licenses. Since most, if not all, of the counties at that time exceeded the limitation, and any intercounty transfer would have increased the number of excess licenses in another county, the board's motive probably was to prevent evasion of the limitation policy by transfer.

After receiving testimony from various witnesses and carefully considering this subject, this committee believes that the prohibition of intercounty transfers of licenses from excess to deficit counties, is no longer valid. This prohibition can be removed by the department without the necessity of enacting a statute. The benefits that will accrue from revoking the policy appear to outweigh by far any difficulties in the initial establishment of administrative machinery necessary to implement a voluntary intercounty transfer program. By permitting transfer from county to county the enforcement problem in saturated counties will be reduced, and the number and open market prices of licenses will tend to find their economic level throughout the State. In other words, instead of the State issuing new licenses in those counties where the ratio of licenses to population is below the statutory limitation, demand in those counties should be filled, insofar as is possible, by transfer from counties where the ratio exceeds one per thousand population.

REVISION OF ALCOHOLIC BEVERAGE CONTROL ACT

22. The department feels that the Alcoholic Beverage Control Act has certain conflicts, ambiguities and uncertainties which hamper its administration.

The Director of the Department of Alcoholic Beverage Control testified regarding the Alcoholic Beverage Control Act, that "In my opinion as an attorney, it is one of the worst laws on our books at the present time to administer." (Russell S. Munro, Sacramento hearing, p. 178.)

Generally the conflicts and ambiguities fall into two main categories: first, the sections which, in their present wording, are almost impossible to enforce because the language is open to various interpretations; and, second, the sections which discriminate against or grant preferential treatment to various branches of the liquor industry.

Section 25602 prohibits the sale of alcoholic beverages to an "obviously" intoxicated person, and is an example of the first category. The intent of this section is clear but the word "obviously" is open to many interpretations. The person must be "obviously" drunk to the person selling the alcoholic beverages, and at the time of sale Discussing the difficulties of enforcing this provision, Jack A. O'Keefe, Chief of Police of Stockton stated:

> "We have had sobriety tests performed on some of the individuals arrested and they have showed higher than the ordinary drunk driver and yet they are not obviously drunk in the eyes of some of the courts." (Sacramento hearing, p. 135.)

The sections regulating the commercial activities of manufacturers, rectifiers, wholesalers and retailers contain numerous examples of ambiguities in the law. For example, Section 25500 appears to prohibit *all* manufacturers, rectifiers and wholesalers from holding a financial interest in an on-sale license or in a business which supplies fixtures to licensees. However, Section 25501 contains similar, but not identical, restrictions which apply only to brewery manufacturers and wholesalers The department is not sure if the contents of Section 25501 are in addition to or in lieu of the restrictions contained in Section 25500. In another instance, Section 25600 prohibits licensees from giving any premium or gift in connection with the sale of alcoholic beverages. In this connection it is difficult to determine what is a gift, within the meaning of the law, and whether it is issued in connection with the sale of alcoholic beverages.

The Alcoholic Beverage Control Act contains many provisions which either grant special privileges to, or discriminate against, certain segments of the liquor industry. Section 25503(g) prohibits any manufacturer or wholesaler from giving a retailer any advertising sign which exceeds 630 square inches. If this provision was strictly enforced, then grocery, drug and liquor stores would lose much of their indoor advertising. Under Section 25508, grocery cooperatives are allowed to act as wholesalers to their retail members, a practice which gives a special privilege and is otherwise contrary to Sections 25505 and 25506 which prohibit retailers from having a financial interest in wholesalers.

The department feels that extensive public hearings should be held throughout the State to receive the views of industry and the public

regarding the complete revision of this act. The objectives would be to reorganize the act in a logical sequence, to provide that all segments of the liquor industry are treated in the same manner, and to insure the uniform protection of the public and the safeguarding of the public interest.

FIREARMS FOR AGENTS

23. More than 100 alcoholic beverage control agents, in their capacity as peace officers, are carrying firearms. Because the State does not provide weapons for this group of enforcement officers, there is no uniformity in types of firearms used and, therefore, no uniform and proper training program in their use.

The committee believes that persons engaged in hazardous law enforcement duties should be armed and trained in the use of these arms. That this is not the case is indicated by the following:

> "One hundred three of our officers now are carrying firearms they themselves own * * *. Ordinarily our work doesn't require the carrying of firearms but we are * * * inspecting a lot of these skid-row places and * * * we are pretty well convinced that every officer on night duty should have a sidearm and handcuffs." (Malcolm E. Harris, Deputy Director, Sacramento hearing, p. 68.)
>
> "* * * We have actually withheld from our men the idea that they do have full police officer powers because I do not feel that they are qualified to undertake these powers until they are adequately trained." (Russell S. Munro, Department Director, Sacramento hearing, p. 192.)

On two previous occasions, the Department of Alcoholic Beverage Control has unsuccessfully attempted to obtain firearms and reload ammunition for its agents. A $2,500 item in the 1956-57 Budget for firearms and various types of security equipment, such as blackjacks and handcuffs, was disapproved by the Department of Finance for the reason that it was inconsistent with the general state policy of having peace officers provide their own firearms.

In October of 1956, the Fresno City Police Department arranged for the local alcoholic beverage control agents to use their range facilities. The State Controller's office ruled that the agents could not submit an expense voucher for the expended ammunition, and also stated that it would not honor a departmental purchase voucher to obtain the reload ammunition. The reason given for the refusal was basically the same as the Department of Finance's, i.e., peace officers are required to purchase their own ammunition.

As a result of these administrative refusals, legislative action will be necessary to provide weapons and ammunition to the State's alcoholic beverage control agents should this be desirable.

INFLUENCE OF LICENSE VALUE ON ENFORCEMENT

24. Generally the holders of on-sale beer licenses, which cost $28 per year, and on-sale beer and wine licenses, which cost $84 per year, are less diligent in attempting to prevent violations on their premises than are holders of on-sale general licenses because of the smaller investment involved.

At San Bernardino the committee received testimony concerning 23 licensed premises where law enforcement officials had made repeated arrests. The violations covered such offenses as narcotics, assault, rape, prostitution, bookmaking, fights and sales to minors. The flagrant disrespect for the law by the operators of these premises was evident from the incessant number of violations. Over 100 police complaints had been registered against the patrons of several of these establishments during the last few years. Thirteen of these premises held on-sale beer and the other 10 on-sale beer and wine licenses. The absence of testimony indicating any serious continuing violations by establishments with limited (i.e., general) licenses verifies the contention of the San Bernardino District Alcoholic Beverage Control Supervisor:

> "* * * It has been my experience that a beer license has very little value, and people don't have too much to lose and are not as careful with their control of the premises as those people who own a limited type license." (Harry S. Knust, San Bernardino hearing, p. 88.)

RECOMMENDATIONS

The committee makes the following recommendations, including a constitutional amendment and bills, each of which is preceded by an explanation.

1. The following constitutional amendment and bill provide that whenever revocation has been ordered by the director, and approved by the Appeals Board, any further appeal by the licensee then would go directly to the district court of appeal with a hearing priority, and the power of the district court to grant stays of execution would be eliminated.

In other departmental disciplinary cases, i.e., suspensions, or where the Appeals Board differs with the director, the same procedure would be followed, but the district court of appeal retains its power to grant stays of execution.

CALIFORNIA LEGISLATURE—1957 REGULAR SESSION

Assembly Constitutional Amendment No. 29

Introduced by the Members of the Assembly who constitute the Interim Committee on Government Organization: Messrs. Weinberger, Rees, Conrad, Thomas J. Doyle, Beaver, Coolidge, Johnson, McCollister, Miller, Rumford, Schrade, and Shell

January 19, 1957

REFERRED TO COMMITTEE ON CONSTITUTIONAL AMENDMENTS

Assembly Constitutional Amendment No. 29—A resolution to propose to the people of the State of California an amendment to the Constitution of the State, by amending the seventh paragraph of Section 22 of Article XX thereof, relating to alcoholic beverages.

Resolved by the Assembly, the Senate concurring, That the Legislature of the State of California at its 1957 Regular Session commencing on the seventh day of January, 1957, two-thirds of the members elected to each of the two houses of the Legislature voting therefor, hereby proposes to the people of the State of California that the Constitution of the State be

amended by amending the seventh paragraph of Section 22 of Article XX thereof, relating to alcoholic beverages, to read:

When any person aggrieved thereby appeals from a decision of the department ordering any penalty assessment, issuing, denying, transferring, suspending or revoking any license for the manufacture, importation, or sale of alcoholic beverages, the board shall review the decision subject to such limitations as may be imposed by the Legislature. In such cases, the board shall not receive evidence in addition to that considered by the department. Review by the board of a decision of the department shall be limited to the questions whether the department has proceeded without or in excess of its jurisdiction, whether the department has proceeded in the manner required by law, whether the decision is supported by the findings, and whether the findings are supported by substantial evidence in the light of the whole record. In appeals where the board finds that there is relevant evidence which, in the exercise of reasonable diligence, could not have been produced or which was improperly excluded at the hearing before the department it may enter an order remanding the matter to the department for reconsideration in the light of such evidence. In all other appeals the board shall enter an order either affirming or reversing the decision of the department. When the order reverses the decision of the department, the board may direct the reconsideration of the matter in the light of its order and may direct the department to take such further action as is specially enjoined upon it by law, but the order shall not limit or control in any way the discretion vested by law in the department. *An* order s of the board shall be subject to judicial review, upon petition of the director or any party aggrieved by such order, *by the district court of appeal for the appellate district in which the licensed premises are located or in which the party resides. Such review proceedings shall be preferred over, and shall be heard and determined in preference to, all other civil business except election causes, irrespective of position on the court's calendar. In cases in which the department has revoked a license and the board has affirmed the decision of the department, the court shall not grant any stay of the operation of the decision of the department pending the judgment of the court. In all other cases, the court may grant such a stay, but only after notice of the motion therefor has been given to the parties in the proceedings and after a hearing thereon at which all such parties are given an opportunity to be heard. The provisions of this paragraph shall not preclude the Legislature from providing for a different type of judicial review of orders of the board.*

CALIFORNIA LEGISLATURE—1957 REGULAR SESSION

ASSEMBLY BILL No. 1966

Introduced by the Members of the Assembly who constitute the Interim Committee on Government Organization: Messrs. Weinberger, Rees, Conrad, Thomas J. Doyle, Beaver, Coolidge, Johnson, McCollister, Miller, Rumford, Schrade, and Shell

January 19, 1957

REFERRED TO COMMITTEE ON GOVERNMENT ORGANIZATION

An act to amend Section 23091 of, and to repeal Section 24301 of, the Business and Professions Code, relating to alcoholic beverages.

The people of the State of California do enact as follows:

SECTION 1. Section 23091 of the Business and Professions Code is amended to read:

23091. *A* final order s of the board shall be subject to judicial review as ~~prescribed by law~~ *provided in Section 22 of Article XX of the Constitution*. Where any statute specifies a limited period within which an action for judicial review of any matter within the jurisdiction of the board may be instituted, the time for filing the action shall commence to run on the date on which the final order of the board is delivered to the parties personally or sent to them by registered mail.

SEC. 2. Section 24301 of said code is repealed.

SEC. 3. Section 1 of this act shall be operative only if a constitutional amendment providing for judicial review of orders of the Alcoholic Beverage Control Appeals Board by the District Courts of Appeal is proposed by the Legislature at this session and is adopted by vote of the people, in which event Section 1 of this act shall become operative at the same time that said constitutional amendment takes effect.

2. This bill would reduce from 40 days to 10 days the time within which an appeal to the Alcoholic Beverage Control Appeals Board may be filed.

CALIFORNIA LEGISLATURE—1957 REGULAR SESSION

ASSEMBLY BILL No. 1967

Introduced by the Members of the Assembly who constitute the Interim Committee on Government Organization: Messrs. Weinberger, Coolidge, Rees, Thomas J. Doyle, Beaver, Conrad, Johnson, McCollister, Miller, Rumford, Schrade, and Shell

January 19, 1957

REFERRED TO COMMITTEE ON GOVERNMENT ORGANIZATION

An act to amend Section 23081 of the Business and Professions Code, relating to alcoholic beverages.

The people of the State of California do enact as follows:

SECTION 1. Section 23081 of the Business and Professions Code is amended to read:

23081. Within ~~40~~ *10* days after the decision of the department is delivered or mailed to the parties, any party aggrieved by a final decision of the department may appeal to the board from such decision. The appeal shall be in writing and shall state the grounds upon which a review is sought. A copy of the appeal shall be mailed by the appellant to each party who appeared in the proceeding before the department, including the department which shall thereafter be treated in all respects as a party to the appeal.

3. This bill provides that hearings on protests, accusations, or petitions for licenses, may be held at Los Angeles, San Francisco, or Sacramento, whichever city the department deems most suitable, but with due regard to the convenience of witnesses, rather than only in the county where the licensee or premises is located.

CALIFORNIA LEGISLATURE—1957 REGULAR SESSION

ASSEMBLY BILL No. 1964

Introduced by the Members of the Assembly who constitute the Interim Committee on Government Organization: Messrs. Weinberger, Rees, Conrad, Thomas J. Doyle, Beaver, Coolidge, Johnson, McCollister, Miller, Rumford, Schrade, and Shell

January 19, 1957

REFERRED TO COMMITTEE ON GOVERNMENT ORGANIZATION

An act to amend Section 24300 of the Business and Professions Code, relating to alcoholic beverages.

The people of the State of California do enact as follows:

SECTION 1. Section 24300 of the Business and Professions Code is amended to read:

24300. Any hearings held on a protest, accusation, or petition for a license ~~shall~~ *may* be held at the county seat of the county in which the premises or licensee are located, *or may be held in Los Angeles, San Francisco, or Sacramento, whichever of such cities is most convenient with due regard to the convenience of witnesses* ; provided, that hearings before the department itself on reconsideration or under subdivision (c) of Section 11517 of the Government Code may be held in Sacramento or at any other place in the State where the department is meeting. Except as provided in Section 24203 and in this section, the proceedings shall be conducted in accordance with Chapter 5 of Part 1 of Division 3 of Title 2 of the Government Code, and in all cases the department shall have all the powers granted therein.

4. This bill would make it a misdemeanor for any person to issue, or any minor to have in his possession, false documentary evidence of majority.

CALIFORNIA LEGISLATURE—1957 REGULAR SESSION

ASSEMBLY BILL No. 1961

Introduced by the Members of the Assembly who constitute the Interim Committee on Government Organization: Messrs. Weinberger, Rees, Conrad, Thomas J. Doyle, Beaver, Coolidge, Johnson, McCollister, Miller, Rumford, Schrade, and Shell

January 19, 1957

REFERRED TO COMMITTEE ON GOVERNMENT ORGANIZATION

An act to add Section 25660.5 to, and to amend Section 25661 of, the Business and Professions Code, relating to documentary evidence of majority and identity of persons.

The people of the State of California do enact as follows:

SECTION 1. Section 25660.5 is added to the Business and Professions Code, to read:

25660.5. Any person who sells, gives, or furnishes to any person under the age of 21 years any false or fraudulent documentary evidence of the majority and identity of such person is guilty of a misdemeanor.

SEC 2. Section 25661 of said code is amended to read:

25661. Any person under the age of 21 years who presents or offers to any licensee, his agent or employee, any written *documentary* evidence of age *and identity* which is false, fraudulent, or not actually his own for the purpose of ordering, purchasing, attempting to purchase or otherwise procuring or attempting to procure, the serving of any alcoholic beverage, *or who has in his possession any false or fraudulent documentary evidence of age and identity,* is guilty of a misdemeanor.

5. This bill would make it a misdemeanor for any on-sale licensee to permit a minor to consume alcoholic beverages on the premises, or for a minor to enter and remain in a public premises without lawful business therein.

CALIFORNIA LEGISLATURE—1957 REGULAR SESSION

ASSEMBLY BILL No. 1962

Introduced by the Members of the Assembly who constitute the Interim Committee on Government Organization: Messrs. Weinberger, Rees, Conrad, Thomas J. Doyle, Beaver, Coolidge, Johnson, McCollister, Miller, Rumford, Schrade, and Shell

January 19, 1957

REFERRED TO COMMITTEE ON GOVERNMENT ORGANIZATION

An act to amend Sections 25658 and 25665 of the Business and Professions Code, relating to alcoholic beverages.

The people of the State of California do enact as follows:

SECTION 1. Section 25658 of the Business and Professions Code is amended to read:

25658. (a) Every person who sells, furnishes, gives, or causes to be sold, furnished, or given away, any alcoholic beverage to any person under the age of 21 years is guilty of a misdemeanor.

(b) Any person under the age of 21 years who purchases any alcoholic beverage, or any person under the age of 21 years who consumes any alcoholic beverage in any on-sale premises, is guilty of a misdemeanor.

(c) Any on-sale licensee who permits a person under the age of 21 years to consume any alcoholic beverage in the on-sale premises is guilty of a misdemeanor.

SEC. 2. Section 25665 of said code is amended to read:

25665. Any licensee under an on-sale license issued for public premises, as defined in Section 23039, who permits a person under the age of 21 years to enter and remain ~~on~~ *in* the licensed premises without lawful business therein is guilty of a misdemeanor. *Any person under the age of 21 years who enters and remains in the licensed public premises without lawful business therein is guilty of a misdemeanor.*

6. This bill would require that the department establish minimum lighting regulations for on-sale premises to assist their agents and local law enforcement officials in carrying out their responsibilities under the Alcoholic Beverage Control Act.

CALIFORNIA LEGISLATURE—1957 REGULAR SESSION

ASSEMBLY BILL No. 2195

Introduced by the Members of the Assembly who constitute the Interim Committee on Government Organization: Messrs. Weinberger, Rees, Conrad, Thomas J. Doyle, Beaver, Coolidge, Johnson, McCollister, Miller, Rumford, Schrade, and Shell

January 19, 1957

REFERRED TO COMMITTEE ON GOVERNMENT ORGANIZATION

An act to add Section 25763 to the Business and Professions Code, relating to alcoholic beverages.

The people of the State of California do enact as follows:

SECTION 1. Section 25763 is added to the Business and Professions Code, to read:

25763. The department shall by rule establish standards of lighting to be maintained in all on-sale premises, sufficient to enable the department and local enforcement officers to carry out their responsibilities and duties in such premises.

7. This bill would require that all state and local law enforcement agencies immediately notify the Department of Alcoholic Beverage Control of any arrests concerning licenseees or licensed premises.

CALIFORNIA LEGISLATURE—1957 REGULAR SESSION

ASSEMBLY BILL No. 1968

Introduced by the Members of the Assembly who constitute the Interim Committee on Government Organization: Messrs. Weinberger, Coolidge, Rees, Thomas J. Doyle, Beaver, Conrad, McCollister, Miller, Rumford, Schrade, and Shell

January 19, 1957

REFERRED TO COMMITTEE ON GOVERNMENT ORGANIZATION

An act to add Section 24206 to the Business and Professions Code, relating to alcoholic beverages.

The people of the State of California do enact as follows:

SECTION 1. Section 24206 is added to the Business and Professions Code, to read:

24206. All state and local law enforcement agencies shall immediately notify the department of any arrests made by them for violations which involve a licensee or licensed premises. The department shall promptly cause an investigation to be made as to whether grounds exist for suspension or revocation of the license or licenses of the licensee.

8. This bill would require that local law enforcement agencies or district attorneys initiate investigations concerning a licensee or licensed premises if the Department of Alcoholic Beverage Control so requests, in writing.

CALIFORNIA LEGISLATURE—1957 REGULAR SESSION

ASSEMBLY BILL No. 1963

Introduced by the Members of the Assembly who constitute the Interim Committee on Government Organization: Messrs. Weinberger, Rees, Conrad, Thomas J. Doyle, Beaver, Coolidge, Johnson, McCollister, Miller, Rumford, Schrade, and Shell

January 19, 1957

REFERRED TO COMMITTEE ON GOVERNMENT ORGANIZATION

An act to add Section 25620 to the Business and Professions Code, relating to alcoholic beverages.

The people of the State of California do enact as follows:

SECTION 1. Section 25620 is added to the Business and Professions Code, to read:

25620. Any local law enforcement agency or any district attorney shall initiate and conduct such investigations as to any licensee or licensed premises as may be requested in writing by the department.

9. This bill would provide that anyone selling intoxicating liquor within one mile of a state or junior college is guilty of a misdemeanor.

CALIFORNIA LEGISLATURE—1957 REGULAR SESSION

ASSEMBLY BILL No. 1965

Introduced by the Members of the Assembly who constitute the Interim Committee on Government Organization: Messrs. Weinberger, Rees, Conrad, Thomas J. Doyle, Beaver, Coolidge, Johnson, McCollister, Miller, Rumford, Schrade, and Shell

January 19, 1957

REFERRED TO COMMITTEE ON GOVERNMENT ORGANIZATION

An act to add Section 172e to the Penal Code, relating to the selling or exposing for sale intoxicating liquor in the vicinity of any state college or junior college.

The people of the State of California do enact as follows:

SECTION 1. Section 172e is added to the Penal Code, to read:

172e. 1. Every person who, within one mile of the grounds belonging to any state college or junior college on which the principal administrative offices of the college are located, sells or exposes for sale any intoxicating liquor is guilty of a misdemeanor and upon conviction thereof shall be punished by a fine of not less than one hundred dollars ($100), or by imprisonment for not less than 50 days, or by both such fine and imprisonment, in the discretion of the court.

2 The provisions of this section shall not apply to the sale, gift, or exposing or offering for sale of lager beer, ale, porter, wine, similar fermented malt or vinous liquor or fruit juice containing one-half of 1 percent or more of alcohol by volume and not more than 3.2 percent of alcohol by weight or the sale, gift, or exposing or offering for sale of beer.

3 Distances provided in this section shall be measured not by air line but by following the shortest road or roads connecting the points in question.

4. The provisions of this section shall not apply to the sale, giving away, exposing for sale, or serving of alcoholic beverages by any licensee under the Alcoholic Beverage Control Act in any premises for which a license is issued and in effect on the effective date of this section, but no such license may be transferred from one premises to another within the prescribed area.

OTHER RECOMMENDATIONS

The following recommendations do not require legislation but can be carried out by the department under existing authority.

10. That the Department of Alcoholic Beverage Control study more carefully criminal associations in the background of licensees and their regular employees as a basis for evaluating their continuing fitness as licensees or the desirability of applicants to become licensees.

The recommendation is based upon Finding No. 11, which described the activities and background of certain undesirables who were licensed by the Board of Equalization. The committee is particularly concerned about licensees or prospective licensees that have associates or relatives with criminal records because of the possibility that they are merely acting for persons with criminal records. Therefore, the committee believes that wherever there is the slightest suspicion of false ownership, the department should be extremely diligent in its investigation to determine the fitness of the new or existing licensee.

11. That the department, by administrative order, permit the transfer of on-sale and off-sale general licenses between counties, so long as the number of licenses in the transferee county does not exceed the legislative policy of one on- and off-sale general license per 1,000 population.

The District Attorneys of Sierra and Modoc Counties presented testimony to the committee, summarized in Finding No. 21, stating that a serious law enforcement problem exists in certain rural communities because of the excessive number of liquor licenses in relation to the population.

The witnesses indicated, and the committee concurs, that the problem could be solved if the department would permit licenses to be transferred from counties where there are an excess to counties that are below the statutory limit. This proposal, if adopted, not only would solve the problem raised by the district attorneys, but also would tend to equalize the distribution of licenses throughout the State.

12. That the Department of Alcoholic Beverage Control postpone the effective date of Rule 28 until April of 1958, and in the interval, a thorough and comprehensive study of the ramifications of commercial regulation in the liquor industry, be made by the Legislature.

Finding No. 12 outlines the committee's position on this subject.

The committee firmly believes that a thorough study should be made of proposed Rule 28, and commercial regulation in general, as a basis for legislative re-evaluation of this matter.

I

ORGANIZATION OF THE DEPARTMENT OF ALCOHOLIC BEVERAGE CONTROL

Under the Board of Equalization there were 53 offices and nine other locations where liquor control officers were permanently assigned, with at least one employee in each county. Under this arrangement it appears that adequate supervision was lacking, channels of communication were overextended and inefficient use of state-owned equipment prevailed.

Under the current organization, which is essentially the same as that recommended by the Department of Finance when the new department was created, all of the employees are concentrated in and work out of 23 offices. These offices, the areas covered, and the person in charge are shown on the attached Exhibit A which was prepared by the Department of Alcoholic Beverage Control on September 17, 1956.

For administrative and operational purposes the State is divided into three administrative areas: the Northern Coastal area, with headquarters in San Francisco; the Central Valley area with headquarters in Sacramento; and the Southern California area with headquarters in Los Angeles.

Under existing policies each area administrator has full responsibility for matters of administration in his area including assignment of personnel for enforcement purposes, and he in turn presumably holds his district supervisors responsible for enforcement activities in his several districts.

In general, the men in each district are assigned to one of two activities, licensing or enforcement. Most of the enforcement work, particularly in the larger cities, is done at night, while all of the licensing work and some follow up or "back tracking" is done during the day.

Chart 1 shows the general organization of the department. The number of employees in each unit is shown, the totals being cumulative from bottom to top of the chart, i.e., the five employees shown in the Vallejo branch office are included in the 35 shown for Oakland, which in turn are included in the 135 for the Northern Coastal area, and so on. Including the director, there are 450 employees in the department.

The staff units in the headquarters office of the department generally have the following responsibilities:

1. *Principal Counsel.* Responsible for (a) legal advice to the director, (b) supervision and conduct of all hearing officers and reporters, (c) review of all findings and recommendations by hearing officers, (d) review of all accusations for legal content, and (e) of all corporate articles and partnership agreements involved in applications.

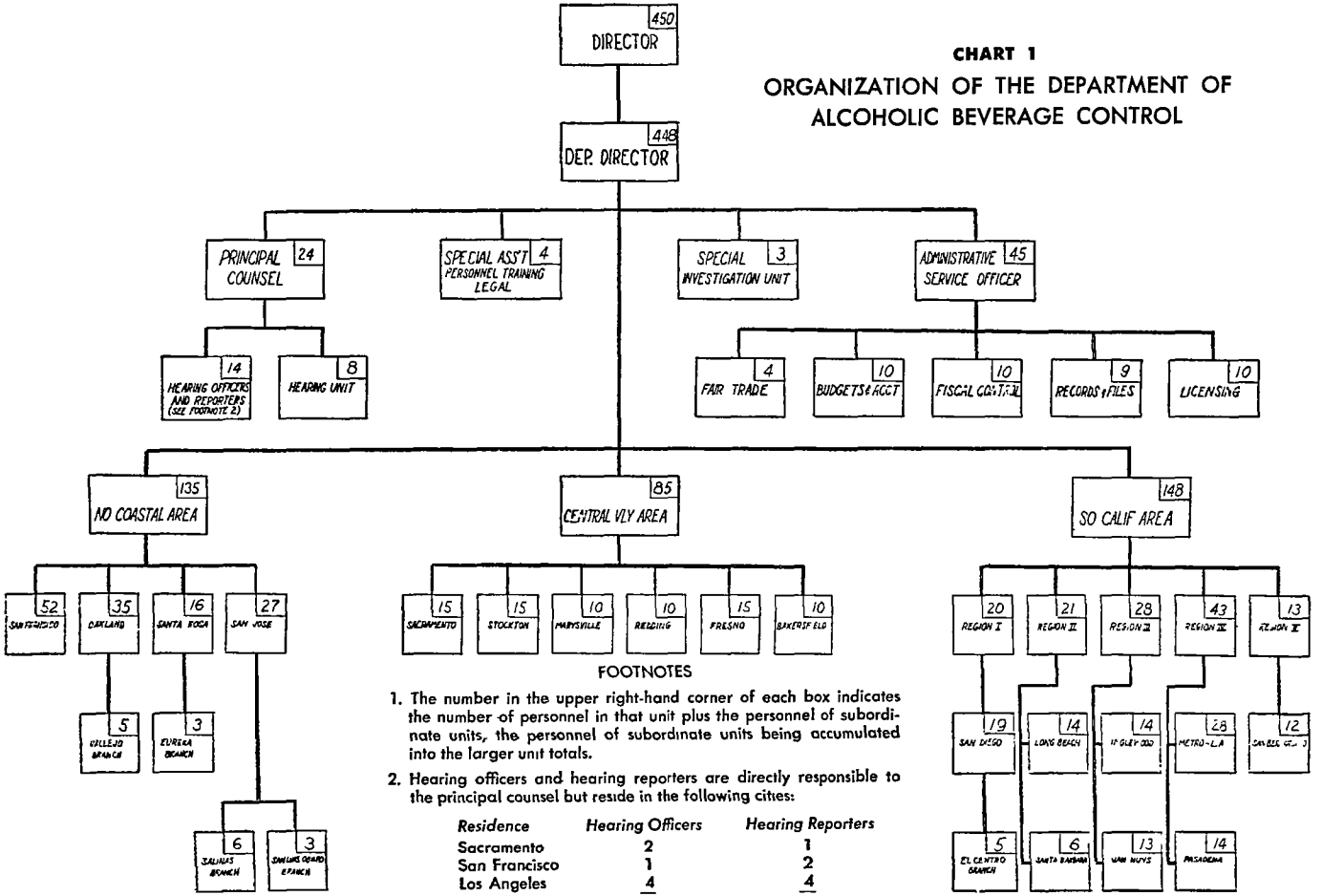
2. *Special Assistant.* Acts as general assistant to the director and carries out special assignments as directed. Major activities pertain

to personnel policies, management and procedures, training programs, and legal work.

3. *Special Investigation Unit.* Makes investigations of violations which may involve activities of departmental personnel and is responsible for investigating new applicants for employment in the department. Investigates cases involving violations which are too difficult or complicated to be handled by regular field personnel. Makes miscellaneous investigations as required by the director.
4. *Administrative Service Officer.* Responsible for housekeeping activities of the department including budget preparation, fiscal control, records and files, issuance and recording of licenses and fair trade matters.

CHART 1

ORGANIZATION OF THE DEPARTMENT OF ALCOHOLIC BEVERAGE CONTROL



FOOTNOTES

1. The number in the upper right-hand corner of each box indicates the number of personnel in that unit plus the personnel of subordinate units, the personnel of subordinate units being accumulated into the larger unit totals.
2. Hearing officers and hearing reporters are directly responsible to the principal counsel but reside in the following cities:

Residence	*Hearing Officers*	*Hearing Reporters*
Sacramento	2	1
San Francisco	1	2
Los Angeles	4	4
Total	7	7

EXHIBIT A

OFFICES OF DEPARTMENT OF ALCOHOLIC BEVERAGE CONTROL

September 17, 1956

HEADQUARTERS—1215 O Street, Sacramento
Russell S. Munro, Director

I. Northern Coastal Area

Headquarters—San Francisco 11, 130 World Trade Center Bldg.
Frank Fullenwider, Area Administrator
Phone: EXbrook 7-1740

District Offices

San Francisco Norbert Falvey	130 World Trade Center Bldg. Phone: EXbrook 7-1740	(Counties: Marin, San Francisco, San Mateo)
Oakland W. E. Pendergast	2229 Grove Street Phone: TWinoaks 3-7536	(Counties: Alameda, Contra Costa, and Solano)
Branch Office Vallejo Stanley J. Pierce	820 Marin Street Phone: VAllejo 8-0268	
Santa Rosa Richard Burke	819 Fourth Street Phone: Santa Rosa 43	(Counties: Del Norte, Humboldt, Lake, Napa, Mendocino, and Sonoma)
Branch Office Eureka D. C. Bartholomew	529 Second Street Phone: HIllside 3-3708	
San Jose Jerry M. O'Brien	246 S. First Street Phone: CYpress 2-3509 CYpress 2-5534	(Counties: Monterey, San Benito, San Luis Obispo, Santa Cruz, and Santa Clara)
Branch Office Salinas Clarence J. Speckman	924 Park Row Phone: HArrison 2-8726	
Branch Office San Luis Obispo C. H. Sutherland	940 Chorro Street Phone: LIberty 3-7183	

II. Central Valleys Area

Headquarters—Sacramento, 1215 O Street, Room 400
James O. Reimel, Area Administrator
Phone: GI 2-4711, Ext. 4818

District Offices

Redding H. E. Morrill	1824 Shasta Street Phone: 805 MA—P. O. Box 618	(Counties: Lassen, Modoc, Shasta, Siskiyou, Tehama, Trinity)
Marysville Donnell Greely	712 E Street Phone: SHerwood 3-9251 MA—P. O. Box 870	(Counties: Butte, Colusa, Glenn, Nevada, Plumas, Sierra, Sutter, Yuba)
Sacramento Paul Wham	1215 O Street Phone. GI 2-4711, Ext. 2546	(Counties: Alpine, Amador, El Dorado, Placer, Sacramento, Yolo)
Stockton Norman A. Strickland	411 Bank of America Bldg Phone: HOward 4-7685	(Counties: Calaveras, Mariposa, Merced, San Joaquin, Stanislaus, and Tuolumne)
Fresno A. S. Madden	1720 Fulton Street Phone: AMherst 8-4501 MA—P. O. Box 492	(Counties: Fresno, Kings, Madera, and Tulare)
Bakersfield L. W. Hubbard	2028 19th Street Phone: FAirview 7-1478 MA—P. O. Box 3025	(Counties: Inyo, Kern, and Mono)

III. Southern Area

Headquarters—Los Angeles, 357 S. Hill St.
B. M. Grant, Assistant Area Administrator
Phone: MAdison 6-1515, Ext. 2831

District Offices

Region I—San Diego

Supervising Agent, Arthur Brown	1405 Fifth Ave. Phone: BElmont 4-7361	(San Diego and Imperial Counties)
Branch Office El Centro W. C. Elledge	Rm. 8, Producer's Exchange Bldg., Fourth and Bdwy., P. O. Box 138 Phone: ELgin 2-5433	

Region II—Long Beach and Santa Barbara

Supervising Agent, Harry Moore	357 S. Hill St.	
Long Beach Office D. B. Weisel	4335 Atlantic Ave. Phone: NEvada 6-4040	(All of Orange County and southeastern part of Los Angeles County)
Santa Barbara Office James G. Ross	831 State St. Phone: WOodland 2-2821	(Santa Barbara and Ventura Counties)

Region III—Inglewood and Van Nuys

Supervising Agent, Viggo E. Hansen	357 S. Hill St.	
Inglewood Office Ralph Paddock	210 E Regent St. Phone: ORchard 1-8208	(Southern and western parts of Los Angeles County)
Van Nuys Office C. E. Cameron, Jr.	14556 Friar St. Phone: STate 6-5301	(North and northwestern parts of Los Angeles County)

Region IV—Metropolitan Los Angeles and Pasadena

Supervising Agent, Paul Thompson	357 S. Hill St.	
Metropolitan Los Angeles Office	357 S. Hill St.	(Central part of City of Los Angeles)
Pasadena Office C. E. Kirk	111 S. Hudson Ave. Phone: RYan 1-7184	(Northeastern part of Los Angeles County)

Region V—San Bernardino

Supervising Agent, Harry Knust	304 Central Bldg. Phone: S-6851	(San Bernardino and Riverside Counties)

II

PERSONNEL IN THE DEPARTMENT OF ALCOHOLIC BEVERAGE CONTROL

INITIAL APPOINTMENTS

The Department of Alcoholic Beverage Control came into being on January 1, 1955, and acquired civil service personnel and facilities formerly used by the Board of Equalization in administering that activity.

The constitutional amendment creating the department provides for five positions in the agency exempt from civil service—the director (appointed by the Governor) and four appointees of the director. The director has designated these exempt positions to be those filled by the deputy director and the three area administrators.

Late in 1954 the Governor indicated publicly that he intended to appoint Colonel K H. Leitch director. The appointment was never consummated, however, and on or about January 15, 1955, Colonel Leitch definitely declined the position. Malcolm E. Harris was assigned by the Governor's Office on or about December 20, 1954, to assist in the preliminary work of taking over department functions from the Board of Equalization. The only action Colonel Leitch appears to have taken was to consent to Harris' appointment of Reimel, Davis and Woodbury (see below).

Russell S. Munro was appointed director on February 3, 1955.

Between January 1, 1955, and February 3, 1955, Harris was acting director and James O. Reimel acting deputy director. Upon Munro's appointment, Harris became deputy director and Reimel area administrator for the Central Valley area.

Phillip E. Davis was appointed area administrator for the Southern California area by Harris and continued in that capacity until March 6, 1956, when he resigned. His permanent successor was not appointed until January, 1957.

Frank I. Fullenwider was appointed area administrator for the Northern Coastal area by Munro, on March 21, 1955.

On or about December 20, 1954, Norman E. Woodbury, formerly personnel officer for the Department of Corrections, was also assigned by the Governor's Office to assist in organizing the new department. His particular assignment, which carried over into the first weeks of operation under the new department, was to determine which employees merited dismissal or other disciplinary action. He was originally appointed by Harris to one of the exempt area administrator positions but was transferred to the civil service position of special assistant to the director on March 19, 1955, and has continued with the agency in that capacity, performing certain staff functions involving management studies, procedures, personnel, training and legal matters.

Since March 7, 1956, Woodbury has also been acting area administrator for the Southern California area. He devoted his full time to this job until July 15. Since then he has been acting on a part-time basis in this capacity.

NEW POSITIONS AND CLASSIFICATION CHANGES

As of January 1, 1955, 282 civil service enforcement positions in field offices were transferred from the Board of Equalization to the Department of Alcoholic Beverage Control. These were as follows:

Class	*No*
District liquor control administrator IV	1
District liquor control administrator III	2
District liquor control administrator II	5
District liquor control administrator I	6
Deputy district liquor control administrator	1
Supervising liquor control officer	38
Special liquor investigator	6
Liquor control officer	223
Total	282

Under a comprehensive reclassification program worked out by the Personnel Board at the request of and with the cooperation of the department, three new classes were created in lieu of the foregoing eight, the titles and 1956-57 salary ranges of which are as follows:

Class title	*1956-57 salary range*
Supervising agent II alcoholic beverage control	$584-$710
Supervising agent I alcoholic beverage control	458- 556
Agent, alcoholic beverage control	395- 481

In addition, three new civil service positions were created with the title of assistant area administrator ($676-$821). These have been filled from eligible lists established in March, 1956. The department has also been using a special classification (investigator trainee, $358-$395) to recruit young men with college training in enforcement work for ultimate advancement to the agent level.

Of the individuals holding the 14 district liquor control administrator positions under the Board of Equalization one retired, two have been convicted of felonies, and the remaining 11 were given comparable jobs with the Department of Alcoholic Beverage Control as supervising agents II. One of these retired recently and another will reach the compulsory retirement age in August, 1957. Among the remainder several other retirements are anticipated in the next two or three years.

The deputy district liquor control administrator, the supervising liquor control officers and several of the special liquor investigators were reclassified as supervising agents I, while the liquor control officers were reclassified as agents.

The civil service position of principal counsel ($1,050-$1,150), has been established in the headquarters office and has been filled by Bion Gregory, who was hearing officer for the State Personnel Board.

The salary of the director is fixed by law at $15,000 per year. The salaries of the deputy director and the three area administrators have been fixed by the Department of Finance at $13,200-$14,400 per year and $12,600-$13,800 per year, respectively.

DISCIPLINARY ACTIONS

From January 1, 1955, to October 31, 1956, the department has imposed four disciplinary suspensions against employees and 17 have been separated, either by outright dismissal or through resignation or retirement under circumstances where dismissal was indicated. A list of these is as follows:

SUSPENSIONS

Hugh A. Boyle——Liquor control officer; dismissed 1/13/55; changed to disciplinary suspension effective from 1/13/55 through 3/31/55

John T. Brady——Agent, A. B. C.; disciplinary suspension effective from 8/13/56 through 8/17/56.

C. E Cameron, Jr.——Supervising liquor control officer; dismissed 1/14/55; changed to disciplinary suspension effective from 1/14/55 through 3/14/55.

Robert N. Lewis——Liquor control officer; dismissed 3/3/55; changed to disciplinary suspension effective from 3/3/55 to 4/27/55.

SEPARATIONS

Claude C. Aasved——Liquor control officer; resigned 3/1/55, under unfavorable circumstances.

Joseph C. Akers——Hearing officer, B/E; resigned 3/31/55.

Robert S. Bowen——Liquor control officer; retired 4/1/55.

John R. Byrne——Agent, A. B. C.; dismissed, 2/3/56.

C. E. Cameron, Sr——Liquor control officer; dismissed 1/14/55; changed by stipulation to resignation effective same date.

Edward J. Clark——State Liquor Administrator; dismissed 2/15/55; changed by stipulation to resignation effective 12/31/55.

Donald K. Deming——Liquor control officer; dismissed 1/10/55.

Gilbert S. Forte——Supervising agent I; retired 9/30/56.

Jack R. Graves——Supervising liquor control officer; dismissed 1/14/55; changed by stipulation to resignation effective 2/28/55.

Cornelius Hennessey——Supervising liquor control officer; dismissed 1/14/55; changed by stipulation to resignation effective same date.

Leonard L. Lake——Agent, A. B. C.; dismissed 4/9/56; changed by stipulation to resignation effective same date.

H. E. MacKenzie——District liquor control administrator; dismissed 1/14/55.

Ralph J. Miller——Agent, A. B. C.; resigned 4/6/55, under unfavorable circumstances.

Herman Pause——Supervising liquor control officer; dismissed 1/14/55; changed by stipulation to resignation effective same date.

Robert J. Schneider——Agent, A. B. C.; resigned 10/31/56 in lieu of charges.

Harry R. Selvidge——Special Agent, Bureau C. I. I; rejected during probationary period, 4/30/55.

Max M. Smith——Liquor control officer, retired 4/1/55.

CHANGES IN FIELD ENFORCEMENT PERSONNEL

In addition to the 17 separations previously mentioned there were 21 voluntary retirements and 29 voluntary resignations of field enforcement personnel between January 1, 1955, and October 31, 1956, or a total of 67 separations, which represents about 24 percent of the total field enforcement staff taken over from the Board of Equalization.

During the same period the department made 16 promotions to supervisory positions. This action has tended to advance the better qualified younger members of the staff to positions of greater responsibility. These were as follows:

From agent to supervising agent I	9
From supervising agent I to supervising agent II	5
From supervising agent I to assistant area administrator	1
From supervising agent II to assistant area administrator	1
Total	16

In many cases these promotions involved shifts from one location to another, such as San Jose to Santa Rosa, San Luis Obispo to Santa Rosa, Oakland to Salinas, headquarters office to Stockton, San Francisco to San Bernardino and Fresno to San Bernardino. The last two involved the promotion of Harry Knust from a supervising agent I, on enforcement work in San Francisco, to a supervising agent II in charge of the San Bernardino regional office, and the promotion of Allen J. Anderson from an agent in Fresno to a supervising agent I in charge of enforcement in San Bernardino. Harry Knust had prior service in Oakland, Marysville and Fresno, while Allen J. Anderson had some experience as a supervising agent I in Los Angeles prior to his assignment to San Bernardino.

Another significant transfer which did not involve a promotion was that of Arthur F. Brown, a supervising agent II, who had been district liquor control administrator in Woodland under the Board of Equalization, to regional supervisor in charge in San Diego, starting May 31, 1956. Prior to this assignment he had been acting as the assistant area administrator for the central valleys area.

An addition to the field enforcement staff from outside the organization was effected by the appointment of John Misterly, a former supervising inspector for the Bureau of Narcotics Enforcement of the State Department of Justice, to succeed Brown as the assistant area administrator for the central valleys area.

In addition to the personnel shifts resulting from promotions, there have been numerous other transfers between locations as a consequence of the general reorganization of the field enforcement staff taken over from the Board of Equalization.

Between January 1, 1955, and October 31, 1956, total transfers of field personnel between locations were as follows:

Agents	96
Supervising agents I	19
Supervising agents II	2
Total	117

It is perhaps interesting to note that as a combined result of separations and transfers, 184 people out of the 282 positions in the field staff taken over by the new department, or 65 percent, had either left or had been assigned to a new job during the first 22 months of operation under the new department.

EMPLOYEE PERFORMANCE RATINGS

According to the procedure established by the Personnel Board for all state agencies, a report of performance is prepared each year on the last day of February in which each permanent employee is given an over-all service rating by his immediate superior as outstanding, standard, short of standard, or unacceptable. In addition to the over-all rating, he is similarly rated on the following "performance factors":

1. Quality of work—accuracy; precision; completeness, neatness. (Quantity not considered.)
2. Quantity of work—amount of work turned out. (Quality not considered.)
3. Work habits—organization of work; care of equipment; safety; punctuality; industry.
4. Relationships with people—ability to get along with others; effectiveness in dealing with the public, other employees. patients or inmates.
5. Initiative—self-reliance; resourcefulness; willingness and ability to accept and carry out responsibility.
6. Dependability—degree to which employee can be relied upon to do the job and to meet deadlines without close supervision.
7. Analytical ability—thoroughness and accuracy of analysis of data, facts, laws and rules.
8. Ability as supervisor—proficiency in training employees and in planning, organizing, laying out and getting out work; leadership.
9. Administrative ability—promptness of action; soundness of decision; application of good management principles.
10. Factors not listed above.

An examination of the records of the State Personnel Board as to performance ratings given by the Board of Equalization during the five-year period immediately preceding January 1, 1955, indicates that the supervising agents currently employed by the Department of Alcoholic Beverage Control who were formerly employed by the Board of Equalization only one received a rating of less than standard, and that individual for only one of the years involved.

No substandard rating were given by the Department of Alcoholic Beverage Control in 1956 for any of its 56 supervising agents.

With reference to agents, the Board of Equalization gave two substandard ratings during the five-year period, while the Department of Alcoholic Beverage Control gave four in 1956.

The percentage distribution of performance ratings for all permanent Alcoholic Beverage Control employees and all permanent state employees for the last two fiscal years was as follows, according to information furnished by the State Personnel Board staff:

	Department of ABC employees		*All state employees*	
	No.	*Percent*	*No*	*Percent*
1954-55				
Outstanding	32	9.09	3,987	8 78
Standard	320	90.91	41,151	90 62
Short of standard	--	--	250	.55
Unacceptable	--	--	23	.05
Totals	352	100.00	45,411	100.00
1955-56				
Outstanding	39	11.40	4,435	9 33
Standard	299	87.43	42,904	90.25
Short of standard	4	1.17	181	.38
Unacceptable	--	--	19	.04
Totals	342	100.00	47,539	100.00

One of the difficulties which the department has experienced with the performance rating system is the tendency on the part of the supervisors to rate their subordinates on an unrealistic basis. One aspect of the supervisor training program being carried on within the department is intended to correct this deficiency.

As to the employees rated standard in the foregoing tabulation, the following were rated substandard on one or more of the individual items previously listed as "performance factors":

	Department of ABC employees		*All state employees*	
	No.	*Percent*	*No*	*Percent*
1954-55	25	7 8	1,893	4.6
1955-56	40	13 4	1,845	4 3

The report of performance form which is always shown to the employee, also contains a space for comments to the employee with the instructions that the "supervisor should comment on work especially well or poorly done and give suggestions as to how work performance can be improved."

The percentages of such reports which contained such comments for permanent Alcoholic Beverage Control employees and all permanent state employees are as follows:

	ABC employees	*All state employees*
1954-55	55 6%	67.7%
1955-56	95 7	80.0

The above tabulations appear to indicate a trend toward improvement in the rating process in the Alcoholic Beverage Control Department which exceeds that in the state service generally.

OTHER OBSERVATIONS

It appears that the department is developing an improved personnel policy, including a well designed training program. Staff morale as a whole appears to be good and is improving, a fact which seems to be confirmed by State Personnel Board staff members who state that there are fewer complaints from Alcoholic Beverage Control employees under the new regime than under the old. The top administrators indicate a considerable knowledge of the capabilities and limitations of individual staff members.

The operation of the Southern California area prior to March, 1956, apparently was not effective. The situation which existed in the San Bernardino district (San Bernardino and Riverside Counties) between January, 1955, and July 1, 1956, is perhaps indicative of administrative failures. The former district administrator under the Board of Equalization, H. E. MacKenzie, was dismissed January 14, 1955. He was not replaced until July 1, 1956, some 18 months later. During this interim a supervising agent I was in charge of the office apparently by default.

It was not until July 1, 1956 (the area administrator resigned on March 6, 1956), that the district was staffed with supervisory personnel in accordance with standards in use in other parts of the State, i.e., a supervising agent II in charge with two supervising agents I under him.

III

ALCOHOLIC BEVERAGE CONTROL LICENSING PROCESS

INTRODUCTION

Final approval for the issuance of new retail alcoholic beverage licenses and the transfer of existing licenses rests with the headquarters office of the California Department of Alcoholic Beverage Control. Applications are made at district offices and the procedure followed for new licenses and transfers is almost identical. The following is a brief description of the content of the application forms, the processing procedure, and an identification of the various department officials charged with the responsibility for approving or rejecting the applications.

APPLICATION FOR LICENSES

Application for a retail liquor license is generally made at a district office on departmental Form 211. This form requires answers to the following:

1. Type of license desired, i e., on-sale general, off-sale beer and wine, etc.
2. Name of the applicant or applicants.
3. Name of the business establishment ("doing business as"), if any.
4. Address of the business.
5. Whether the premises is located within a city (location governs the distribution of state liquor license fees, the county government receiving the proceeds if the premises is located in an unincorporated area, and the city receiving the proceeds if the location is within its boundaries).
6. Whether the premises now has a liquor license, and if so, what type.
7. Whether the applicant ever had a California liquor license refused, suspended or revoked (an affirmative answer, depending upon the circumstances, would immediately raise the question as to the fitness of the applicant for a license).
8. Whether the applicant is a citizen of the United States (this is pertinent because Section 23788 of the Alcoholic Beverage Control Act limits the issuance of on-sale general licenses to citizens of the United States).
9. Whether the applicant has been convicted of a felony.
10. Whether the applicant has violated any provision of the Alcoholic Beverage Control Act or any department regulation (this question supplements number 7, above).
11. Name of the applicant's workmen's compensation insurance carrier.

Normally, two formal copies of the application are required if prepared at a district office; three, if at a branch In addition, carbon copies are prepared for future distribution to local law enforcement officials. The applicant must sign the form, and in the case of a partnership, all partners must sign. The corporate officer signs under the corporate seal if the applicant is a corporation.

Also listed on this form is the amount of the license fee required, which varies depending upon the type of license desired, and the pro rata fee depending upon the time of year the application is made. On-sale licenses are renewable at the beginning of a calendar year and off-sale at the start of a fiscal year.

PROCESSING AN APPLICATION BELOW DEPARTMENT LEVEL

The applicant, with the assistance of an alcoholic beverage control agent, normally completes the application form at a district or branch office (this form may be filled out and mailed directly to departmental headquarters).

Fingerprint Record. The applicant and spouse must complete identification Form 208 and be fingerprinted unless their prints are already on file with the Department of Alcoholic Beverage Control. Two copies are made of the fingerprints and both are sent to the Bureau of Criminal Identification and Investigation, Department of Justice. The bureau forwards one copy to the Federal Bureau of Investigation in Washington, D. C. Form 208 is filed in the district office.

License Fee. At the time the application is filed the license fee must be paid. A copy of the receipt is attached to the original application which is sent to departmental headquarters in Sacramento.

Notifying Public Officials. Carbon copies of the application are also sent to the sheriff, chief of police, and district attorney of the locality where the premises is situated, and to the board of supervisors if in an unincorporated area, or to the city council if within a city (Section 23987, ABC Act). One of the copies of the application remains at the district office. The date that the carbons are mailed to the local officials is stamped on the lower right hand side of the original form. This signifies the beginning of the 30-day time interval during which the license cannot be issued.

Notice to the Public. The applicant for an on-sale license is required to publish, within 10 days after filing the application, a newspaper notice signifying his intention to engage in business. A certified copy of this notice must be sent to department headquarters where it is attached to the original application. Without this notice, no action will be taken by the department. Form 207, signifying intent to engage in business at the premises, must be posted at the entrance to all premises, both on-sale and off-sale, for 15 days immediately prior to the issuing of the license.

Routing Application Documents. Applications, together with any accompanying documents, are mailed directly to Sacramento and are not normally routed through area offices. The central valley area is an exception. At department headquarters the applications are placed in the "pending file." No action is taken until the investigation reports are received and the 30-day waiting period has expired.

INVESTIGATION REPORTS

The 30-day interval between the filing of the application and the first date the license can be issued is used by the district office to conduct an investigation into the background and qualifications of the applicant and the conditions of the proposed business premises.

The investigation report, Form 220, contains the following:

1. Name of the agent and district office conducting the investigation.
2. Date the report was made.
3. Name, address and DBA of the applicant.
4. Name of the city and county where the proposed premises is located, and whether the premises is inside a city.
5. Type of license applied for and fee paid.
6. Whether the applicant already holds a license at the premises.
7. Verification of the existence of a valid posting notice.
8 Report on the moral character of the applicant (see below).
9. Examination of the premises to see that it conforms with the rules and regulations of the department.
10. Name, license number and file number of the previous licensee at this premises.
11. "Effective date" (due to the delay in granting licenses, the applicants frequently specify an effective future date, thus saving money on their license fee).

Moral Character. The moral character of an applicant is generally checked by the following process:

a. Interviewing the applicant's former employees or employers, business associates and neighbors when the department has reason to suspect the applicant's character.

b. Contacting local law enforcement agencies such as the sheriff's office and the police department. This procedure is becoming more common, especially in smaller communities, but still is not general practice.

c. Examining reports on the fingerprint check by the Bureau of Criminal Identification and Investigation of the State Department of Justice and the F. B. I. An investigation report will not be completed until at least the former report is returned. The F. B. I. report also comes from the State Department of Justice but normally at a later date.

Processing the Investigation Report. The agent who conducts the investigation and signs the report recommends approval or denial. Cancellation may be recommended if the applicant so requests The district supervisor, or a supervising agent, acting for the district supervisor, then adds his recommendation. Normally, the next step is to mail the report directly to departmental headquarters. However, there are certain modifications of this procedure. Regional supervisors also endorse the report in the southern area. In the coastal area, where branch offices exist, both the branch and district supervisors endorse the report. Certain types of reports, i.e., those dealing with new limited licenses,

limited partnerships, corporations, and where the applicant has a disciplinary or felony record, must flow through the area administrator's office for his consideration. Similarly, if the agent and district supervisor disagree on the recommendation, the report is sent to the area administrator for his endorsement.

Reports with a final denial recommendation are sent to the department's hearing and legal section for review and then placed on the "denial list." Approved reports are attached to the original application and placed in the "pending file."

PROCESSING APPLICATIONS AT DEPARTMENT LEVEL

An application with an approval recommendation is processed in the following manner at department headquarters:

1. It remains in the "pending file" for 30 days following which, if all the necessary papers and reports are present, it is reviewed by the hearing and legal section to determine if any protests by citizens or local governmental officials against the issuance of the license are pending. The file is held in abeyance until any protests are disposed of.
2. If no protests are pending, the file is reviewed by the office manager to determine if all fees have been paid.
3. The director or deputy director review problem cases.
4. The application is placed on a daily file and approved or rejected by the director or deputy director .
5. If approved, the license is issued and copies are distributed as follows:
   A. Applicant (original).
   B. District office where the application originated.
   C. Local officials who received carbon copies of the application form.
   D. Headquarters card index file.
   E. Headquarters numerical index file.
   F. Headquarters geographic index file.
   G. Headquarters audit file.
6. If denied, the applicant is notified but still has recourse by petitioning the department for reconsideration, in which case a hearing must be held.

TRANSFERRING LICENSES

Application for transferring existing licenses are handled in the same manner as original applications with the following exceptions:

1. The application is made on Form 214.
2. For limited licenses, A (on-sale beer and wine), P (on-sale general), and C (off-sale general) a certified copy of the "Recorded Notice of Intention to Transfer" must be made containing the following information:

A. Name and address of the licensee.
B. Name and address of the intended transferee.
C. Type of license to be transferred.
D. Date, place and amount where any consideration for transferring the license is to be paid (the date must be at least 10 days after this notice is recorded at the local county recorder's office).
E. Name and address of any escrow holder.

3. The transferor and transferee are required to complete Form 213, a notice of application for transfer. The purpose of this notice is to inform the prospective transferee of his obligations during the interim period before the license is issued. Normally this form is kept in the district office file.
4. Limited licenses cannot be transferred intercounty.

SPECIAL CONSIDERATION

Protesting the Issuance of a License. During the 30-day waiting period before a license can be issued or transferred, individuals and governmental agencies can protest. Protests by individuals must be verified. All protests by public officials, and verified protests of individuals, are given a hearing, provided cause for denial of license is stated. Individuals have the responsibility for presenting their case before the hearing officer. Public body protests can be presented either by a representative of the body or by the district office supervisor.

After the license has been issued, protest by a public body or individual must be in the form of an accusation.

Partnership Agreements and Corporate Articles. The hearing and legal section of the department must review any partnership agreements or corporate articles before the application will be acted upon by the director.

ADDITIONAL ON-SALE GENERAL LICENSES

Under the law new additional on-sale general licenses may be issued in any county only if two conditions prevail:

1. Population in the county has increased to the point where it exceeds 1,000 for each existing on-sale license (i.e., on-sale general plus on-sale beer and wine) and
2. It appears to the department that by reason thereof the inhabitants of the county are unjustly and unfairly discriminated against.

The department concluded that these conditions existed in 10 counties and on August 9, 1956, gave public notice that additional licenses were available in these counties. The number of new licenses available and the number issued or having applications pending on February 8, 1957, is as follows:

County	*Licenses available*	*Licenses issued or applications pending as of Feb. 8, 1957*
Kern	55	0
Los Angeles	2,218	6
Orange	219	38
Riverside	68	41
San Bernardino	118	36
San Diego	376	11
San Mateo	30	10
Santa Clara	128	20
Stanislaus	23	4
Ventura	58	0
Total	3,193	166

Prospective applicants were placed in the following priority classes, and licenses were to be issued to all applicants in Class A before any would be issued to those in Class B, etc.

Class A. Persons who had applications on file prior to January 1, 1955, and who did not thereafter obtain on-sale general licenses or final orders of denial.

Class B. Persons now holding one of the following types of licenses at an existing premises, and who agree to surrender such licenses for cancellation upon the issuance of new on-sale general licenses.

1. On-sale general license for seasonal business.
2. On-sale general license for bona fide club.

Class C. Persons now operating unlicensed restaurants or hotels containing bona fide eating establishments wherein the principal nature of the business is the sale of meals to the public.

Class D. Persons having ownership control of undeveloped properties suitable for the operation of on-sale general businesses. Any application accepted in this class will be processed pursuant to Section 24044 of the ABC Act, but no license will be issued until construction is completed and the premises qualify.

Because of the relatively few applications received for new on-sale general licenses since the release of the department's bulletin of August 6, 1956, there has been little reason to use these priority classifications, except in the processing of applications.

License Speculation. Under present law there appears to be no restriction against the sale of alcoholic beverage licenses between private parties for a profit. The preventative measure presently being used by the department to curtail individuals from speculating is to make certain that new applicants are sincere in their reasons for wanting an on-sale general license. Some of the methods for determining intent are as follows:

1. The applicant must demonstrate a bona fide intent to engage in an on-sale general business as well as financial ability to do so, including source of funds to be used.
2. The applicant must provide evidence that the premises for which the license is applied are now, or will be, regularly and in a bona

fide manner kept open for the serving of meals to guests for compensation; that the premises has, or will have, suitable kitchen facilities connected therewith containing utensils for cooking an assortment of foods which may be required for ordinary meals; that the kitchen is, or will be, kept in a sanitary condition, with the proper amount of refrigeration for the keeping of food; and that the premises complies, or will comply, with all of the regulations of the local Department of Health.

3. The applicant must agree that no application to transfer will be filed for at least one year after issuance unless the applicant proves to the department's satisfaction that:
   A. A bona fide attempt has been made to operate the licensed premises for a reasonable period of time, and
   B. Good cause exists for the transfer other than speculation.

ADDITIONAL OFF-SALE LICENSES

The conditions governing issuance of new off-sale general licenses are similar to those regarding new on-sale general licenses; that is, there must be a population increase and a finding by the department that additional licenses are needed.

No new off-sale general licenses can be issued unless the combined total of off-sale general and off-sale beer and wine licenses in the county is less than one per thousand population.

The department first gave public notice on January 9, 1956, that in Orange County, 59 additional off-sale general licenses could be issued under the formula provided by law and that the issuance of additional licenses appeared justified since the current asking price for transfer of existing licenses was about $30,000, as opposed to the fee of $3,100 required by the State. This would have increased the total off-sale licenses in Orange County of both classes from 335 to 394.

As of October 1, 1956, subsequent population increases appeared to justify an additional 36 off-sale licenses, making a total of 430 for Orange County.

In the release of January 9, 1956, the department pointed out that additional off-sale general licenses could be issued without regard to the population factor if a like number of off-sale beer and wine licenses were canceled and accordingly suggested that all holders of off-sale beer and wine licenses who desired an off-sale general license should surrender the former cancellation and file an application for the latter. It was also indicated at this time that no additional off-sale beer and wine licenses would be issued in Orange County until further notice.

As of January 9, 1956, the total off-sale licenses in Orange County, by class, was as follows:

Off-sale general	126
Off-sale beer and wine	209
	335

As of October 1, 1956, the situation was as follows:

Off-sale general licenses.		
Outstanding 1/9/56	126	
New licenses issued:		
Upon cancellation of off-sale beer and wine	79	
Additional	42	
Applications pending for additional licenses	18	
Total off-sale general issued and applied for		265
Off-sale beer and wine licenses:		
Outstanding 10/1/56	152	
Applications pending	13	
Total off-sale beer and wine issued and applied for		165
Total		430

There were no special priority classes established for off-sale general licenses comparable to those used in the case of new on-sale general licenses, the licenses being issued to qualified persons in the order in which the applications were filed.

Orange County is the only county in the State where additional off-sale licenses were available under the population formula provided in the law.

In order to avoid speculation in licenses the department required applicants for new licenses to demonstrate a bona fide intent to engage in an off-sale general business at the location for which the license was issued within 30 days of the date of issuance, upon penalty of forfeiture of the license.

IV

ALCOHOLIC BEVERAGE CONTROL DISCIPLINARY ACTION AGAINST LICENSEES

INTRODUCTION

All enforcement work, with the exception of a relatively small part performed by the special investigation unit of three persons attached to the headquarters staff, is carried on under the general supervision of the area administrators and most of this is at the district office level under the direct supervision of a district enforcement supervisor

For enforcement purposes districts generally divide their territory into "problem areas" and "non-problem areas " A problem area, in general, is one which is so regarded by the local peace officers. Most of the activity in problem areas centers around on-sale establishments. The skid row type of locale is almost always a problem area.

Disciplinary action usually stems from an arrest either by an Alcoholic Beverage Control agent or a local peace officer.

A brief description of the enforcement procedure followed by the Alcoholic Beverage Control Department, the method of maintaining liaison with other law enforcement agencies, and the steps taken to process an accusation follows.

ALCOHOLIC BEVERAGE CONTROL ENFORCEMENT

Approximately one-third of the agents at a district office are normally assigned to enforcement work Most of this work is done at night and on week ends and the agents usually travel in pairs. Enforcement activity is of two types, undercover activity and patrol, both of which are employed by the districts in varying degrees.

Patrol Activity. In this type of activity the agents usually enter an establishment to observe and be observed. The purpose is to put the licensee on notice of the activity of the Department of Alcoholic Beverage Control, and it is believed that it has value in preventing violations from being committed. Since the agents spend only a few minutes at a premises, the only violations they can be expected to detect are the obvious ones such as sales to minors, consumption by minors or drunks, and sales after hours. Patroling is normally used for nonproblem areas and where the agents are well known.

Undercover Activity This is employed when the district supervisor suspects that violations are being committed at the premises of a type which cannot normally be detected by the patroling agents. This type of activity generally is reserved for problem areas and necessitates the use of agents who are unknown to the licensee or bartender.

Arrests by Alcoholic Beverage Control Agents. The procedure by Alcoholic Beverage Control agents when making an arrest is as follows:

1. Observe the violation.
2. Identify themselves to the violators
3. Notify the violators they are under arrest.
4 Seize the evidence, if any
5. "Book" the guilty parties at the proper police station.
6. Sign a complaint report for the police or sheriff.
7. Write up departmental case report.
8. Store the evidence in a safe place.

The departmental case report is given to the enforcement supervisor, and it is the basis for determining whether an accusation should be initiated.

INFORMATION FROM LAW ENFORCEMENT AGENCIES

Arrest reports from police departments, sheriffs' offices, and state narcotics enforcement officers, and information from the military, health departments and other law enforcement agencies is indispensable for maintaining an effective alcoholic beverage control enforcement program The degree of cooperation given by these agencies bears heavily upon the effectiveness of the enforcement program Liaison with other agencies is described briefly hereafter.

Police Departments and Sheriffs' Offices. All district and branch alcoholic beverage control offices have liaison arrangements with local police departments and sheriffs' offices. Some of these arrangements are formal, written documents, i e., Los Angeles and San Francisco. However, most are oral understandings The most satisfactory arrangement from the standpoint of the Department of Alcoholic Beverage Control would be for the local law enforcement agency to segregate all arrests or complaints concerning liquor establishments and then forward this information to the department In actual practice in the smaller communities it is necessary for the district liaison agent to exercise considerable diligence in order to assure that information will be received as to all arrests.

The Los Angeles Police Department and sheriff's office forwards all arrest reports and complaints to the southern area office. The area liaison agent makes a record of all the pertinent arrests and complaints, sends one copy to the appropriate district office, puts another copy in the licensee's file and maintains the third copy in a district office control folder.

State Narcotic Bureau. Liaison with this bureau is not as close as with local peace officers. Cooperation is more on a case basis rather than continuing liaison and the initiative normally comes from the bureau.

Military. Agents regularly attend the meetings of the regional armed forces disciplinary control boards. "Off limits" notices, which can only be issued by the senior board which meets in San Francisco, are sent by that board direct to the Director of Alcoholic Beverage Control who instructs the district supervisor to post the premises.

Health Departments. Some information is received from city and county health departments but not on a systematic basis.

ACCUSATIONS

Preparing an Accusation. The first step in determining whether an accusation should be prepared is made when the district enforcement supervisor reviews the agents' case reports, arrest reports received from local police officers, or complaints, to determine if an investigation is warranted. The enforcement supervisor normally consults with the district supervisor on any borderline cases. Most investigations are confined to reports received from other law enforcement agencies. Agent case reports are factual statements and three decisions are possible: (1) file an accusation; (2) recommend a warning letter be issued; or (3) disregard the report because the evidence is insufficient.

The alternatives are also available after the agent has completed an investigation based on other information. The initial responsibility for determining which action should be taken seems to vary among the districts. Some districts place the responsibility upon the investigating agent, others on the supervising enforcement agent. In all cases the district supervisor reviews the initial recommendation and can either concur or recommend a different course of action .

Who Writes the Accusation? Prior to July 1, 1956, all accusations in the southern area were written by the staff of the southern area administrator. After that date, the southern area adopted the procedure followed in the rest of the State, i.e , the accusations are written at the district level. In some districts the supervising enforcement agent writes the accusation, in others the supervising agent in charge of administration.

Processing the Accusation. Four copies of the accusation are made on Form 221 and are initially signed either by the investigating agent or the enforcement supervisor. The accusation states the charge or charges against the licensee and also contains a record of previous alcoholic beverage control disciplinary action.

(1) District Level. The accusation is reviewed by the district supervisor and if he concurs, he either initials or signs the form. If the district supervisor disagrees with the accusation, a letter explaining his stand is written and attached to the form. The original and two copies of the form are forwarded to the next organizational level. One copy is retained by the district.

(2) Regional Level. In the southern area the accusations go to the regional supervisors, mainly for informational purposes, but they can also recommend a different course of action. The procedure followed is identical to that of the district supervisors.

(3) Area Level. The legal staff of the area administrator reviews the accusation for content, format, and legal soundness Very often the legal staff recommends changes be made, and if so, normally the accusation is rewritten by the district. However, regardless of the recommendations of the district or regional supervisors, the sole authority for determining whether an accusation will be filed rests with the area administrator.

(4) Department Level. The hearing and legal section gives the accusation its final review before definite action is taken. The accusation

is then sent to the registration unit to be recorded, following which one copy of the accusation is sent to the licensee, one to the area office, and the original to the director's office. Accompanying the licensee's copy of the accusation is a "notice of defense" which must be filled in and returned by the licensee within 15 days. If the licensee returns the notice of defense within the proper time interval, a hearing is scheduled. If not, a so-called default hearing is arranged. In a default hearing the department may use affidavits in lieu of testimony and the respondent can offer evidence only in mitigation. However, the decision of the hearing officer can be appealed.

Upon the recommendation of an area administrator, a third course is available, namely a waiver action. This action is normally used for first offenses of a minor nature. The accused agrees to the accusations, accepts full responsibility, and waives all rights of appeal. No hearing is held and the director imposes the penalty which usually consists of a 15-day suspension with 10 days of the sentence stayed for one year. The purpose of the waiver action is to expedite the accusation and eliminate the necessity for a hearing, thus reducing the expenses of the department.

HEARING PROCEDURE

Hearings are normally held at the county seat wherein the premises is located and the department is responsible for proving the alleged charges contained in the accusation. The area legal counsel designates which witnesses for the department should be called and orders the issuance of subpenas. Normally the district supervisor, or enforcement supervisor, but sometimes an area office attorney, presents the department's case before the hearing officer.

The hearing officer is charged with the responsibility of conducting the hearing, listening to the testimony of the accused and the accuser, and witnesses for both sides, and making a decision as to the validity of the charges. He then prepares a decision including a recommendation for appropriate penalties. The final action as to the penalties to be imposed is taken by the director who reviews all proposed decisions personally or assigns them for review to a member of his immediate headquarters staff. After review, the licensee is notified of the action, and if he desires he can appeal the director's decision first to the Appeals Board and ultimately to the courts.

ENFORCING THE PENALTY

The licensee is served with a notice stating the penalty and its effectiveness 40 days later unless the licensee appeals. On the effective date a notice is posted at the premises and the license is removed and held in the district office for the term of the suspension or permanently in the case of a revocation.

To prevent a license being transferred while an accusation is pending or a penalty is due, a notice is placed in the licensee's file at the district office indicating that disciplinary action is pending or in force.

WARNING LETTERS

When an offense has been committed but the evidence is insufficient to warrant an accusation, the area administrator may write a warning

letter to the licensee. A copy of this letter is placed in the licensee's file in the district office. Usually these letters are written upon the recommendations of the district supervisor after the arrest reports or complaints have been investigated. However, the final decision on whether to issue a warning letter rests solely with the area administrator.

COMPARATIVE DATA ON DISCIPLINARY ACTIONS

Table 5 shows actions taken on accusations by calendar years from 1949 through 1954 by the Board of Equalization, and for 1955 and 1956 by the Department of Alcoholic Beverage Control.

TABLE 5

ACTIONS TAKEN ON ACCUSATIONS, BY CALENDAR YEARS

Calendar year	Disciplinary actions taken			Accusations dismissed	Total actions
	Suspensions	Revocations	Total		
(1)	(2)	(3)	(4)	(5)	(6)
Board of Equalization ____ 1949	849	69	918	336	1,254
Board of Equalization ____ 1950	450	55	505	304	809
Board of Equalization ____ 1951	780	53	833	495	1,328
Board of Equalization ____ 1952	783	59	842	379	1,221
Board of Equalization ____ 1953	959	70	1,029	304	1,333
Board of Equalization ____ 1954	894	140	1,034	287	1,321
Department of Alcoholic Beverage Control _____ 1955	969	70	1,039	346	1,385
Department of Alcoholic Beverage Control _____ 1956	1,374	145	1,519	387	1,906

During the entire period the number of licensed retail premises remained almost constant, there being 42,420 on April 1, 1949, as compared with 42,912 on April 1, 1956.

During 1956, the number of suspensions and revocations imposed by the Department of Alcoholic Beverage Control was about 50 percent higher than the 1954 record of the Board of Equalization, and about three times the board's record of 1950. Table 5 seems to indicate clearly that the department is conducting a vigorous enforcement program.

Additional statistical data on disciplinary actions imposed by the Department of Alcoholic Beverage Control, by districts, types of violations, and penalties, are contained in Appendix V.

V

DEPARTMENT OF ALCOHOLIC BEVERAGE CONTROL'S TRAINING PROGRAM

DEPARTMENTAL TRAINING COMMITTEE

No organized formal training program existed for liquor control officers or supervisors under the Board of Equalization. Such training as existed was carried on by district offices without any apparent supervision or guidance from headquarters or other authorative sources.

On October 17, 1955, district supervisors and other top administrative personnel of the Department of Alcoholic Beverage Control met with the state training officer of the State Personnel Board in Sacramento for purposes of formulating a plan for an over-all training program for the Department of Alcoholic Beverage Control. At this meeting it was decided that three steps should be taken:

A. Individual alcoholic beverage control agents should be consulted as to the type of training desired. This was to be done by means of a questionnaire.

B. Training should be carried on at three different levels:
   (1) The departmental level which would advise the three areas.
   (2) The area level which would advise the districts.
   (3) The district level which would be the backbone of the training program.

C. Training committees should be set up at the three different training levels and coordinators named for each.
   (1) The state training committee should consist of the departmental coordinator, and the area coordinators, plus one agent from each area. The members of the original state training committee were:
      Norman Woodbury—chairman (department coordinator);
      Russell Dickson—member (northern coastal area coordinator);
      Rayburn Crocker—member;
      Arthur Brown—member (central valleys area coordinator);
      Louis Carbinale—member;
      Viggo Hansen—member (southern area coordinator);
      Melvin Hagerman—member.
   This committee should meet every three months.
   (2) The area training committee should consist of at least four supervising agents, two agents (one of whom would be designated as a member of the state training committee), the area coordinator, the area administrator and such other persons as he wished to designate. This committee should meet once a month.

(3) The district training committee should consist of the supervising agents, one of whom would be designated the district coordinator. This committee should hold weekly meetings with its staff.

In November, 1955, a questionnaire was sent to all agents to obtain comments and suggestions on an agent training program. The questionnaire contained a section in which the agents were asked to indicate from a selected list of subjects those in which the immediate need for training appeared to be the greatest. Two hundred and six agents replied. A tabulation of these replies showing the subjects listed and the percentage of those selecting each subject as being most urgent is as follows:

Subject	*Percent favoring*
Clarification of policy, laws, rules	84
Investigation techniques	67
Supervisory training (for agents and superiors)	66
Report writing	54
Law of arrest	54
Evidence—securing of, custody of, presentation of	50
Public relations	49
Knowledge of organization of department	45
Self-defense and safety techniques	25
Civil service and retirement	16

In their replies many of the agents suggested that the training program deal with the specific needs of an agent, that lectures be given by specialists from within the department, and that written material be distributed to each agent for his guidance during and after the training program.

During the three-day period ended December 2, 1955, the director, deputy director, special assistant to the director, and the three area administrators met with the state training officer of the State Personnel Board to acquaint themselves with the content of the regular "supervisors-in-training" course given by that officer and to obtain the benefit of his knowledge as to administrative skills and management techniques.

Between December 5, 1955, and December 14, 1955, 10 supervisors from the staff of the Department of Alcoholic Beverage Control were given the regular "supervisors-in-training" course by the staff of the State Personnel Board in Sacramento. This is an intensive eight-day course designed to give the supervisors the most effective methods of training subordinates and also to teach them to train other trainers. Those attending were the assistant area administrator for the central valleys area, and nine district supervisors, one from the central valleys area, and four from each of the other two areas.

Since its creation the departmental training committee has held three meetings, February 15, 1956, June 20, 1956, and October 19, 1956. Under its supervision a number of decisions have been made as to training policies and procedures. It has prepared statements of the purpose of the training program, the organization of the various training committees, the procedures for scheduling training sessions and the subject matter of training to be adopted and made them available to all employees of the department.

Under its supervision a 114-page course outline on the techniques of investigation has been prepared by staff members which will serve as the basis for training on that subject. Likewise there was prepared and presented by staff members at the 15th Annual Institute of Peace Officers Training at University of California at Los Angeles in August, 1956, a course on the administration and enforcement of the Alcoholic Beverage Control Act. This was for the benefit of local peace officers interested in alcoholic beverage control enforcement problems.

TYPES OF TRAINING

The state training committee realized that two types of training were necessary to the training program. These are:

A. *Policy Training.* This program is presently the type of training being conducted on a state-wide basis.

B. *Skill Training.* This type of training is not well developed but is being developed by the department for future use. It includes arrest techniques, use of firearms, etc.

The training committee has encouraged departmental personnel at the district level to ask questions and offer criticism (without threat of reprimand) to the department. These questions and criticisms have been sent directly from the district to the director's office. The director, in turn, replies to the district office.

TRAINING MATERIALS

The training materials presently used by the State Training Committee for the state-wide program are:

A. Rules and regulations of the department (clarification of).
B. Alcoholic Beverage Control Act (clarification of).
C. Bulletins of directors' policy (sent out monthly).

DISTRICT TRAINING PROGRAM

Policy bulletins and new rulings by the department are sent out periodically to the area office The bulletins are often used for training conference subject matter and are the result of the questions submitted by the district to the director. Area coordinators send the subject matter of these bulletins to the individual district offices, usually in the "notice of a training conference." District supervisors post these notices of the monthly training conferences on the district bulletin board for all the personnel to see. These bulletins inform district personnel as to when the next conference will be held, who will conduct it, the subject matter to be presented, and the personnel required to be present.

All district personnel except clerical are required to attend these training conferences. The conferences are conducted by the area training coordinator with the assistance of the district personnel (usually the supervising agents). The conferences are held in each of the districts or in a combination of districts each month. Training sessions are conducted informally and are usually of the conference or open discussion type.

Personnel who have been assigned to present subject matter for these conferences receive a lesson plan from the area coordinator prior to the class presentation. In this manner, the area coordinator can make certain that the subject matter is properly covered and that all points are brought out. Conferences are conducted on a regular work day and are a full day in duration.

Subject matter covered during these training conferences varies at each meeting. Normally, the training conference presents five or six one-hour classes dealing with two or more subjects. An example of subject matter for the October training conference on a state-wide basis is as follows:

Topic I—1 hour. Presentation and group discussion of agenda and minutes of area staff meeting of September 27.

Topic II—1 hour. Liaison—Explanation and group discussion.

Topic III—½ hour. Explanation and group discussion of Attorney General's opinion of Sec. 23954.5 as briefed in the deputy director's memorandum of September 12, 1956.

Topic IV—2 hours. Presentation and discussion of new rules—leader to use the director's memorandum of transmittal for answer and explanation of questions (to be supplied each agent at conference).

Topic V—½ hour. Explanation of process and procedure in rule making under Sections 11420-11427 of Administrative Procedure Act.

Topic VI—½ hour. Explanation and group discussion of proposed new application form together with notes of explanation as presented by the deputy director in a memorandum of September 24, 1956.

SPIRIT OF TRAINING

Response by the personnel to the training conferences has been good in most cases. Occasionally, the response has not been as good as might be expected, for two reasons:

A. Some older members of the department seem to feel that they know all that they need to and resent having "elementary" subject matter presented to them. Sometimes the younger men of the district will reflect this feeling.

B. Occasionally the subject matter for the conferences tends to become too specialized or technical. Some of the agents seem to feel that the subject matter should be directed to them as individuals rather than to the specialized sections of the department.

STATUS OF TRAINING PROGRAM

At the state training committee's meeting on October 19, 1956, the area coordinators reported on the progress of training in each of their areas.

A. Southern area coordinator reported that training had been conducted on a full scale in his area throughout the summer months.

B. Northern coastal coordinator reported that training had fallen off for the past two months, but would be functioning again in a short time.

C. Central valleys coordinator reported that there had been no organized training in the central valleys area, since April 1, 1956. He also reported that there is no existing structure in the central valleys area at the present.

There appear to be differences of opinion at various levels of the department as to how far the state training program has progressed since its outset. It appears that the state training committee has many problems to solve regarding (a) subject matter sources, (b) more centralized control of its training program, and (c) some method for determining how effective the training has been to the personnel. Written tests have not been used for this purpose. The department hopes to have a new agent's manual available to its personnel by June, 1957. At present the only manual available is the "Manual for California State Liquor Control Officers" issued by the Board of Equalization in 1945.

It would appear that there are differences in attitude and effort regarding training between the three areas, and that a more comprehensive effort on the part of departmental headquarters would be desirable to assure uniformity of training throughout the agency.

Deficiencies in the application of the training program are probably due, at least in part, to the fact that the chairman of the state training committee was relieved of his staff duties in department headquarters and assigned as area administrator in the Southern California area on a full-time basis between March 7, and July 15, 1956.

APPENDICES

APPENDIX I

WITNESSES BEFORE THE COMMITTEE

Department of A.B.C. Personnel

Name	*Position*	*Hearing location*
Russell S. Munro	Director	San Bernardino, Los Angeles, San Francisco, Sacramento
Malcolm E. Harris	Deputy director	Sacramento
Norman E. Woodbury	Southern area administrator	San Bernardino, Los Angeles, San Francisco
Frank I. Fullenwider	Northern coastal area administrator	San Francisco
James O. Reimel	Central Valley area administrator	Sacramento
Bion Gregory	Principal counsel	Sacramento
Burdette M. Grant	Assistant southern area administrator	San Francisco
Norbert Falvey	District supervisor, San Francisco	San Francisco
Harry S. Knust	Regional supervisor, San Bernardino	San Bernardino
C. E. Cameron, Jr.	District supervisor, Van Nuys	San Francisco
Allen J. Anderson	Supervising agent, San Bernardino	San Bernardino
Charles Shorey	Supervising agent, San Bernardino	San Bernardino
Norman Pearson	Agent, San Bernardino	San Bernardino

Law Enforcement Officials

Name	*Position*	*Hearing location*
Paul Baker	District attorney, Modoc County	Sacramento
Winslow Christian	District attorney, Sierra County	Sacramento
Bradford M. Crittendon	District attorney, San Joaquin County	Sacramento
Don Keller	District attorney, San Diego County	Los Angeles
Lowell E. Lathrop	District attorney, San Bernardino County	San Bernardino
Francis J. Ahern	Chief of police, San Francisco	San Francisco
James W. Ellis	Chief of police, San Bernardino	San Bernardino
James V. Hicks	Chief of police, Sacramento	Sacramento
Vernon E. Jeffries	Chief of police, Manteca	Sacramento
Jack A. O'Keefe	Chief of police, Stockton	Sacramento
Charles Stanley	Captain, Los Angeles Police Department	Los Angeles
Wyman W. Vernon	Chief of police, Oakland	San Francisco
Sgt. Glenn E. Anderson	Sheriff's Office, Alameda County	San Francisco
Frank Bland	Sheriff, San Bernardino County	San Bernardino

Industry Representatives

Name	*Position or representing*	*Hearing location*
Anthony Anselmo	Secretary, San Francisco Local Joint Executive Board of Culinary Workers, Bartenders and Hotel and Club Service Workers	Sacramento
Richard P. Bronson	Duchess, Inc., San Mateo County	San Francisco
M. R. Callaghan	Executive secretary, California State Council of Culinary Workers, Bartenders and Hotel Service Employees	Sacramento
Joe Charlebois	President, Retail Liquor Dealers Association, San Bernardino and Riverside Counties	San Bernardino
Murray Chotiner	Attorney for United Wholesale Liquor Dealers Association of California	Los Angeles
Henry Cramer	Licensee, San Diego	San Bernardino
Charles C. Davis	Licensee, San Bernardino County	Los Angeles
Don Gilespie	Wholesale Beverage Dealers of San Bernardino and Riverside Counties	San Bernardino
W. D. Hadeler	Executive secretary, California Grocers Association	San Francisco
Aubrey Harwood, Jr.	Vice president and assistant general manager, California Wine Association	San Francisco
Sidney Hoedemaker	Head of Chain Organization of Restaurants, Los Angeles	Los Angeles
Harvey Mandel	Licensee and Board of Directors of California Tavern Association	San Bernardino
Clifford H. Marker	Director, California Beverage Retailers Association	Los Angeles
Philip Marshall	Owner Stewart-Reynolds Co., Los Angeles	San Francisco
Duke Molner	President, United Wholesale Liquor Dealers Association of California	Los Angeles
Sante Quattrin	Executive secretary and legal counsel for Wholesale Liquor Distributors Association of Northern California	Los Angeles, San Francisco
Charles C. Quitman	Attorney and legislative advocate, Liquor Stores and Taverns Association	San Francisco
Joseph S. Ray	World-Over Importers, Inc.	Los Angeles
George Royal	Hollywood Ranch Market, Los Angeles and Bill's Ranch Market, Burbank	Sacramento
Kenneth Ryan	Secretary, Local Joint Executive Board, Bartenders Union, Sacramento	Sacramento
Leonard Seiv	Owner, Pacific Liquor Distributors of Los Angeles	Los Angeles
Craig P. Smith	President, California Hotel Association	San Francisco
Harry L. Tarnoff	California Retail Liquor Dealers Institute	Sacramento
Joseph Timoner	Joe's Liquor Store, Los Angeles	Los Angeles
Mrs. Jackie Walsh	President, San Francisco Local Joint Executive Board of Culinary Workers, Bartenders and Hotel and Club Service Workers	Sacramento

Others

Name	*Hearing location*
Reverend Earl Haydock	Los Angeles
Carl N. Hewitt	San Bernardino
A. Donald Minton	Los Angeles
William J. Olson	Los Angeles

APPENDIX II

LETTERS FROM LAW ENFORCEMENT OFFICIALS

II-A

OFFICE OF DISTRICT ATTORNEY
CONTRA COSTA COUNTY
MARTINEZ, CALIFORNIA, October 29, 1956

HON. CASPAR W. WEINBERGER, *Chairman*
Committee on Government Organization
State Capitol, Sacramento 14, California

DEAR MR. WEINBERGER: Thank you for your letter of October 25, 1956, with regard to the Assembly Interim Committee on Government Organization holding hearings on alcoholic beverage control.

I have no comments to make at this time but I sincerely appreciate your contacting me.

Very truly yours,

FRANCIS W. COLLINS
District Attorney

II-B

OFFICE OF DISTRICT ATTORNEY
ORANGE COUNTY, CALIFORNIA
SANTA ANA, October 31, 1956

Assembly Interim Committee on Government Organization,
Room 4017, State Capitol,
Sacramento 14, California

Attention: Honorable Caspar W. Weinberger.

GENTLEMEN: In reply to your letter of October 25, 1956, I would like to state that this office has had a good working relationship with the new State Department of Alcoholic Beverage Control.

I have no specific recommendations at this time for changes in the law.

Very truly yours,

ROBERT P. KNEELAND
District Attorney

II-C

OFFICE OF DISTRICT ATTORNEY
SAN FRANCISCO 11, CALIFORNIA, November 1, 1956

HONORABLE CASPAR W. WEINBERGER
Chairman, Assembly Interim Committee
on Government Organization
Room 4017, State Capitol, Sacramento 14, California

I am very happy to reply to your letter of October 25, 1956, wherein you state you would appreciate any comments I care to make concerning the present enforcement of alcoholic beverage control laws, and asking for any recommendations that I may have for submission to the 1957 session of the Legislature.

First, may I say I do not think it would be necessary for me to appear at your hearing. A further complication is that the District Attorneys' Law and Legislative Committee is tentatively scheduled to hold hearings of several days during this period. I would like, however, to avail myself of the opportunity to state that the present enforcement of alcoholic beverage control laws is in excellent shape. In all my experience, we have never had the cooperation we are presently receiving, and the entire atmosphere of enforcement has radically changed for the better. My observation is that the enforcement officers presently acting in this area are doing an outstanding job, and I am very glad to give them my highest commendation.

I do not have presently any specific recommendations to make in connection with changes in the liquor laws, but it is possible that the district attorneys and peace officers may have some suggestions to make. I am sure these will be communicated to you when their hearings are completed.

Very truly yours,

THOMAS C. LYNCH
District Attorney

II-D

OFFICE OF THE DISTRICT ATTORNEY
COUNTY OF SHASTA
REDDING, CALIFORNIA, October 31, 1956

CASPAR W. WEINBERGER, *Chairman*
Assembly Interim Committee on Government Organization
Room 4017, State Capitol, Sacramento 14, California

DEAR MR. WEINBERGER: In reply to your letter of October 25, 1956, this office is satisfied with the operation of the State Department of Alcoholic Beverage Control. Our working relationship has been excellent.

Sincerely yours,

RANDALL J. PRESLEIGH
District Attorney

II-E

DISTRICT ATTORNEY, VENTURA COUNTY
VENTURA, CALIFORNIA, October 30, 1956

HONORABLE CASPAR W. WEINBERGER
Chairman, Assembly Interim Committee on Government Organization
Room 4017, State Capitol, Sacramento 14, California

Thank you very much for your letter of October 25, 1956, with respect to the proposed hearings of your committee on the operations of the new State Department of Alcoholic Beverage Control.

As far as I am aware, there have been no difficulties in the administration of liquor laws in our county under the new department. The relationship between my office and the officers and employees of the department has been one of cooperation and harmony. I have no recommendations to make concerning any legislation.

Consequently, there is no point in my attending the hearings or in submitting a written statement.

Kindest personal regards to you.

Sincerely yours,

ROY A. GUSTAFSON
District Attorney

II-F

OFFICE OF THE SHERIFF
SANTA BARBARA COUNTY
SANTA BARBARA, CALIFORNIA, October 29, 1956

HONORABLE CASPAR W. WEINBERGER, *Chairman*
Committee on Government Organization
State Capitol, Sacramento 14, California

DEAR SIR: This is in answer to your letter of October 25th relative to the hearings scheduled by the Assembly Interim Committee on Government Organization which are scheduled for the southern part of the State on November 14th.

I am not planning to attend the hearing as I do not feel that I could give the committee any information. I am happy to say that my office and the new State Department of Alcoholic Beverage Control have a very harmonious working relationship. My office maintains various substations throughout Santa Barbara County, and my deputies and agents from the State Department of Alcoholic Beverage Control work as a team on any matters pertaining to liquor control and enforcement.

About the only comment I can make in the way of a recommendation would be to speed up the hearing procedure. We have had instances where an accusation has been filed, and it has taken as much as six months to get disciplinary action by the department. I feel that if this procedure could be speeded up it would have a very salutary effect from a law enforcement standpoint.

Sincerely yours,

JOHN D. ROSS
Sheriff

II-G

SHERIFF'S OFFICE
COUNTY OF SANTA CRUZ
SANTA CRUZ, CALIFORNIA, November 1, 1956

California Legislature
Assembly Interim Committee on Government Organization

Attn: Caspar Willard Weinberger
Chairman

DEAR MR. WEINBERGER: Please be advised that I am in receipt of your letter of October 25, 1956, in which you have stated that there will be hearings on alcoholic beverage control at designated cities throughout the State.

I am pleased to state that our relations with the members of the ABC working from this office have been most pleasant. We have found that the members of the ABC have been most cooperative and discussed at length any problems which have come up, which through mediation, has resulted in the satisfactory conclusion of these problems not only from an ABC enforcement level but also from a law enforcement level.

Again let me reiterate that our associations with the members of the ABC have been most pleasant and it is sincerely hoped that the type of mutual understanding and aid to each other will continue to exist.

Respectfully submitted,

W. P. HENDRICK
Sheriff, Santa Cruz County

Unfortunately a representative from this office will be unable to attend one of the hearings at this time.

II-H

POLICE DEPARTMENT
THE CITY OF SAN DIEGO
SAN DIEGO 12, CALIFORNIA, November 6, 1956

HON. CASPAR W. WEINBERGER
Assembly Interim Committee on
Government Organization
Room 4017, State Capitol, Sacramento 14, California

DEAR MR. WEINBERGER: This will acknowledge receipt of your letter of October 25 relative to the hearings on alcoholic beverage control.

First, I want to go on record as being highly pleased with the work which has been done by the Alcohol Beverage Control Department. Our relations with the department have been cordial and cooperative. We could not ask for a better working relationship.

There is one phase of the administration of the new law which we feel leaves much to be desired.

An applicant who assumes the ownership by purchase, of a licensed premise, with the intention of eventually accomplishing the transfer of the existing license to himself is sometimes in possession of the premises for a considerable period of time, as much as nine months, before a decision is reached as to whether or not the license will be transferred to the new owner.

The new owner may be undesirable as a licensee and we can assume will eventually be denied the right to continue to operate the premises. In the meantime local law enforcement is confronted with a bad situation.

We think there could be a change in policy or law which would prevent the transfer of the premises to a new owner until a preliminary investigation was conducted. If such preliminary investigation disclosed the possibility that the license transfer might be eventually denied, then the transfer of the premises should be prevented.

We are also interested in the proposal that all employees of licensed liquor establishments be fingerprinted and identified prior to securing employment as a waitress, bartender, etc. Such identification would be permanent and no renewal would be necessary.

You are to be congratulated on the very effective work you did in bringing order out of the chaos which existed under the old "board" administration. I am sure law enforcement appreciates your interest and cooperation.

Sincerely,

A. E. JANSEN
Chief of Police

APPENDIX III

REPORT OF ACTIONS BY THE ALCOHOLIC BEVERAGE CONTROL APPEALS BOARD, 1955 AND 1956, PRESENTED BY THE ALCOHOLIC BEVERAGE CONTROL APPEALS BOARD TO THE ASSEMBLY INTERIM COMMITTEE ON GOVERNMENT ORGANIZATION, DECEMBER 7, 1956

III-A

CASES NOT DECIDED BY THE ALCOHOLIC BEVERAGE CONTROL APPEALS BOARD WITHIN 60 DAYS AFTER RECEIPT OF DEPARTMENTAL HEARING TRANSCRIPT

				DEPARTMENT'S DATA						APPEALS BOARD DATA				
File Number	Appellant	Type of Action	Decision of Department	Accusation Filed	Hearing Held	Proposed Decision	Decision Adopted	Total Time Elapsed	Appeals Filed	Received Transcript	Hearing Held	Decision Certified	Total Time Elapsed
244	Richards	application	denial	9/19/55	12/ 1/55	12/ 7/55	12/29/55	101 days	2/ 2/56	6/15/56	7/17/56 10/24/56	12/ 6/56	204 days
254	James	public bar	indefinite suspension	7/ 1/55	8/ 9/55 9/13/55	12/15/55	1/19/56	202 days	2/17/56	7/ 9/56	9/26/56	11/ 8/56	122 days
234	Rinetti	dis. house	40-day suspension	4/18/55	7/26/55	12/ 7/55	12/29/55	255 days	1/13/56	5/25/56	11/ 8/56		
258	Green	sale minor	15-day; 15 stayed	8/24/55	12/27/55 10/14/55	1/10/56	2/ 9/56	169 days	2/23/56	6/15/56	7/18/56	10/24/56	130 days
268	Jimenez	protest	denial	8/19/56	11/ 4/55	12/ 7/55	2/ 9/56	178 days	3/ 9/56	7/18/56	9/26/56	11/14/56	119 days
269	Dami	sale with but lic	30-day suspension	11/ 9/55	1/ 6/56	1/20/56	2/ 9/56	92 days	3/ 9/56	8/ 1/56	9/26/56	11/14/56	105 days
272	Morgan et al	application	denial	11/14/55	12/29/55	1/18/56	2/ 9/56	87 days	3/16/56	6/25/56	7/18/56 9/27/56		
274	Haley	owner-ship	revoke	4/ 8/55	12/21/55	12/29/55	2/ 9/56	307 days	3/19/56	6/14/56	7/18/56 9/27/56	12/ 6/56	205 days
289	Constantatos	sale cbv, bnkcper	15-day suspension	8/25/55	1/16/56 1/ 5/56	1/24/56	3/22/56	210 days	4/10/56	7/ 9/56	9/26/56	11/27/56	141 days
295	Korshav	dis. house	revoke	6/ 1/55 11/28/55	1/ 9/55 11/28/55	4/ 3/56	4/13/56	315 days	4/30/56	8/24/56	10/19/56	11/27/56	95 days
298	Geanolis	dis. house	revoke	11/10/55	2/ 6/56	2/24/56	3/22/56	113 days	4/30/56	7/16/56	9/28/56 7/24/56	12/ 6/56	143 days
325	Prosta	protest	denial	11/ 4/55	3/12/56	3/21/56	5/ 3/56	181 days	5/28/56	6/ 4/56	9/19/56		
323	Johnson	public bar	indefinite suspension	1/ 3/55	3/20/56 2/21/55	3/27/56	5/ 3/56	486 days	5/25/56	7/13/56	9/20/56	11/14/56	124 days
326	Cosgrosi	application	denial	5/25/56	failed to exhaust administrative remedy		-------	--------	5/28/56	Motion	9/27/56 9/19/56	11/ 5/56	
331	Faver	after hours	45-day suspension	8/25/55	1/21/56	1/ 3/56	5/ 3/56	252 days	6/ 6/56	7/24/56	10/29/56		
333	Allen	application	denial	1/ 9/56	3/27/56	4/ 5/56	5/ 3/56	123 days	6/ 7/56	7/13/56	9/21/56	11/ 8/56	118 days
334	Bonini	dis. house	indefinite suspension	2/ 7/56	4/25/56	5/ 2/56	5/24/56	107 days	6/ 8/56	7/19/56	9/26/56 7/25/56	12/ 6/56	140 days
338	LaShelle	adulter-ation	5-day suspension	7/ 5/55	2/ 8/56	2/ 9/56	5/ 3/56	300 days	6/14/56	6/29/56	9/19/56	11/14/56	138 days
339	Devaney	sale minor	15-day suspension	11/ 8/55	3/13/56	3/20/56	5/ 3/56	177 days	6/14/56	7/ 2/56	9/20/56	11/14/56	135 days
340	Stancliffe	appli-cation	denial	1/19/56	2/28/56	3/22/56	5/ 3/56	185 days	6/14/56	7/16/56	11/29/56		
342	Williams	moral turp	revoke	8/12/55	1/25/56	3/21/56	5/ 3/56	265 days	6/14/56	7/ 2/56	9/27/56	12/ 6/56	157 days
343	Williams	appli-cation	denial	1/ 3/56	1/25/56	3/21/56	5/ 3/56	121 days	6/14/56	7/ 2/56	9/27/56	12/ 6/56	157 days
345	Lisaits	B-girl	revoke	6/21/55	1/24/56	1/ 5/56	5/ 3/56	345 days	6/18/56	7/12/56	10/30/56		
348	Village of Ridgecrest	dis. house	15-day suspension	8/17/55	1/10/56	1/20/56	5/ 3/56	260 days	6/18/56	7/23/56	9/21/56	11/14/56	114 days
355	Barbary Coast	B-girl	revoke	12/ 7/55	4/25/56	5/ 1/56	5/24/56	169 days	6/22/56	7/10/56	9/28/56	11/14/56	127 days
358	Bell	protest	denial	1/21/56	4/27/56	5/21/56	6/14/56	85 days	6/28/56	7/31/56	12/10/56		
359	Furst	sale minor	15-day suspension	9/15/55	1/24/56	4/ 5/56	5/24/56	252 days	7/ 2/56	8/ 2/56	10/31/56		
360	Lares	dis. house	revoke	2/ 8/56	4/ 5/56	4/17/56	5/24/56	106 days	7/ 2/56	7/12/56	9/21/56	11/14/56	125 days
361	Cavalier Ent.	sale cbv	30-day suspension	1/ 6/56	4/ 4/56	4/10/56	5/24/56	139 days	7/ 3/56	7/16/56	9/21/56	11/ 8/56	116 days
362	Pabal	lic'r trade	15-day suspension	12/13/55	3/27/56	4/ 5/56	5/24/56	163 days	7/ 5/56	8/ 7/56	10/29/56		
363	Hollins	after hours	15-day suspension	2/ 1/56	4/19/56	4/25/56	5/24/56	113 days	7/ 5/56 9/17/55	8/15/56	12/12/56		
364	5501 Holly-wood Inc.	sale minor	15-day suspension	1/15/56	4/ 6/56	4/16/56	5/24/56	127 days	7/ 9/56	7/13/56	9/19/56	11/14/56	124 days
366	La Marr	dis. house	revoke	5/ 2/55 6/13/55	11/17/55	6/11/56	6/11/56	406 days	7/13/56	8/ 9/56	9/28/56		
367	Arnell	sale minor	15-day suspension	2/ 7/56	5/ 3/56	5/16/56	6/14/56	128 days	7/16/56	7/25/56	10/31/56		
368	Martinez	wh's cn premises	revoke	1/31/56	5/ 8/56	5/21/56	6/14/56	135 days	7/16/56	7/31/56	10/29/56		
371	Lucero	after hours	15-day suspension	1/19/56	4/ 9/56	5/22/56	6/14/56	147 days	7/20/56	7/31/56	10/31/56		
372	Young & Chinn	dis house	30-day suspension	1/ 5/56	5/ 2/56	6/15/56	7/ 5/56	122 days	7/23/56	8/ 8/56	9/28/56		
373	Maxwell	not lic whiskey	revoke	1/24/56	4/25/56	5/ 1/56	6/14/56	142 days	7/23/56	8/ 1/56	10/30/56		
375	Williams	owner-ship	dismiss	6/ 7/55	8/11/55	1/30/56 7/ 5/56	7/ 5/56	394 days	7/24/56	8/20/56	9/28/56		
376	Ballantyne	sale cbv, brkcpr	15-day suspension	2/ 8/56	5/ 4/56	5/10/56	7/ 5/56	179 days	7/25/56	8/ 1/56	10/29/56		
380	Walsh	dis. house	revoke	4/ 3/56	6/28/56	7/ 6/56	7/25/56	113 days	8/ 1/56	8/23/56	11/19/56		
381	Xourofis	sale minor	revoke	1/18/56	6/ 7/56	6/15/56	7/ 5/56	169 days	8/ 6/56	8/27/56	10/30/56		
386	Fierro	dis. house	30-day suspension	3/ 5/56	5/ 3/56	6/15/56	7/ 5/56	122 days	8/10/56	8/21/56	10/18/56		
391	Holstun	sale minor	30-day suspension	2/23/56	5/ 6/56	6/11/56	7/ 5/56	133 days	8/15/56	8/20/56	10/30/56		
392	Silverberg	sale minor	15-day suspension	3/16/56	6/18/56	6/28/56	7/25/56	131 days	8/15/56	8/27/56	10/31/56		
396	Bd. of Ed. San Bernardino	protest	issue	5/21/56	7/10/56	7/16/56	8/ 7/56	96 days	8/17/56	9/25/56	10/31/56		
406	Stein	after hours	revoke	1/ 3/55	1/ 3/56	2/29/56	4/12/56	406 days	8/27/56	Motion			
411	Cabusora	application	denial	8/27/56	failed to exhaust administrative remedy				8/31/56	Motion	9/27/56	11/ 2/56	
370	Moore	sale minor	15-day suspension	1/19/56	4/ 6/56 5/14/56	5/22/56	6/14/56	147 days	7/19/56	7/27/56	10/29/56		

III-B

SUMMARY OF COURT ACTIONS ON ALCOHOLIC BEVERAGE CONTROL CASES, 1955 AND 1956

Summary of Cases in Superior Courts

Actions filed by department	13
Actions won by Appeals Board	9
Actions won by department	4
Actions filed by complainant	1
Actions won by complainant	1

Appeals in District Courts of Appeal

Appeals filed by Appeals Board *	2
Appeals filed by department	3
Appeals abandoned by department	3
Total appeals pending	2

Court Actions Against Appeals Board and Department

Approximately 50 cases have been filed in superior courts against the Appeals Board and the department in those instances where the Appeals Board decision affirmed the department's decision. Several of these cases are on appeal to the district courts of appeal. To date only three cases have been decided. The district courts of appeal affirmed the decisions of the Appeals Board in these three cases.

Court Cases Filed by the Department Against the Appeals Board

1. *Munro* vs. *Appeals Board; Stoumen*—S. F. 453912
   Petition for writ filed December 2, 1955. Return and answer filed by Appeals Board. Alternative writ issued, returnable December 21, 1955. Oral argument December 21, 1955. Petition for writ of mandate denied December 27, 1955. Motion for full trial submitted January 21, 1956, on ground findings were necessary (due to death of judge). Appeals Board sustained by judgment dissolving alternative writ of mandate April 21, 1956. This case involved the legal question of whether there was substantial evidence to support the findings of the department. No appeal by the department.
2. *Munro* vs. *Appeals Board; Moose Lodge, Gridley*—SAC. 100927
   Petition for writ filed May 18, 1955. Return and answer filed by Appeals Board. Alternative writ issued, returnable June 8, 1955. Briefs submitted. Appeals Board sustained by judgment denying petition for writ of mandate entered March 22, 1956. This case involved the question of whether the penalty of revocation imposed by the department was arbitrary as a matter of law. No appeal by the department.
3. *Munro* vs. *Appeals Board; Giannotti*—S. F. 454577
   Petition for writ filed December 30, 1955. Return and answer filed by Appeals Board. Alternative writ issued, returnable January 25, 1956. Oral argument January 25, 1956. Briefs submitted. Judgment ordering petition for writ of mandate granted February 15, 1956 The principal question was the sufficiency of the finding. No appeal by the Appeals Board.
4. *Munro* vs. *Appeals Board; Marino*—L. A 656717
   Petition for writ filed February 29, 1956. Return and answer filed by Appeals Board. Alternative writ issued, returnable April 20, 1956. Oral argument April 20, 1956. Brief submitted. Minute order April 27, 1956, denied petition and discharged alternative writ. Appeals Board sustained by judgment denying petition for writ entered July 18, 1956. Appeal filed by the department September 17, 1956. Appeal abandoned by department October 19, 1956.

* FOOTNOTE BY COMMITTEE. The committee calls to the attention of the Legislature the fact that in those cases where the Appeals Board itself files and actively prosecutes an appeal from a superior court decision adverse to one of its rulings, the Appeals Board is, in effect, using the resources of the State to Appeal to a higher court the private case of a disappointed applicant for a license, or a disciplined licensee. The desirability of this action by the Appeals Board seems, at the very least, open to serious question

5. *Munro* vs. *Appeals Board; Souza*—S. F. 452495
Petition for writ filed Oct. 13, 1955. Return and answer filed by Appeals Board. Alternative writ issued, returnable November 18, 1955, postponed until December 15, 1955. Oral argument December 15, 1955. Briefs submitted. Motion for a new hearing submitted April 9, 1956, due to death of judge Appeals Board sustained by judgment denying petition for writ of mandate entered August 16, 1956. Motion for new trial by the department filed September 5, 1956, and briefs submitted thereon. Oral argument September 26, 1956. Order denying motion for new trial entered October 2, 1956. Appeal by the department filed October 15, 1956. This case involved questions of substantial evidence and the sufficiency of the findings. Appeal abandoned by department, November 2, 1956.

6. *Munro* vs *Appeals Board; Moss*—SAC. 101347
Petition for writ filed July 1, 1955. Return and answer filed by Appeals Board. Alternative writ issued, returnable August 10, 1955. Briefs submitted. Memorandum opinion April 19, 1956, ordered that writ of mandate issue. No appeal by the Appeals Board. This case involved questions of substantial evidence and sufficiency of the findings.

7. *Munro* vs. *Appeals Board; Cuscuza*—L. A. 660285
Petition filed April 25, 1956. Points and authorities in opposition to petition submitted May 4, 1956. Appeals Board sustained by judgment denying petition and dismissing proceedings submitted June 1, 1956, and filed. This case involved the necessity for findings on the question of bona fide documentary evidence of age and identity in a case dealing with the sale of an alcoholic beverage to a minor. No appeal by the department.

8. *Munro* vs. *Appeals Board; Chew and Jew*—L. A.
Petition for writ filed May 2, 1956. Return and answer filed by Appeals Board. Oral argument June 27, 1956. Appeals Board sustained by judgment denying petition filed July 18, 1956. Appeal filed by the department September 17, 1956. The appeal was abandoned by the department on September 20, 1956. This case involved the question of misrepresentation of a material fact in acquiring a license to dispense alcoholic beverages.

9. *Munro* vs. *Appeals Board; Borenstein and Kahn*—L. A. 659175
Petition for writ filed April 18, 1956. Return and answer filed by Appeals Board. Alternative writ issued, returnable June 1, 1956. Oral argument June 22, 1956. Judgment granting writ of mandate entered September 26, 1956, granting petition for writ of mandate. No appeal filed by the Appeals Board. This case presented the question of the harshness of the penalty imposed by the department.

10. *Munro* vs. *Appeals Board; Miyame*—L. A. 654344
Petition for writ filed January 11, 1956. Return and answer filed by Appeals Board. Oral argument May 25, 1956. Appeals Board sustained by judgment denying petition filed July 18, 1956. This case involved a question whether there was substantial evidence to support the department's findings that the licensee was not conducting a bona fide restaurant. No appeal by the department.

11. *Munro* vs. *Appeals Board; Chaney*—L. A. 658855
Petition for writ filed April 11, 1956. Return and answer filed by Appeals Board. Oral argument July 25, 1956. Judgment granting writ filed. Notice of appeal filed by the Appeals Board on September 12, 1956. Clerk's transcript now being prepared This case involved the question of whether an applicant for a license was a fit and proper person.

12. *Munro* vs. *Appeals Board; Smith and Murphy*—L. A. 659251
Petition for writ filed April 19, 1956. Return and answer filed by Appeals Board. Oral argument June 1, 1956. Appeals Board sustained by judgment denying petition for writ of mandate entered July 18, 1956. No appeal filed by the department. The question presented in this case was whether the prior record of the licensee was sufficient, as a matter of law, to constitute said licensee an unfit person to hold a license.

13. *Kochn* vs. *State Board of Equalization, et al.*
Petition for writ of mandate filed by the complainant after reversal by the Appeals Board of the department's decision on August 17, 1955. Return and answer filed by the Appeals Board on October 25, 1955. Return and answer filed by the department adverse to the decision of the Appeals Board. Briefs submitted by all parties. Judgment granting writ January 27, 1956. Appeal filed by the Appeals Board on February 15, 1956. Case now pending in the District Court of Appeal, First Appellate District. This case involved the question of whether the department had granted reconsideration in accordance with the Administrative Procedure Act.

14. *Munro* vs. *Appeals Board; Legakes*
Petition for writ of mandate served on Appeals Board November 17, 1955, alleging that the Appeals Board exceeded its jurisdiction in reversing the decision of the department. Alternative writ did not issue and case abandoned by the department The case involved the question of substantial evidence to support findings of the department of sale and consumption of an alcoholic beverage by a minor.

III-C

SUMMARY OF ALCOHOLIC BEVERAGE CONTROL APPEALS BOARD ACTIONS, 1955 AND 1956

1955

Month	Appeals rec'd	Waivers	Premature	Withdrawn	Dismissed	Remanded	Sustained	Reversed
January	29							
February	40	2	2	2				
March	16			1		6	14	5
April	18			1	2	3	26	1
May	17			1	1	1	15	1
June	14			1	3	2	1	
July	11			2	4	1	16	5
August	18			4	2	1	9	1
September	29			1	1		3	2
October	8			2	3	1	8	2
November	10				3	1	5	1
December	18			3	2	3	13	1

1956

Month	Appeals rec'd	Waivers	Premature	Withdrawn	Dismissed	Remanded	Sustained	Reversed
January	14			1	5		3	*2
February	23				3		4	2
March	19		1	1	3	2	5	5
April	15				1	1	3	2
May	32		1	1	6		12	3
June	27				1		3	1
July	21		1	1	4		9	2
August	32				9		13	4
September	28			1			7	†2
October	20				9		5	6
November								
December								

* The decision reached in appeal No AB-193 reversed two counts and sustained one count
† The decision reached in appeal No AB-321 reversed one count and affirmed one count

APPENDIX IV

LEGISLATION SPONSORED BY THE DEPARTMENT OF ALCOHOLIC BEVERAGE CONTROL, 1957 GENERAL SESSION

An act to amend Section 24070 of the Business and Professions Code, relating to alcoholic beverages

An act to amend Section 23954.5 of the Business and Professions Code, relating to alcoholic beverages.

An act to amend Section 24048 of, and to add Sections 24048.1, 24048.2, 24048.3 and 24048.4 to, the Business and Professions Code, all relating to alcoholic beverages.

An act to amend Sections 25503 and 25612 of the Business and Professions Code, relating to alcoholic beverages.

An act to add Section 25775.5 to the Business and Professions Code, relating to alcoholic beverages. (Senate Bill No. 1097.)

An act to amend Section 25662 and 25663 of the Business and Professions Code, relating to alcoholic beverages

An act to amend Sections 23985, 24013 and 24203, and to repeal Section 24015 of the Business and Professions Code, relating to alcoholic beverages.

An act to add Section 25666 to the Business and Professions Code, relating to alcoholic beverages.

An act to amend Section 23085 of the Business and Professions Code, relating to alcoholic beverages.

An act to add Section 23825 to the Business and Professions Code, relating to alcoholic beverages. (Senate Bill No. 1098.)

An act to amend Section 23787 to the Business and Professions Code, relating to alcoholic beverages

An act to amend Section 24072.2 of the Business and Professions Code, relating to alcoholic beverages. (Assembly Bill No. 1515.)

An act to amend Section 24200.5 of the Business and Professions Code, relating to alcoholic beverages (Assembly Bill No. 1815.)

An act to amend Section 25761 of the Business and Professions Code, relating to alcoholic beverages (Assembly Bill No. 1816.)

An act to amend Sections 23320, 23959, 24045, 24047, 24071, and 24072 of, and to add Section 23366.1 to, the Business and Professions Code, relating to alcoholic beverages. (Assembly Bill No. 1817.)

An act to amend Section 24045 of the Business and Professions Code, relating to alcoholic beverages (Assembly Bill No. 1947.)

An act to amend Section 23037 of the Business and Professions Code, relating to alcoholic beverages. (Assembly Bill No. 1948.)

An act to repeal Section 4 of Chapter 1801 of the Statutes of 1955, and to amend Sections 23399 and 23824 of the Business and Professions Code, relating to alcoholic beverages. (Assembly Bill No. 1949.)

An act to amend Section 24049 of the Business and Professions Code, relating to alcoholic beverages. (Assembly Bill No. 1950.)

An act to amend Section 23788 of, and to add Section 23788.5 to, the Business and Professions Code, relating to alcoholic beverages. (Assembly Bill No. 1951.)

An act to amend Section 23380, and to repeal Section 23782 of the Business and Professions Code, relating to alcoholic beverages (Assembly Bill No. 1952.)

An act to amend Section 25656 of, and to repeal Section 25655 of, the Business and Professions Code, relating to alcoholic beverages. (Assembly Bill No. 1953.)

An act to amend Section 23102 of the Business and Professions Code, relating to alcoholic beverages. (Assembly Bill No. 1954.)

An act to amend Sections 23950 and 23951 of the Business and Professions Code, relating to alcoholic beverages. (Assembly Bill No. 1955.)

An act to repeal Sections 24010, 24050, and 24202, and to amend Sections 24046 and 25755 of the Business and Professions Code, relating to alcoholic beverages. (Assembly Bill No. 1956.)

An act to amend Section 23433 of the Business and Professions Code, relating to alcoholic beverages. (Assembly Bill No. 1957.)

An act to amend Section 23775 of the Business and Professions Code, relating to alcoholic beverages (Assembly Bill No. 1958.)

An act to amend Sections 24073, 24074 and 24075 of the Business and Professions Code, relating to alcoholic beverages. (Assembly Bill No. 1959.)

An act to add Section 23104.5 to the Business and Professions Code, relating to alcoholic beverages. (Assembly Bill No. 1960.)

APPENDIX V

ENFORCEMENT RECORD OF THE DEPARTMENT OF ALCOHOLIC BEVERAGE CONTROL, JANUARY 1, 1955, TO OCTOBER 31, 1956, BY DISTRICT AND TYPE OF ACTION

District	Revocations	Indefinite suspensions	Term suspensions	Accusations dismissed	Accusations pending at 10/31/56	Total
Northern Coastal Area						
San Francisco	26	7	131	35	141	340
Oakland	21	9	236	38	133	437
Santa Rosa	2	----------	51	6	31	90
San Jose	10	6	84	14	67	181
Total	59	22	502	93	372	1,048
Central Valleys Area						
Sacramento	19	12	92	21	37	181
Stockton	6	13	101	27	59	206
Fresno	7	9	91	14	35	156
Redding	----------	3	15	6	9	33
Marysville	2	----------	27	7	7	43
Bakersfield	3	4	52	6	21	86
Total	37	41	378	81	168	705
Southern Area						
San Diego	8	5	67	45	44	169
El Centro	1	2	15	2	19	39
Long Beach	6	7	148	70	59	290
Santa Barbara	3	2	35	12	13	65
Inglewood	16	8	141	58	79	302
Van Nuys	2	3	53	22	42	122
Los Angeles*	27	13	187	98	125	450
Pasadena	4	2	79	30	33	148
San Bernardino	11	4	69	34	42	160
Total	78	46	794	371	456	1,745
Total	174	109	1,674	545	996	3,498

* Central district only

APPENDIX V-A

NORTHERN COASTAL AREA

ACCUSATIONS FILED, JANUARY 1, 1955, TO OCTOBER 31, 1956, BY DISTRICT AND TYPE OF VIOLATION

Type of violation	San Francisco	Oakland	Santa Rosa	San Jose	Total
Sales to obviously intoxicated persons	31	2	6	1	40
Sales during restricted hours	22	26	5	6	59
Possession or sales without proper license	10	13	1	4	28
Sales to or consumption by minors	132	327	73	98	630
Operating public bar				7	7
Operating disorderly premises	9	12	1	9	31
Conviction involving moral turpitude	6	2		2	10
Fair trade regulations	22	4		4	30
B-girls operations	20	3	2	2	27
Misrepresentation of a material fact in obtaining a license				3	3
Gambling on premises	9	5			14
Refilled bottles	8	5	1		14
Sales to nonmembers		2		1	3
Not true party in interest	13	11	1	6	31
All other	54	28	3	36	121
Total	336	440	93	179	1,048

APPENDIX V-B

CENTRAL VALLEYS AREA

ACCUSATIONS FILED, JANUARY 1, 1955, TO OCTOBER 31, 1956, BY DISTRICT AND TYPE OF VIOLATION

Type of violation	Stockton	Sacramento	Fresno	Bakersfield	Marysville	Redding	Total
Sales to obviously intoxicated persons	25	35	9	8	2	1	80
Sales during restricted hours	7	5	3	2		1	18
Possession or sales without proper license	8	5	5	3		1	22
Sales to or consumption by minors	114	81	92	54	31	22	394
Operating public bar	8	2	5		2	1	18
Conviction involving moral turpitude	1	2	1				4
Fair trade regulations		8	1		1		10
Prostitution and solicitation	5	9	1				15
Employment of females	2	7	3				12
Operating disorderly premises	6	4	9	5	3	1	28
Misrepresentation of a material fact in obtaining a license	1	2					3
Gambling on premises	11	2	10	7	1		31
Refilled bottles			2	3			5
Sales to nonmembers	1						1
Not true party in interest	5	4	3	3	2	4	21
Narcotics		2	2				4
All other	12	13	10	1	1	2	39
Total	206	181	156	86	43	33	705

APPENDIX V-C

SOUTHERN AREA

ACCUSATIONS FILED, JANUARY 1, 1955, TO OCTOBER 31, 1956, BY DISTRICT AND TYPE OF VIOLATION

Type of violation	Region I		Region II		Region III		Region IV		Region V	Total
	San Diego	El Centro	Santa Barbara	Long Beach	Van Nuys	Inglewood	Los Angeles*	Pasadena	San Bernardino	
Sales to obviously intoxicated persons	6		3	6	6	34	101	2	3	161
Sales during restricted hours	8	1	4	21	5	24	32	13	9	117
Possession or sales without proper license	6	1	1	9		12	14	12	1	56
Sales to or consumption by minors	97	20	39	195	82	150	138	87	99	907
Operating public bar	5	1	2	8	4	17	37	6	4	84
Operating disorderly premises	3	1	2	9	2	14	29		11	71
Conviction involving moral turpitude	3	2		6	3	4	1	2	3	24
Fair trade regulations	1	3	4	2	6	5	31	1		53
B-girls operations		3					27	1	1	32
Misrepresentation of a material fact in obtaining license				3	1	7	1		1	13
Gambling on premises	1			3	1	6	5	12	4	32
Refilled bottles	5			3	1	3	5			17
Sales to nonmembers			1	1		2				4
Not true party in interest	2			2	4	8	7		5	28
All other	32	7	9	22	7	16	22	12	19	146
Total	169	39	65	290	122	302	450	148	160	1,745

* Central district only

APPENDIX VI

LEGISLATIVE COUNSEL'S OPINION ON ARREST REPORTS OF LOCAL LAW ENFORCEMENT AGENCIES

SACRAMENTO, CALIFORNIA, January 18, 1957

HONORABLE CASPAR W. WEINBERGER
Assembly Chamber

Alcoholic Beverage Control—#3089

DEAR MR. WEINBERGER: You have submitted a report based on information obtained by interviews with certain law enforcement officials and investigative and arrest reports of the Sheriff's office in San Bernardino County, the Bureau of Narcotic Enforcement of the State Department of Justice, and minutes of meetings of the Armed Forces Disciplinary Control Board, San Bernardino area The report and supporting documents deal with unlawful activities, such as sales of narcotics, bookmaking, contacts by prostitutes and perverts, sales of alcoholic beverages to minors and to obviously intoxicated persons, and disturbances of the peace which have occurred in or about certain licensed alcoholic beverage premises in San Bernardino County. Many of such activities involved the licensee or his employees, and many resulted in convictions by the courts.

In connection with this report you have asked several questions which will be set forth and answered separately below.

QUESTION NO 1

Assuming the information contained in the report was available to the Department of Alcoholic Beverage Control, what steps to initiate disciplinary proceedings against a licensee involved would the department be required by law to take and what steps could it take legally?

OPINION NO. 1

In our opinion, the department would not be required by law to take steps to initiate disciplinary proceedings unless a written report of a public officer disclosing grounds for the suspension or revocation of the license were made to it or unless a person or local legislative body filed a formal accusation against the licensee It would be authorized, however, to initiate such proceedings without such a report or accusation.

ANALYSIS NO. 1

Under Section 22 of Article XX of the California Constitution, the department is given the power, *in its discretion*, to deny, suspend or revoke a liquor license if it determines for good cause that the granting or continuance of such license could be contrary to public welfare or morals or that the person involved has violated any law prohibiting conduct involving moral turpitude. In addition to the broad grounds set forth in the Constitution, the Alcoholic Beverage Control Act (Div. 9, commencing at Sec. 23000, B. & P. C.) lists other grounds which are a basis for disciplinary action against a licensee (B. & P. C. 2420, 25200.5).

There are several ways in which disciplinary proceedings against a licensee may be initiated. Under Section 24201* of the Business and Professions Code, any person may file with the department an accusation against a licensee, stating therein grounds which would authorize the department to suspend or revoke the license. Under Section 24203, local legislative bodies may file an accusation against a licensee.

Section 24202 provides that a written report of any officer, employee, or agent of the department engaged in the enforcement of the Alcoholic Beverage Control Act or of any public officer disclosing grounds for the suspension or revocation of a license shall be deemed an accusation against the licensee even though not in the form of an accusation.

As can be seen from the above, disciplinary proceedings are initiated by an accusation, whether a formal accusation or a written report of an enforcement official of the department or of a public officer. There is no requirement that enforcement officials of the department file written reports disclosing grounds for disciplinary action, so that unless some other public officials do so or unless a formal accusation is filed, there would be no initiation of disciplinary proceedings. Of course, it is clear that under Section 24202 the department has the legal authority to initiate such proceedings.

* Section references are to sections of the Business and Professions Code.

It might be noted in this connection that Section 24204 requires the department, upon notification by the Chief of the Bureau of Food and Drug Inspection of the conviction of any licensee of any violation of the California Pure Foods Act in connection with alcoholic beverages, to promptly cause an investigation to be made as to whether grounds exist for suspension or revocation of the license There is no other similar provision in the act as to required investigations by the department.

QUESTION No. 2

What are the legal powers and duties of the department with respect to the enforcement of the statutory provisions pertaining to the keeping of orderly premises and the selection of or approval of licensees?

OPINION AND ANALYSIS No. 2

Section 25601 of the code makes it a misdemeanor for any licensee, or his agent or employee, to keep, permit to be used, or suffer to be used, in conjunction with a licensed premises, any disorderly house or place in which people abide or to which people resort, to the disturbance of the neighborhood, or in which people abide or to which people resort for purposes which are injurious to the public morals, health, convenience, or safety. In addition, Section 24200 includes, as a ground for disciplinary action, the premises of the licensee being a resort for illegal possessors or users of narcotics, prostitutes, pimps, panderers, or sexual perverts.

The department not only has the power to investigate matters relative to the orderliness of licensed premises (B. & P. C. 25751), but, with respect to the enforcement of Section 25601 and other penal provisions of the Alcoholic Beverage Control Act, the department's enforcement officials have a duty to enforce such provisions. Section 25755 grants to such officials the powers of peace officers in the enforcement of any penal provisions of law while they are in, on, or about any licensed premises in the course of their employment. As peace officers, they are required, along with local peace officers and district attorneys, to enforce the provisions of the act and diligently inform against and prosecute persons whom they have reasonable cause to believe offenders against provisions of the act (B. & P. C 25619). Of course, it will be recognized that the extent to which the department's enforcement officials can enforce these provisions is dependent to a great extent upon the size of the enforcement staff and the funds available for such purpose.

Turning to the selection of or approval of licensees, it has already been pointed out that, under the Constitution, this matter is within the sole discretion of the department, subject, of course, to the requirements with respect to qualifications of licensees and licensed premises prescribed by the Constitution and by law. Section 23958 requires the department, upon receipt of and application for a license or for a transfer of a license, to make a thorough investigation to determine whether the applicant and the premises qualify for a license and whether the provisions of the act have been complied with and to investigate all matters connected therewith which may affect the public welfare and morals. The department is directed to deny an application for a license or for a transfer of a license if the applicant or premises do not qualify for a license under the act.

In addition to the investigation by the department, upon the receipt of an application for a license or a transfer for a license, the department is required to mail written notice thereof to the sheriff, chief of police, and district attorney of the locality in which the premises are situated and the local governing body (B. & P. C. 23987). If the local governing body protests to the department within 30 days of the mailing of such notice, the department is required to hold a hearing on the matter (B. & P. C. 23988).

If the department denies an application for a license, the applicant may demand a hearing (B. & P. C. 24011, 24012). Protests to the issuance of a license may be made by any person at any time before the issuance thereof (B. & P. C. 24013, 24014). If the license has already been issued, the protest will be considered as an accusation against the licensee and a hearing held thereon (B. & P. C. 24015).

QUESTION No. 3

What are the powers and duties of the department to initiate investigations by (a) its own personnel and (b) requesting other law enforcement agencies?

OPINION AND ANALYSIS NO. 3

We have already discussed the powers and duties of the department to initiate such investigations. As indicated previously, the enforcement officials of the department and local peace officers and district attorneys have concurrent powers and duties with respect to the enforcement of laws in or about licensed premises. However, we do not believe there is any legally enforceable duty on the part of the department to request the local law enforcement agencies to initiate investigations, nor is there any such duty on the part of the local law enforcement agencies to comply with such a request.

Very truly yours,

RALPH N. KLEPS
Legislative Counsel
By
RAY H. WHITAKER
Deputy

APPENDIX VII

DEPARTMENT OF ALCOHOLIC BEVERAGE CONTROL STANDARDS USED FOR EVALUATING LICENSE APPLICATIONS NEAR SCHOOLS, CHURCHES, HOSPITALS, AND PUBLIC PLAYGROUNDS

SACRAMENTO, CALIFORNIA, March 12, 1956

To: Area Administrators and District Supervisors

From: Russell S. Munro

Re: Guideposts to Be Used in Considering Applications for Premises Located Within the Immediate Vicinity of Churches, Hospitals, Schools and Children's Public Playgrounds

I. Introduction

While the sale of alcoholic beverages is by law a legitimate business, it must be conducted with a due regard for public health, safety, welfare and morals. This requires that special consideration be given to the location of premises licensed to sell alcoholic beverages in the immediate vicinity of churches, hospitals, schools and children's public playgrounds.

Section 23789 of the Alcoholic Beverage Control Act expresses this legislative intent as follows:

> "The department is specifically authorized to refuse the issuance of on-sale retail licenses for premises located within the immediate vicinity of churches, hospitals, schools, and children's public playgrounds."

While the above section authorizes denial only for an on-sale license, this does not preclude the department from making proximity to a school, church, hospital, or playground the basis for denying any other type of license.

Before a license of any type is denied because of "immediate vicinity," however, the department must consider all relevant facts and determine whether the issuance would be inimical to public welfare and morals. In making such determination, the guideposts set forth herein shall serve as general standards. They are not expected to cover all contingencies, and agents are expected to use personal judgment in applying them.

It should be understood that these guideposts apply only to premises which are (a) not currently licensed or (b) increasing its present licensed privilege.

II. Definitions

The following definitions are to be used only in connection with this general order. They are not intended to be applied in the construction of any other statutes, rules, guideposts or other matters administered by the Department of Alcoholic Beverage Control.

A. "*Consideration point*" means any church, hospital, school or children's public playground.

B. "*Premises*" means the building or other facility wherein alcoholic beverages will be stored, sold, or served.

C. "*Church*" means the real property upon which is located an institution, place or building designed and used for the purpose of the assemblage of people at regular and frequent intervals for divine worship. A temporary location may be considered as a church if plans are presented for the construction of a permanent building for that purpose at that location.

D. "*Hospital*" means the real property upon which is located any institution, place or building which maintains and operates organized facilities for the diagnosis, care and treatment of human illness, including convalescence and including care during and after pregnancy, and to which persons may be admitted for overnight stay or longer. It includes sanitarium, nursing home and maternity home (The guideposts set forth herein are not intended to cover the necessity of compliance with Penal Code Section 172.)

E "*School*" means the real property upon which is located any institution, place or building primarily used for the imparting of organized instruction to persons under 21 years of age. It includes both public and private institutions where the primary purpose is instruction, but does not include nursery schools or other institutions which are primarily for the purpose of care rather than instruction. (The

guideposts set forth herein are not intended to cover the necessity of compliance with Penal Code, Sections 172 and 172a.)

F. "*Children's public playground*" means the real property primarily designed and operated as a public place where persons under 21 years of age may engage in physical play, games, sports, or similar activity, and containing facilities for such activity whether there be any building or structure thereon or not.

G. "*Package store*" means a business which is primarily designed and operated to sell alcoholic beverages as its main line of merchandise.

III. Measurement of Distances

A. Airline measurement should be used unless the question of approval or rejection of the application turns upon pedestrian or vehicular traffic, in which case the travel route is the significant measurement factor.

B. Measurement from the consideration point ordinarily should be from the edge of the nearest building; but if the surrounding grounds are regularly used for the purposes of the consideration point, as in the case of a schoolyard or public playground, measurement should be from the edge of the grounds so used.

C. If the sale or consumption of alcoholic beverages is confined within a building, measurement should be from the entrance nearest the consideration point. Otherwise, as in the case of a swimming pool or patio, measure from the portion of the premises where such sale or consumption takes place.

IV. Preparation of 220 Reports

A. With regard to any application for a premises (a) not currently licensed or (b) increasing its present licensed privilege, the investigating agent should attach a sketch or diagram showing the type, location and distance of consideration points within:

(1) 200 feet of an off-sale premises;
(2) 600 feet of an on-sale premises;

provided, however, that the investigating agent shall list any consideration point outside these distances if, in his judgment, the granting of the license may adversely affect the operation of the consideration point.

B. The investigating agent should contact a principal officer of each consideration point within the prescribed radius and ascertain whether or not a protest will be filed and on what basis.

C. After considering all relevant factors, the investigating agent should recommend approval or denial on the basis of his best judgment. If his recommendation is contrary to the guideposts set forth herein, a written explanation should be made.

D. Consideration points need not be listed if the premises is already operating with a license of equal or greater import.

V. On-sale Premises Within 600 Feet

Generally, applications for on-sale premises should be denied if there is a consideration point within 600 feet airline, and one or more of the following factors is present:

A. There is an unobstructed view of the entrance to the premises from the entrance to the consideration point.

B. The usual routes of pedestrian or vehicular travel followed by a substantial number of persons making use of the consideration point will take them past that part of the premises which can be identified as connected with the alcoholic beverage business.

C. The usual routes of pedestrian or vehicular traffic from the premises will take a substantial number of its patrons past the consideration point and disturb persons using it.

D. The premises is located within, or closely adjacent to, an area which is chiefly residential.

E. If the premises have been previously licensed, the past conduct of the licensees has had an adverse effect upon the functioning of the consideration point.

F. Valid protests have been filed based upon an interference with the functioning of the consideration point by the premises.

None of the above shall be grounds for denial if both the investigating agent and the person(s) in charge of the consideration point declare in writing that the licensing of the premises will not have an adverse effect upon the functioning of the consideration point.

VI. On-sale Premises Over 600 Feet

Generally, applications for on-sale premises where the consideration point is over 600 feet airline should be denied only if both the investigating agent and the person(s) in charge of the consideration point declare in writing that the licensing of the premises will have an adverse effect upon the functioning of the consideration point.

VII. Off-sale Premises Within 200 Feet

Generally, applications for new package-store premises located within 200 feet of a consideration point should be denied if there is substantial reason to believe that the granting of the license will interfere with the functioning of the consideration point. Such denial may be based on the investigating agent's recommendation or upon a valid protest.

VIII. Off-sale Premises Over 200 Feet

Generally, applications for new package-store premises located more than 200 feet from any consideration point shall be denied only if both the investigating agent and the person(s) in charge of the consideration point declare in writing that the licensing of the premises will have an adverse effect upon the functioning of the consideration point.

IX. Grocery and Drug Stores

Some off-sale licensees, such as grocery and drug stores, sell alcoholic beverages as a sideline incidental to the sale of their main lines of merchandise. Oftentimes, there is no exterior advertising of alcoholic beverages and very little interior advertising. This type of business would appear to be less objectionable in the vicinity of a consideration point than a package store. Generally, therefore, applications for drug, grocery, and similar stores shall be denied only if both the investigating agent and the person(s) in charge of the consideration point declare in writing that the licensing of the premises will have an adverse effect upon the functioning of the consideration point.

APPENDIX VIII

COMPARISON OF LIMITED LICENSES AND POPULATION, BY COUNTIES, 1956

VIII-A. ON-SALE LICENSES

Counties	On-sale licenses at 4/1/56			Estimated population 7/1/56 (in thousands)	Licenses per 1,000 population	
	General	Beer and wine	Total (1 and 2)		Total (3 ÷ 4)	On-sale general (1 ÷ 4)
	(1)	(2)	(3)	(4)	(5)	(6)
Sierra	12	3	15	2 3	6 52	5 22
Mono	12	----------	12	2 1	5 71	5 71
Amador	38	9	47	8 9	5 28	4.27
Plumas	47	7	54	11 8	4 58	3 98
Calaveras	28	11	39	9 5	4 11	2 95
Lake	31	9	40	11 0	3 64	2 82
Nevada	56	8	64	18 2	3 52	3.08
Tuolumne	42	8	50	15 3	3 27	2.75
Mariposa	11	2	13	4 1	3.17	2 68
Modoc	25	1	26	9 7	2.68	2 58
Yuba	46	21	67	27 6	2 43	1 67
Colusa	22	5	27	11 2	2 41	1 96
Siskiyou	62	10	72	32.1	2 24	1 93
Sonoma	179	115	294	131 5	2.24	1.36
El Dorado	24	13	37	17.1	2.16	1.40
San Francisco	1,359	290	1,649	766 5	2 15	1 77
Santa Cruz	110	35	145	67.7	2.14	1 62
Lassen	25	9	34	17.0	2.00	1 47
San Benito	26	3	29	15 1	1 92	1 72
Trinity	7	5	12	6 5	1 85	1 08
Tehama	17	20	37	20 2	1 83	84
Placer	69	15	84	47 2	1 78	1 46
Mendocino	69	28	97	55 9	1 74	1.23
Inyo	18	3	21	12 3	1.71	1 46
San Luis Obispo	74	24	98	60 3	1 63	1 23
Napa	63	24	87	57 6	1 51	1.09
San Joaquin	203	147	350	232 1	1 51	.87
Monterey	139	83	222	148 9	1 49	93
Shasta	55	12	67	45 0	1 49	1.22
Glenn	18	5	23	16 2	1 42	1 11
Yolo	39	35	74	52.7	1 40	.74
Humboldt	97	31	128	98.8	1 30	.98
Merced	64	35	99	77 5	1 28	.83
Solano	94	44	138	109 1	1 26	86
Kings	36	22	58	45 9	1 26	.78
Imperial	50	34	84	67 9	1 24	74
Marin	119	22	141	115.2	1 22	1 03
Butte	50	32	82	69 3	1.18	72
Santa Barbara	96	35	131	111 1	1.18	86
Madera	18	26	44	37 9	1 16	47
Sacramento	304	137	441	393 1	1 12	.77
Fresno	200	156	356	324 2	1 10	.62
Alameda	587	306	893	851 4	1 05	.70
Contra Costa	223	130	353	350 3	1 01	64
San Mateo	263	67	330	360 0	92	73
Sutter	16	10	26	28 3	92	57
Tulare	77	54	131	144 1	91	53
Del Norte	12	3	15	17 7	85	68
Stanislaus	82	39	121	144 0	84	57
Kern	154	60	214	262 9	81	59
Riverside	70	89	159	215 5	.74	32
San Bernardino	129	156	285	386 8	74	33
Santa Clara	216	122	338	461.7	.73	47
Alpine	1	1	2	3	.67	33
San Diego	349	146	495	735 2	67	.47
Ventura	55	40	95	147.1	.65	37
Los Angeles	2,656	518	3,174	5,366.4	.59	49
Orange	129	68	197	404 7	.49	32
State-wide	9,073	3,343	12,416	13,260 0	Av. .94	Av. .68

SOURCE: Columns 1, 2 and 3 per Department of Alcoholic Beverage Control Mimeo List; Column 4 per Finance Booklet dated July, 1956.

VIII-B. OFF-SALE LICENSES

Counties	Off-sale licenses at 4/1/56			Estimated population 7/1/56 (in thousands)	Licenses per 1,000 population	
	General	Beer and wine	Total (1 and 2)		Total (3 – 4)	Off-sale general (1 – 4)
	(1)	(2)	(3)	(4)	(5)	(6)
Mono	16	13	29	2 1	13 81	7 62
Alpine	1	2	3	3	10 00	33
Sierra	10	8	18	2 3	7 83	4 35
Mariposa	12	19	31	4 1	7 56	2.93
Lake	26	43	69	11 0	6 27	2 36
Plumas	43	23	66	11 8	5 59	3 64
Trinity	8	21	29	6 5	4 46	1 23
Inyo	17	33	50	12 3	4 07	1 38
El Dorado	24	44	68	17 1	3 98	1.40
Tuolumne	27	31	58	15 3	3 79	1 76
Colusa	18	23	41	11 2	3 66	1.61
Calaveras	20	13	33	9 5	3 47	2 11
Siskiyou	67	41	108	32 1	3 36	2 09
Yuba	35	56	91	27 6	3 30	1 27
Shasta	41	106	147	45.0	3 27	91
Modoc	27	3	30	9 7	3 09	2 78
Placer	63	69	132	47 2	2 80	1 33
Imperial	50	130	180	67 9	2 65	74
Nevada	30	18	48	18 2	2 64	1 65
Tehama	21	30	51	20 2	2 52	1 04
Glenn	18	20	38	16 2	2 35	1 11
Amador	16	4	20	8 9	2 25	1 80
San Francisco	1,335	351	1,686	766 5	2 20	1 74
San Benito	13	20	33	15 1	2 19	.86
San Luis Obispo	52	78	130	60 3	2 16	86
Santa Cruz	74	70	144	67.7	2 13	1 09
Riverside	87	359	446	215 5	2 07	40
Santa Barbara	112	118	230	111.1	2 07	1 01
Lassen	21	14	35	17 0	2 06	1.24
Mendocino	50	65	115	55 9	2 06	.89
Merced	39	114	153	77 5	1 97	50
Kings	31	58	89	45 9	1 94	68
Sonoma	126	116	242	131 5	1 84	96
Madera	20	49	69	37 9	1.82	53
Fresno	217	351	568	324 2	1 75	.67
Del Norte	14	17	31	17 7	1 75	.79
Monterey	117	143	260	148 9	1.75	.79
San Bernardino	173	498	671	386 8	1 73	45
Butte	51	67	118	69 3	1 70	.74
Kern	147	299	446	262 9	1.70	56
Solano	81	104	185	109 1	1 70	74
Tulare	82	162	244	144 1	1 69	57
San Joaquin	158	214	372	232 1	1 60	.68
Yolo	28	53	81	52 7	1 54	.53
Humboldt	83	65	148	98 8	1 50	84
Sutter	15	26	41	28 3	1 45	.53
Napa	37	46	83	57 6	1 44	64
Ventura	60	138	198	147 1	1 35	41
San Diego	334	627	961	735 2	1 31	45
Sacramento	244	257	501	393 1	1 27	62
Alameda	647	406	1,053	851 4	1 24	76
Los Angeles	3,561	2,658	6,219	5,366.4	1 16	.66
Marin	100	33	133	115 2	1 15	87
Stanislaus	63	98	161	144 0	1 12	44
Contra Costa	141	211	352	350 3	1 00	40
Orange	183	197	380	404 7	94	45
San Mateo	144	168	312	360 0	87	40
Santa Clara	169	234	403	461 7	87	37
State-wide	9,399	9,234	18,633	13,260.0	Av. 1 41	Av. 71

SOURCE: Columns 1, 2 and 3 per Department of Alcoholic Beverage Control Mimeo List, Column 4 per Finance Booklet dated July, 1956.

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STATE RETURNS FROM OIL AND GAS IN TIDE AND SUBMERGED LANDS

REPORT OF THE SUBCOMMITTEE ON CONSERVATION AND DEVELOPMENT OF HYDROCARBON PRODUCTS ON STATE LANDS

A Subcommittee of the

ASSEMBLY INTERIM COMMITTEE ON CONSERVATION, PLANNING, AND PUBLIC WORKS

House Resolution No. 239, 1955

MEMBERS OF SUBCOMMITTEE

ALLEN MILLER, *Chairman*

BRUCE F. ALLEN
JACK A. BEAVER
JACK SCHRADE
JESSE M. UNRUH

January, 1957

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L. H. LINCOLN
Speaker

CHARLES J. CONRAD
Speaker pro Tempore

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Chief Clerk of the Assembly

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COMMITTEE LETTER OF TRANSMITTAL

HON. L. H. LINCOLN
Speaker of the Assembly; and Members of the Assembly
Assembly Chamber, Sacramento, California

GENTLEMEN: Herewith is submitted the report of the Subcommittee on Conservation and Development of Hydrocarbon Products on State Lands of the Assembly Interim Commitee on Conservation, Planning and Public Works.

In the short interim available this subcommittee has reviewed and compiled an important body of knowledge relating to conservation practices in this State. The important work of this subcommittee in protecting the state interests in its tideland oil resources deserves the careful consideration of the Legislature and merits a continuation of its work during the coming interim period.

Sincerely,

FRANCIS C. LINDSAY

SUBCOMMITTEE LETTER OF TRANSMITTAL

January 15, 1957

HON. FRANCIS C. LINDSAY, *Chairman*
Assembly Interim Committee on Conservation, Planning, and Public Works
California Legislature,
State Capitol, Sacramento, California

DEAR MR. LINDSAY: Pursuant to your directive and in conformance with the provisions of House Resolution No. 239 of the 1955 General Session, the Subcommittee to Investigate Conservation and Development of Hydrocarbon Products on State Lands herewith submits its report.

The subcommittee considers the matter of oil leasing and state participation in the revenues to be derived from oil and gas in state lands to be one of vital interest and importance to the people of California and to the future of the State. It is the subcommittee's firm conclusion that all of the people of the State should benefit to the greatest possible extent through state participation in revenues to be derived therefrom. The subcommittee further believes that it is more logical and palatable to support, insofar as is possible, the tremendous services provided by the State out of revenues from property owned by the State, rather than through increased and additional taxes to the exclusion of revenues that might otherwise be obtained from natural resources within these lands.

The subcommittee sincerely invites you, the members of the Interim Committee on Conservation, Planning, and Public Works, the Members of the Legislature and the public to join with this subcommittee in sponsoring and enacting the legislation proposed by the subcommittee to the end that revenues from these natural resources be used for the benefit of all the public.

The subcommittee wishes to express its appreciation for assistance given it throughout its study by the staff of the State Lands Commission, the Legislative Counsel's Office, the Legislative Auditor's Office, and especially to Harris E. Hogan of the Legislative Auditor's staff for his valuable assistance in research and in the preparation of this report.

Respectfully submitted.

(Signed) ALLEN MILLER, Chairman
BRUCE ALLEN
JACK BEAVER
JACK SCHRADE
JESSE UNRUH

STATE RETURNS FROM OIL AND GAS IN TIDE AND SUBMERGED LANDS

INTRODUCTION

The people of California stand to lose billions of dollars in oil royalties from state tide and submerged lands unless a realistic program is adopted for the development of these natural resources.

It has been estimated that the tide and submerged lands along California's coast contain at least four billion barrels of oil plus a tremendous quantity of natural gas. The oil alone, at an average price of $2.50 per barrel on today's market, represents a value of $10,000,000,000.

Under existing law (Division 6, Public Resources Code, commonly called the Cunningham-Shell Act of 1955) the people of California, who own this oil as it now exists, will receive only one-eighth of its value (approximately $1,250,000,000) as it is brought to the surface, plus an indeterminate cash bonus depending upon several economic factors plus the generosity of the oil interests that will develop the oil fields. Whether the people of California should receive a more significant share of this bonanza is a matter of great consequence in the financing of services required by the rapid growth of the State. This matter must be dealt with realistically and immediately and should be resolved in the interest of all the people.

Under existing law it is extremely unlikely, if not impossible, that the State's future income from tidelands oil will equal the 26 percent royalty which the State has experienced under a variety of leasing conditions dating back to 1921. It is even more unreal to suppose that the State's average royalty of 36 percent between 1934 and 1954 will be approximated under present requirements of law.

This unfavorable circumstance derives from the fact that existing law requires future developments of the tidelands to be made under a land classification plan by which royalties to be paid on oil produced will be limited to a flat 12½ percent unless a lease is made for the purpose of extending an existing oil field. As a practical matter, this limitation will apply to virtually all state tidelands to be leased in the future, thereby holding state royalties to a flat 12½ percent. Although the law permits a sliding scale starting at 16⅔ percent, this is applicable only where the State's tidelands overlay an existing oil field

It seems only reasonable that the people of the State should share in the State's natural resources in a way that will give them a greater portion of lucrative production rather than a flat percentage without regard to that production. Therefore, there can be little question but that the people and the State's interests will be better protected and served by the establishment of a sliding scale royalty than by a continuation of the present fixed royalty.

If no more could be achieved by the sliding scale royalty approach than to equal the State's long term royalty return figure of 26 percent,

the resulting $2,600,000,000 (based on current estimates of reserves and market prices) would build the entire Feather River Project, currently estimated to cost approximately $1,500,000,000, and, in addition, would provide a sum equivalent to the amount estimated to be required to build the additional school facilities needed in California in the next four years. If the royalty return results of 36 percent achieved for the State under sliding scale royalties since 1934 could be continued, an additional $1,000,000,000 of revenue would be available to meet the increasing financial problems of the State. With the annual state budget at the $2,000,000,000 mark, the question of paying for the State's services to its citizens requires that every means for increasing revenues without adding to the tax burden must be explored. Certainly the use of revenues from state-owned natural resources would be more logical and more palatable than increasing direct taxes upon the public.

It was with a full awareness of the implications of these and other related problems that this committee undertook its work. It is within this frame of reference that it submits this report The guiding principle of this committee in recommending a state policy for oil production from tide and submerged lands has been that the State's interest in minerals in the tidelands is a valuable asset which should be disposed of in such manner as to secure the maximum return possible without limiting or jeopardizing the ligitimate opportunity of private citizens to share in the wealth produced in accordance with their contribution to its production.

The committee held three public hearings on the subject of the conservation and development of hydrocarbon products from state lands. Testimony was heard and evidence received from qualified persons in the oil industry who are concerned with the mineralogical development of the State's tide and submerged lands, and from state officials and employees who are charged with the responsibility for such development. The essential question raised and considered by the committee was: How can the oil and gas potential of the state-owned tide and submerged lands be developed so as to produce the greatest amount of revenue for the State and also best protect the interests of the people of California?

CONCLUSIONS

As a result of its hearings and deliberations, the committee reached the following conclusions:

Leasing

1. It is in the State's interest to encourage the most rapid discovery and development of the mineral resources of tide and submerged lands consistent with the maximum return to the State.
2. The State occupies the position of landowner and preferably should permit the development of its mineral resources by private enterprise through mineral leases, if a fair and reasonable return to the State can be insured by that method.
3. The present law governing the leasing of state tide and submerged lands does not permit a fair return to the people of California because of the following:

a. Lands offered for mineral leasing must be classified as being either within or without the known geologic structure of a producing oil or gas field
b. Lands classified as being without the known geologic structure of a producing oil or gas field must be leased at a flat rate royalty of not more than 12½ percent and a cash bonus.
c. Currently virtually all tide and submerged lands within the known geologic structure of a producing oil and gas field are under lease, consequently future offerings, within the foreseeable future will usually have to be at 12½ percent royalty and a cash bonus.
d. Cash bonuses would have to be three or four times the largest bid to date to approximate the average royalty received by the State from the tidelands already under lease.

4. The State Lands Commission's experience, from 1929 to the effective date of the Cunningham-Shell Act, with leasing tide and submerged land for oil or gas production is limited to the leasing of land which was in fact an extension of a producing oil and gas field.

5. The present principal offerings of leases, under the Cunningham-Shell Act, are of lands not within the known geologic structure of a producing oil or gas field, and consequently are offerings concerning which the State Lands Commission, as presently constituted, has not had previous direct experience.

6. The only way that the State can be sure of a fair and reasonable participation in any extremely rich oil strikes which may be made in the tidelands is by incorporating into its leasing procedures a provision for sliding scale royalties on both unproven lands and extensions of existing production.

7 Since the decision was made by the Legislature in 1955 to permit the development of the tide and submerged lands off the California coast for oil and gas production, and since the oil industry has evidenced its immediate interest in doing so by asking the State Lands Commission to lease large acreages of currently nonproductive submerged lands, it is imperative that a firm policy for such leasing be established at the earliest possible time so as to permit such development to proceed in an orderly manner under stabilized procedures, and *with maximum returns* to the people of California.

Exploration

1. Modern oil development techniques permit and require the extensive use of geologic and geophysical exploration prior to the commencement of actual drilling for oil production. Such exploration materially reduces the probabilities of unproductive drilling.

2. Such exploration on state lands can provide potential bidders for state leases of such land with knowledge as to the potential mineralogical value of such lands, which knowledge under present law is not given to the State Lands Commission.

3. Without such information, the State Lands Commission is handicapped in determining whether bids made for state leases reasonably reflect the estimated mineral value of the lands offered for lease.
4. Exploration in state tide and submerged lands under present law is subject to the rules and regulations prescribed by the State Lands Commission.
5. The present regulation of such explorations by the State Lands Commission requires the issuance of a permit for all geophysical exploration and for geological explorations by core drilling to depths in excess of 500 feet below the floor of the ocean.
6. The State Lands Commission makes no inspection or investigation of core drilling activities currently being done without permit.
7. It cannot be determined at this time whether core drilling not done under permit has in fact been limited to depths of less than 500 feet. Under these circumstances, it is possible that oil and gas pools or reservoirs have actually been tapped, with the consequent positive assurance to the explorer that oil or gas is available in the tidelands at a certain location.
8. Permanent damage to an oil or gas reservoir lying under tide or submerged lands could result from careless or improper core drilling.

Maximum Recovery Through Unitization

1. There are techniques of oil production available, commonly called secondary recovery methods, which can, when applied in appropriate circumstances, result in substantially increasing the total quantity of oil recoverable from a pool or reservoir.
2. The State Lands Commission should have the authority to require the use of such methods in the production of any pool or reservoir in which the State has a majority interest whenever there is evidence that waste exists, and be empowered to enter into cooperative agreements for the application of such methods to any pool or reservoir in which the State has any interest.
3. While the voters of the State overwhelmingly rejected the proposed "oil conservation" initiative measure on the ballot at the last general election (Proposition 4), it seems clear that the idea of conservation and prevention of waste of irreplaceable natural resources should be fostered; that it is particularly appropriate in connection with public lands; and that the State Government's trusteeship position with regard to such lands will not permit the State to await the application of any general oil conservation measure which would be applicable to both public and private holdings.

RECOMMENDATIONS

Three proposed bills are attached hereto, Assembly Bill No. 47 relating to oil and gas leases of state lands, Assembly Bill No. 80 relating to the State Lands Commission, and Assembly Bill No. 36 relating

to unit operation of oil and gas pools. These bills are designed to accomplish the committee's recommendations for amendment of the present law to provide:

Leasing

1. For the deletion of the requirement that lands be classified as being within or without a known geologic structure of a producing oil and gas field as a prerequisite to leasing such land for oil and gas development (Assembly Bill No 47).
2. That leasing of state tide and submerged lands shall be on a sliding scale royalty basis to be specified by the State Lands Commission with the minimum royalty to be not less than 12½ percent. Awarding of a lease shall be on the basis of the highest cash bonus bid (Assembly Bill No. 47).

Exploration

3. That all exploration of the tide or submerged lands for geologic or geophysical data related to locating potential deposits of oil or gas shall be by permit from the State Lands Commission subject to such rules and regulations as it may deem appropriate, and that any and all basic data developed as a result of such exploration be given to the commission on a confidential basis (Assembly Bill No. 80).

Maximum Recovery Through Unitization

4. That a law be enacted requiring that secondary recovery methods under a unitized operating plan to prevent waste be applied in any oil pool or reservoir in which the State and public agencies of the State have a majority interest and where waste can be prevented and returns to the State will be increased by the use of such methods (Assembly Bill No. 36).
5. That the State Lands Commission be empowered to insure the application of secondary recovery methods to any oil pool or reservoir in which the State and public agencies of the State have less than a majority interest, through cooperative agreement with other interests (Assembly Bill No. 36).

The committee further recommends that the State Lands Commission implement its authority to exercise discretion in determining leasing policy by:

1. Establishing an adequate inspectional system to insure protection against improper explorations and to assure that it receives the basic exploratory data necessary to provide a basis for determining reasonable valuations of mineral deposits in state tide and submerged lands.
2 Establishing an adequate staff to evaluate the exploratory information received by it, and that such evaluations be utilized as the basis for proposing an appropriate sliding scale royalty for lands offered for lease, and for evaluating the adequacy or inadequacy of cash bonus bids.

3. Undertaking its own exploration activities in the event exploratory data made available to the commission by private exploration is not adequate to evaluate properly mineral resources and bids for mineral leases in the tidelands.

HISTORICAL DEVELOPMENT

Historically, the State has been concerned with two kinds of leases, developmental and protective. In the first instance, the State permitted exploratory drilling under lease for the purpose of finding new oil fields. Under the protective type of lease, the State only permitted drilling for the purpose of protecting state lands, including tide and submerged lands, from being drained of oil and gas deposits by wells drilled by private interests on adjacent lands.

The State first took jurisdiction over the development of minerals from state-owned lands in 1921, and leases were made prior to 1929 which resulted in the development of the Elwood, Rincon and Capitan fields, as well as an expansion of the Summerland field. Royalties under these leases were fixed by statute at 5 percent In addition, prospecting permits were granted which gave the holder a preferential right to a lease upon the land if oil or gas were discovered. Following 1929, and until the effective date of the Cunningham-Shell Act, leases were made solely to protect tide and submerged lands from being drained of mineral deposits by adjacent development. Thus, it is only since the effective date of that act, September 7, 1955, that the State has again been in a position to offer developmental leases (as distinguished from protective leases).

Prior to the Cunningham-Shell Act, it was a necessary condition for the issuance of a lease to show that drainage from state lands would occur as the result of operations on adjacent lands. Consequently it was necessary to establish the existence of a common pool or reservoir underlying both state-owned and adjacent lands. This could only be done by examination of geological and geophysical data resulting from both exploratory and developmental work done in the area. These data were readily available to the State Lands Commission for this purpose through the Division of Oil and Gas of the Department of Natural Resources and from potential bidders for any proposed lease, who would, under these conditions, make the exploratory geophysical and geological data known to the State Lands Commission. Leases made under these conditions were inevitably leases of "proven" lands and the royalty provisions could be and were based on a minimum percentage of production ($12\frac{1}{2}$ percent from 1938 to 1942 and $16\frac{2}{3}$ percent from 1942 to 1955), with an increasing sliding scale of royalty relating to increased production from the wells. The biddable factor for leases of this nature was the scale of royalty with a specified minimum and leases were granted to the highest royalty bidder.

In May, 1955, the Lands Commission issued three leases in which a sliding scale royalty with minimum and maximum percentages was specified but with the biddable factor being a cash bonus payable by the successful bidder in advance.

This latter method of bidding for leases of state lands subject to drainage was incorporated into the Cunningham-Shell Act. The specific provision was for a minimum royalty of $16\frac{2}{3}$ percent with a maximum

(on a sliding scale) to be specified in the offer to lease, and the lease to be awarded on the basis of the highest cash bonus. With regard to lands not subject to drainage, that is, "not within the known geologic structure of a producing oil or gas field," the act prescribes a flat rate royalty of 12½ percent of production and the Lands Commission cannot ask for more than that amount of royalty. In this situation the lease is awarded on the basis of the highest cash bonus.

LEASING PROBLEM

Inasmuch as virtually all situations wherein drainage of tide and submerged lands under the State Lands Commission's jurisdiction is currently possible are already under lease, the State Lands Commission is faced with the very real problem of not being able to classify any tide and submerged land so as to qualify it for leasing under a sliding scale royalty. In other words, the maximum royalty which the State can expect to receive for any leases of tide or submerged lands is 12½ percent unless and until new fields are discovered in the tidelands and then only if these extend beyond the limits of the lease on which they were discovered.

This problem is emphasized by the fact that prior to the passage of the Cunningham-Shell Act the commission was voluntarily supplied with the geophysical and geologic data resulting from exploration activity necessary for it to determine that land offered for lease was within the known geologic structure of a producing oil and gas field, whereas with the passage of the act, oil companies with such information refused to give it to the Lands Commission. With the introduction of the requirement in the Cunningham-Shell Act that lands be classified as being within or without the known geologic structure of a producing oil or gas field, it was apparent to the oil industry that making such exploratory information available to the commission might enable it to classify land within a known structure of a producing field which otherwise it would not so classify, and the industry would have to bid on such land on a sliding scale royalty with a minimum of 16⅔ percent instead of a flat rate royalty of 12½ percent.

Such a situation is manifestly unfair to the State. Government should not be required to deal at arm's length with its own citizens to its own disadvantage. If the oil industry will not frankly and fairly enable the State to evaluate the worth of its tidelands oil holdings through the submission of exploratory data so that the State will be in at least as good a position to arrive at fair and reasonable lease terms as the industry, then the State will have little alternative but to develop such data on its own behalf. This latter course will result in tremendous duplication of effort and the unnecessary expenditure of large sums of money.

Under the present law exploratory data of this nature would only be useful to the commission if it showed that an area offered for lease was an extension of a producing field, thus enabling the commission to classify the land so as to require a sliding scale royalty rather than the flat 12½ percent. It might provide a basis for the rejection of any and all bids on the grounds that cash bonuses were not high enough, but in this event it is probable that the tidelands would simply remain undeveloped.

The Division of State Lands sought legal advice as to the commission's duties and responsibilities with regard to classifying land as being within or without the known geologic structure of a producing oil or gas field in cases where "definite information is not available to the commission," and in an opinion rendered April 6, 1956, the Attorney General advised as follows:

> "A determination of this nature cannot be grounded upon mere conjecture or surmise. You state that situations have arisen where 'definite information' is not available to the commission. The term 'definite' is relative and is a matter of degree, the extent of which depends upon the circumstances of a situation. If definite information were understood to mean positive assurance, such information could only be obtained by the actual drilling of an oil or gas well, and even then the knowledge gained might be subject to uncertainties as to the extent and character of the geologic structure. Whether the structure, if one were found to exist, would constitute a part of 'the known geologic structure of a producing oil or gas field' might still remain in doubt. This is what is required to be determined by strict construction of the language. But it is our belief that it was not the intent of the Legislature that the determination need be based upon exact or indisputable knowledge. The maximum that could be gained even through the expenditure of millions by the State for exploratory surveys would not furnish such knowledge.
>
> "However, a determination must have a reasonable degree of factual basis for its support. Our information is that core samples from drillings and records of geophysical explorations would constitute the most reliable data. In the absence of such information, it is possible that opinion evidence of experts in the fields of geology and geophysics might afford a reasonable basis upon which a determination might be made."

Subsequently at the suggestion of this committee, the Lands Commission incorporated into its exploration permits a provision to the effect:

> "The commission reserves the right to receive and upon demand by the commission the permittee shall furnish copies of all exploration results, logs and records, for the confidential use of the State Lands Commission for the sole purpose of its determination as to whether the areas or any portion thereof contemplated within the permit lie within a known geologic structure of a producing oil or gas field."

Since the inclusion of this provision the Lands Commission has been receiving exploration data of this kind. Whether such data could be used by the commission for the purpose of evaluating bids on specific lease offerings is an open question in view of the restrictive language of the permit. The commission is continuing to include this requirement in exploration permits. The classification of land as not within the known geologic structure of a producing oil and gas field has heretofore been dependent on expert opinions to the effect that the explora-

tion of known data of existing producing fields would not reasonably extend to the areas offered for lease.. Whether sufficient data will become available through this permit requirement to regularly enable the Lands Commission to classify lands on the basis of such data is not now known, and seems doubtful.

LIMITING FACTORS OF PRESENT LAW

The net results of the requirements of the present law, coupled with the probability that the great majority of the tide and submerged lands available for leasing are not subject to drainage by existing developments, are that the State Lands Commission presently can only lease land for oil or gas development as exploratory land at the fixed royalty rate of 12½ percent, and must depend on the bonus factor to achieve for the State any additional participation in the benefits of production of oil or gas from its lands, and it must offer such leases in the face of the tremendous amount of exploratory knowledge which has been gained by potential lessees through core drilling since 1948 and through seismic operations going back in one instance to 1944.

The essential difficulty with the Cunningham-Shell Act leasing provisions is that they preclude the State from participating proportionately in any exceptionally valuable oil strikes that may be made in the tide and submerged land, and force the State to speculate that it will be adequately compensated for its interest in any such strike by reliance on the relative size of cash bonuses, when in fact, the size of such cash bonuses may be conditioned as much by the relative competitive position of a particular oil operator, or his access to oil imports, or to the effect of the tax structure on his allied operations at the particular time of bidding, or to a desire to freeze out competition as it is on the facts concerning the potentiality for oil development of the offered lease.

While it is true that all potential bidders for a state tide and submerged lands lease have not necessarily explored the particular area offered to the same degree of thoroughness and, even if they had, might interpret the exploratory data differently, the fact remains that some or all such potential bidders are better informed as to the existence of geologic structures capable of containing oil, and consequently of the possibility of producing oil from a lease, than is the Lands Commission. Thus, the commission can only evaluate the biddable factor of cash bonus in relative terms as between different bidders, whereas the bidders may evaluate their bids at the very least in the positive terms of known geologic structures, and may even be able, as a result of core drilling, to know that in the absence of an unusual geologic feature, oil bearing strata should lie in the structure.

While the knowledge gained from such exploration would undoubtedly influence bidders to extend themselves in offering a cash bonus bid, the State Lands Commission, without such information, would not be able to tell whether the potential of the area offered for lease was being adequately met by the cash bonus bid. It would have no basis in fact for exercising its discretion to reject any and all bids as not being commensurate with the actual value of the offered lease.

LEASING EXPERIENCE

California's primary recent experience in the field of offshore leasing has been with three parcels of land leased in August, 1955, at the east end of the Huntington Beach field. These lands were subject to drainage and, under its then existing authority to specify bid conditions, the Lands Commission offered these leases at a specified sliding scale royalty with a minimum of 16⅔ percent and a maximum of 60 percent, the later being effective at a daily production rate of 450 barrels. The biddable element was the cash bonus, and resulted in a cash bonus for one of the parcels of approximately $2,400 per acre. This is probably the record for such bonus bidding, the only comparable bonus figure being $2,076 per acre for a lease off the Louisiana coast. Admittedly, this California bid was for acreage "within the known limits of a producing oil and gas field." However, it is safe to assume that the Louisiana bid referred to was also for acreage where the potential for production was exceedingly good.

Regardless of what factors may have impelled this record breaking cash bonus bid, had it been coupled with a flat rate royalty, the State of California would have had no assurance of proportionate participation if good production resulted. If the flat rate royalty had been 12½ percent, as is contemplated under present law, the cash bonus bid would have had to be three to four times larger than it was to have assured the State of a return equivalent to its long term average royalty of 36 percent. On the other hand, a sliding scale royalty is not unfair to lessee because if only minimal production results, only the minimum royalty will have to be paid out of production.

A more recent case in point concerns the leasing on January 10, 1957, of 5,500 acres of tide and submerged lands lying off Summerland in Santa Barbara County, to a combine of Standard and Humble Oil Companies. This lease was awarded on the basis of a flat 12½ percent royalty and cash bonus as wildcat acreage. Three bonus bids had been received as follows:

Company	*Cash bonus offer*
Standard-Humble	$7,250,606.95
Monterey-Texas-Newmont	5,667,777.77
Continental-Union-Shell-Superior	655,310.00

The Standard-Humble bid was an average of $1,318.29 per acre, which initially may seem to be a high figure for unproven land. Several factors, however, deserve consideration:

1. Bids running to a little over $2,000 per acre have been made for unproven land off the coast of Louisiana.
2. This offering was classified as unproven by the Lands Commission on the basis of an opinion by a geologic expert. Eight different permittees have been granted permits for geologic exploration by core holing which included this offering. Of these, four are known to have conducted such explorations prior to the submission of bids. Following is the record of core hole exploration work done by oil companies under permit on this particular acreage:

Company	*No. of core holes*	*Dates completed*
Richfield Oil Company	2	November 27, 1956 December 19, 1956
Standard Oil Company of Calif.	3	November 1, 1956 November 25, 1956 December 8, 1956
The Texas Company	2	September 30, 1956 November 16, 1956
Humble Oil Company	5	November 3, 1956 November 10, 1956 November 20, 1956 November 28, 1956 December 9, 1956

In addition, numerous permits for geophysical (seismic) exploration which included this acreage have been operative over a number of years, and no record at all is available of core drilling which might have been conducted without permit, ostensibly to less than 500-foot depths below the ocean floor. While the Lands Commission had some of the data developed by these explorations and some additional data in the process of being made available to it, there is a question whether the data could be used for the purpose of evaluating the cash bonus bid in terms of oil potential, and in fact the data was not so used.

3. The wide difference between the high and low bids, ($6,595,296.95) would indicate either a very significant difference in the knowledge of oil potential for the 5,500 acres or else a tremendous difference in ability to pay a cash bonus at the particular time of this offering. The reasons for this wide range of cash bonus offers is, of course, not known. However, it has been speculated both by persons in the oil business and others that the following factors may have influenced the size of the bids:
   a. Peculiar knowledge possessed by the various bidders as a result of exploration.
   b. Substantial available cash for bonus bidding as a result of the temporary and unexpected cessation of bidding activity off the Gulf coast during a portion of this last year.
   c. A desire on the part of major companies in the oil industry to impress the State with the substantial size of the initial bonus bids under the existing Cunningham-Shell Act leasing provisions.
4. To date the State's experience with leasing tidelands under a sliding scale royalty has indicated that an average long-range royalty return of 36 percent would result. If these lands which were leased on sliding-scale royalties had been offered for lease on a fixed royalty of 12½ percent with cash bonuses, the cash bonuses would have had to approximate three or four times more per acre than the largest single cash bonus ever bid to result in a comparable revenue figure to the State. Thus, if the 5,500-acre Standard-Humble lease proves on the average to be as productive as prior state leases on a sliding-scale royalty basis, the cash bonus would have to be from 5 to 6½ times larger, or might

more appropriately be in the range of $36,250,000 to $47,125,000, rather than the $7,250,606.95 actually bid.* Admittedly, the sliding-scale royalty leases on which this estimate is based were leases of lands subject to drainage by adjacent oil development. However, it seems reasonable to assume that some of the tide and submerged lands to be offered as unproven lands will, in the future, be as productive as presently existing state leases. It may well be that this recent lease to Standard-Humble may be one of these. However, under the present system, the State Lands Commission can never be even reasonably sure in advance that this will or will not be the case.

It was a realization of the fact that the State Lands Commission, under the Cunningham-Shell Act, could not rely on competitive cash-bonus bidding and a fixed royalty of 12½ percent to insure a reasonable return to the State which prompted this committee to recommend to the Lands Commission by letter, dated May 17, 1956, that no leases of unproven tidelands be made until the Legislature had an opportunity to clarify the present law. Despite this request, the Lands Commission has proceeded to offer various parcels of land for lease, and has issued the Standard-Humble lease referred to above. Original notice of intention to seek bids on this parcel was given on August 15, 1956. The bids were received on December 28, 1956, and the lease awarded 13 days later on January 10, 1957.

On their face, high cash bonus bids appear attractive because they provide a large and immediate windfall to the State. However, the following factors should be considered:

1. The record highs are made where bidders are quite sure of production. It seems improbable that California will secure high bonus bids initially on its offerings of unproven tide and submerged lands.
2. There does not appear to be any correlation between the size or kind of royalty rate specified and the cash bonus bid where the possibility of production is good.
3. Considerably higher bonuses than have been bid to date will have to be forthcoming if returns from individual leases made under the present law are to approach the long-term royalty returns experienced by California.

* This estimate is based on information provided by the staff of the State Lands Commission as follows: The long term royalty return to the State on sliding scale royalty leases now in existence is 36 percent. On flat rate royalty with cash bonuses leases it would be necessary for the cash bonus to be approximately three to four times larger than the highest cash bonus ever bid to return an amount of revenue equal to the 36 percent referred to above. Two thousand two hundred dollars per acre is approximately the highest cash bonus ever bid in conjunction with a fixed royalty such as is now provided for in the Cunningham-Shell Act. The calculation of these estimates therefore is as follows: The cash bonus bid necessary to equal the State's long-term royalty experience would have to be from $6,600 to $8,800 per acre (three or four times $2,200). The price per acre, bid on the Humble-Standard lease, would have to be 5 to 6⅔ times the $1,318 per acre actually bid to equal the State's long-term royalty experience ($6,600 ÷ $1,318 = 5 and $8,800 ÷ $1,318 = 6.68 rounded to 6.5 for convenience of expression). Therefore, the cash bonus bid necessary for the Standard-Humble lease to equal the State's long-term royalty experience would have to be from $36,250,000 to $47,125,000 (5 × $7,250,000 and 6.5 × $7,250,000, the bid figure again being rounded for convenience of expression).

Inevitably, where the possibilities for oil production are less, the cash bonus will be less. Equally true is the fact that royalty rates must permit a lessee to recover his investment and operating costs and to make a reasonable profit during the productive life of any pool he discovers, or be cannot and will not bid on a lease. The total of cash bonuses paid by any operator becomes a part of his investment, and to the extent that he must pay higher cash bonuses, he will pay smaller royalties.

Large cash bonuses have two long-term disadvantages. First, they foreclose the possibility of the State's participating proportionately if the lease results in total production in excess of the bidder's estimates and, second, they make the cost of development excessive to the oil industry if leases produce less than the bidder's estimate. It is true that in the latter case the State Treasury has received more cash than it otherwise would, but at the same time this money has come from a vital segment of the State's economy, and to some extent would affect the oil industry's ability to continue exploration and development work.

Cash bonus bidding, particularly when coupled with a low flat royalty rate, tends to limit competition for leases, since usually only the major companies and operators with very large amounts of capital available to them can pay the cash bonus at the time of bidding. The loss to such operators and companies is, of course, less also in the event the lease is unproductive because it is only one of several leases or enterprises. For a smaller operator, even if he were able to get the lease initially, one such failure could spell catastrophe.

On the other hand it would appear proper for the State to capitalize on the apparent belief of oil interests in the productive potential of the tide and submerged lands by continuing a system of cash bonus bidding. This is justified by the State's responsibility to maximize the returns from its assets for the benefit of all the people, and by the practicality of such a system. This practicality results from the difficulty inherent in the evaluation of open royalty bidding.

MAXIMUM RECOVERY THROUGH UNITIZATION

Continuing technological developments in the oil industry are placing increasing emphasis on achieving maximum recovery of the oil in any field. It is known that such recovery can frequently be substantially increased by the application of secondary recovery methods such as reinjection of gas or water flooding. To accomplish these results through the application of these methods it is necessary to operate an oil pool or reservoir as a unit without the limitations imposed by the division of interests usually present in the ownership of the whole.

These matters were the crux of the debate during the past general election campaign concerning Proposition 4. Opinion in the oil industry was sharply divided over the advantages and disadvantages which might result from its passage. That the appropriate application of secondary recovery methods under unit operations would ultimately yield more oil was largely conceded; however, such additional oil would only be available in the future, and the economic position of many operators forced them to consider the advantage to themselves of current production. Additionally, secondary recovery methods are expensive and it seems probable that profit margins will be less. However,

both sides agreed with the principles of conservation and prevention of waste. All apparently would like to see increased ultimate recovery of oil in place, the disagreement being over the effect of this particular measure on the economy of the oil industry and certain segments of that industry.

The defeat of Proposition 4 leaves the question of conservation of oil squarely up to the Legislature and particularly the responsibility for conservation of publicly owned oil.

This committee devoted one entire public hearing to consideration of the probable effect of Proposition 4 on publicly owned lands. Its belief that conservation of our oil resources should be implemented in an acceptable manner was reinforced by this hearing and other data on oil conservation which came to its attention. Particularly it appears to the committee that the Legislature must consider steps to insure the application of unitized operation of oil fields and the appropriate application of secondary recovery methods to publicly owned lands. Traditionally conservation has commenced with its application to the public domain.

This committee has suggested to the State Lands Commission that it include in its mineral leases, provisions to require the application of secondary recovery methods in appropriate cases. As a result of such suggestion a clause is now being included in its leases. This provision is of course not entirely effective because of the necessity of 100 percent agreement among all interests in a pool or field under present law. However, in some cases it could be applied, and the Lands Commission should continue to include it.

It appears probable that the State will in most cases have the single greatest ownership interest in any pools or fields developed in tide and submerged lands. Therefore, it would appear appropriate to authorize the State Lands Commission to require the application of such secondary recovery methods to the production of oil and gas from state lands wherever the State and its subdivisions do have such a majority interest, and to encourage the application of such methods to other state-owned lands by authorizing the commission to cooperate with other interests.

OTHER LEASING SYSTEMS

The committee considered a number of alternative systems of leasing state tide and submerged lands for oil and gas production. Among these were:

1. A system of straight royalty bidding with a specified minimum, wherein the bidders bid to any maximum at any rate they choose.
2. A system where very small parcels, approximately enough for one well, are offered in a pattern which would insure adequate exploration to secure basic geologic data. This might be coupled with a preferential right to meet the high bid for adjacent areas. The royalty rate for these small parcels would not be of great importance, since presumably the rates for adjacent areas could be made to apply to the greatest part of the oil production in the area, and be greater because of the sure knowledge obtained from the first well.

3. A system of straight cash bonus bidding with royalty only attaching at levels of production in excess of those agreed upon as being necessary to finance the lease.

The above three methods are set out as examples of the variations in leasing method which might be devised. These and others were analyzed as to their possible effects not only on the state interests but also on the oil industry, with a view to recommending a system which would be fair to all parties concerned and still provide a flexible framework in which changing conditions could be accommodated. It is the consensus of the committee that the recommended system of sliding scale royalty and cash bonus bidding with the State in a position to evaluate realistically the potential value of the lease offering will best serve all interests.

SUMMARY

It would appear that the most advantageous leasing system for the State would be one wherein sliding scale royalties with a minimum rate were specified for each parcel offered. The sliding scale should be adjustable in the discretion of the State Lands Commission to fit the potential of the particular parcel. The biddable element should be the cash bonus.

Other elements of the lease should be designed to encourage rapid and thorough development of the tide and submerged lands. These should include provision for unitized operations and secondary recovery.

Administratively the State should collect exploratory data from permittees and its right to do so should be clarified in the law. A positive continuing program of collating and organizing this information for use in evaluating future bidding and as a basis for regarding future offers should be initiated.

PROPOSED LEGISLATION

CALIFORNIA LEGISLATURE—1957 REGULAR SESSION

ASSEMBLY BILL No. 47

Introduced by Messrs. Miller, Bruce F. Allen, Unruh, and Lindsay

January 8, 1957

REFERRED TO COMMITTEE ON MANUFACTURING, OIL, AND MINING INDUSTRY

An act to amend Sections 6827, 6834, and 6873.2 of the Public Resources Code, relating to oil and gas leases of state lands.

The people of the State of California do enact as follows:

SECTION 1. Section 6827 of the Public Resources Code is amended to read:

6827. Leases for the extraction and removal of oil and gas deposits may be made by the commission to the highest qualified bidder, or joint bidders, as provided in this chapter. Such a lease shall include all oil and gas deposits in the leased land and be for a term of 20 years and for so long thereafter as gas or oil is produced in paying quantities from the leased land, or lessee shall be diligently conducting producing, drilling, deepening, repairing, redrilling or other necessary lease or well maintenance operations on the leased land. Any lease heretofore issued under this chapter for a term of 20 years, or any renewal or extension thereof, may at any time or times prior to its expiration be extended upon such terms and conditions and for such period of time as the commission deems for the best interests of the State or as the Legislature may provide; provided further, that upon the lessee's timely application therefor the commission may issue a new lease in exchange for any lease issued for a term of 20 years, or any renewal or extension thereof; such new lease shall be issued at the same royalty and upon the same terms and conditions as the lease for which it is exchanged, unless the commission and the lessee shall otherwise agree, except that the term of such exchange lease shall be for a term of five years and for so long thereafter as oil or gas is produced in paying quantities, or lessee shall be conducting producing, drilling, deeping, repairing,

redrilling or other necessary lease or well maintenance operations on the leased land.

~~When state tide and submerged lands offered for lease by the commission are lands not within the known geologic structure, as determined by the commission, of a producing oil or gas field at the date of issuance by the commission of an invitation to bid for an oil or gas lease thereon, the commission shall specify a flat rate royalty to be paid under such lease of 12½ percent in kind, or 12½ percent of the current market price or the price received for the production removed or sold from the leased land, subject to an allowance for oil treatment and dehydration of not to exceed five cents ($0.05) per net barrel for the royalty oil and shall specify a flat royalty of 10 percent of the current gross market value or price received for all dry gas, natural gasoline, and other products extracted and saved from the gas produced from the leased land, except gas used for lease use or reinjection in state lands, and an annual rental payment in advance of not to exceed one dollar ($1) for each acre of the land subject to the lease at the rental date. Unless the commission decides to reject all bids pursuant to Section 6836, the lease of the parcel or tract which is the subject of the bid shall be awarded to the qualified bidder who undertakes to pay the highest cash bonus in addition to satisfying the royalty and rental requirements and all other provisions of the lease.~~

When state lands, including tide and submerged lands, *are* offered for lease by the commission ~~are lands within the known geologic structure, as determined by the commission, of a producing oil or gas field at the date of issuance by the commission of an invitation to bid for an oil and gas lease thereon~~, the commission shall specify ~~a fixed royalty on oil of not less than 16⅔ percent or~~ a sliding scale royalty *on oil* commencing at not less than ~~16⅔~~ *12½* percent up to a maximum percentage specified in the invitation to bid to be paid on the average production of oil per well per day under such lease, and a royalty of ~~15~~ *12½* percent as specified in the invitation to bid on dry gas, natural gasoline, and other products extracted and saved from the gas produced under such lease, except gas used for lease use or reinjection ~~in state~~ *into the leased* lands. Such royalties shall be paid in kind or as a percentage of the current market price at the well of, and of any premium or bonus paid on, the production removed or sold from the leased land, subject to ~~a reasonable~~ *an* allowance for oil treatment and dehydration *of not to exceed five cents ($0.05) per barrel for royalty oil*, and an annual rental payable in advance of not to exceed one dollar ($1) for each acre of the land subject to the lease at the rental date. Unless the commission decides to reject all bids pursuant to Section 6836, the lease of the parcel or tract which is the subject of the bid shall be awarded to the qualified bidder who undertakes to pay

the highest cash bonus in addition to satisfying the royalty and rental requirements and all other provisions of the lease.

If, at any time or from time to time, before or after the expiration of the primary term of such lease, the leased lands cease to produce oil or gas, the lease shall, nevertheless, continue in full force and effect if within six months after the cessation of production, or such longer period of time as the commission may authorize, lessee shall commence and thereafter prosecute with reasonable diligence drilling, deepening, repairing, redrilling or other operations which shall result in the restoration of production of oil or gas from the leased lands.

SEC. 2. Section 6834 of said code is amended to read:

6834. Whenever the commission determines that lands shall be leased for oil and gas as provided in this chapter and when the form of lease therefor has been prepared by the commission, the commission shall give notice of intention to lease such lands. The notice shall be published in a newspaper of general circulation in the county in which the lands or the greater portion thereof are situated and shall state the time (which shall not be less than 14 days after the last date of publication of the notice) and place for receiving and opening bids, a description of the lands, either as a tract or by parcels, ~~whether the lands offered for lease are within or are not within the known geologic structure of a producing oil or gas field,~~ and that the form of lease for the purpose of bidding may be procured at the designated office of the commission.

If the notice is published in a weekly newspaper, it must appear therein on at least two different days of publication and if in a newspaper published oftener, there must be at least five days from the first to the last day of publication, both days included.

SEC. 3. Section 6873.2 of said code is amended to read:

6873.2. Before offering any tide or submerged land area for an oil and gas lease, the commission shall publish notice thereof, and any affected city or county may, within thirty (30) days after the publication of such notice, request in writing to the commission that a hearing be held with respect thereto. Upon receipt of such request, the commission shall hold such a hearing and give not less than ten (10) days written notice thereof to the city or county, or both such city and county, making such request, and to the Department of Natural Resources, and shall publish such notice. The commission in its discretion and irrespective of any such requests may hold such hearings as it shall determine. Published notices shall be given in the manner prescribed in Section 6834 of this chapter.

~~Within~~ *In not less than* thirty (30) days *nor more than ninety (90) days* after such hearing the commission shall determine *whether or not* to offer the land for lease, as provided under Sections 6871.3, 6872 and 6872.1 ~~, unless~~ . *In such determination* the commission shall ~~determine that~~ *consider whether* the issuance of a lease as to all or a part of such land would result in an impairment or interference with the developed shore line recreational or residential areas adjacent to the proposed leased acreage, or ~~the commission may determine~~ *whether* to offer such land for lease as to all or a part thereof and include in the offer for lease such reasonable rules and regulations which, in the opinion of the commission, are necessary for the exploration, development, and operation of said lease in a manner which will not impair or interfere with said developed shore line recreational or residential areas; provided, however, that no tide or submerged lands shall be offered for lease under any conditions, rules, or regulations which will result in a discrimination between bidders as prohibited by Section 6874.

The commission in determining whether the issuance of such lease or leases would result in such impairment or interference with the developed shore line, recreational or residential areas adjacent to the proposed leased acreage or in determining such rules and regulations as shall be necessary in connection therewith shall at said hearing receive evidence upon and consider whether such proposed lease or leases would

(a) Be detrimental to the health, safety, comfort, convenience, or welfare of persons residing in, owning real property, or working in the neighborhood of such areas;

(b) Interfere with the developed shore line, residential or recreational areas to an extent that would render such areas unfit for recreational or residential uses or unfit for park purposes;

(c) Destroy, impair, or interfere with the esthetic and scenic value of such recreational, residential or park areas;

(d) Create any fire hazard or hazards, or smoke, smog or dust nuisance, or pollution of waters surrounding or adjoining said areas.

Authority to hold the hearings provided in this section may be delegated by the commission to its officers or employees.

CALIFORNIA LEGISLATURE—1957 REGULAR SESSION

ASSEMBLY BILL No. 80

Introduced by Messrs. Miller, Unruh, Bruce F. Allen, and Lindsay

January 8, 1957

REFERRED TO COMMITTEE ON GOVERNMENTAL EFFICIENCY AND ECONOMY

An act to amend Section 6826 of the Public Resources Code, relating to the State Lands Commission.

The people of the State of California do enact as follows:

SECTION 1. Section 6826 of the Public Resources Code is amended to read:

6826. The commission, however, may permit geological or geophysical surveys on state lands and may grant permits therefor upon such terms and conditions as the commission shall specify by regulation, but any such permit shall not give the permittee any preferential right to an oil and gas lease. The taking of cores and other samples may be freely conducted on and under tide and submerged lands of the State; provided, that the commission may require that a permit first be obtained covering such types of drilling operations for the purpose of obtaining geological samples as the commission may determine by regulation, such permit to be issued upon such terms and conditions as the commission may specify by regulation, but any such permit shall not give the permittee any preferential right to an oil and gas lease.

The commission shall require, as a condition to the issuance of any permit under this section, that the permittee shall furnish to the commission, upon request, all factual and physical exploration results, logs, and records resulting from the operations under the permit. Any such factual or physical exploration results, logs, or records which the permittee is required to furnish to the commission shall be for the confidential use of the commission and shall not be open to inspection by any other person or agency without the written consent of the permittee.

CALIFORNIA LEGISLATURE—1957 REGULAR SESSION

ASSEMBLY BILL No. 36

Introduced by Messrs. Miller, Bruce F. Allen, Unruh, and Lindsay

January 8, 1957

REFERRED TO COMMITTEE ON MANUFACTURING, OIL, AND MINING INDUSTRY

An act to add Chapter 3.5 (commencing with Section 6935) to Part 2 of Division 6 of the Public Resources Code, relating to unit operation of oil and gas pools.

The people of the State of California do enact as follows:

SECTION 1. Chapter 3.5 is added to Part 2 of Division 6 of the Public Resources Code, to read:

CHAPTER 3.5. UNIT OPERATION

Article 1. General Provisions

6934. This chapter shall be known and may be cited as the Maximum Oil Recovery Law.

6935. Unless the text otherwise requires, the general provisions and definitions contained in this article govern the construction of this chapter.

6936. "Person" means any natural person, corporation, association, partnership, receiver, trustee, executor, administrator, guardian, fiduciary, or other representative of any kind, and includes any department, agency, or instrumentality of the State, city, county, district, or of any other governmental subdivision of the State.

6937. ' Owner" means the person who has the right to drill into and produce from a pool and to appropriate the oil or gas he produces therefrom either for himself or others or for himself and others.

6938. "Waste" means (1) physical waste, as that term is generally understood in the oil and gas industry, (2) the inefficient, excessive, or improper use of, or the unnecessary dissipation of reservoir energy, and (3) the locating, spacing, drilling, equipping, operating, or producing of any oil or gas well or wells in a manner which causes, or tends to cause, reduction in the quantity of oil or gas ultimately recoverable from a pool under prudent and proper operations.

6939. "Pool" means an underground reservoir containing, or appearing at the time of determination to contain, a common accumulation of oil or gas, or both. Each zone of a structure which is completely separated from any other zone in the structure is a pool.

6940. "Oil" means crude petroleum oil and other hydrocarbons regardless of gravity which are produced at the wellhead in liquid form and the liquid hydrocarbons known as distillate or condensate recovered or extracted from gas, other than gas produced in association with oil and commonly known as casinghead gas.

6941. "Gas" means all natural gas and all other fluid hydrocarbons not defined as oil.

6942. "Public lands" means all lands, including tide and submerged lands, owned by the State or by a city, county, district, or other public agency of the State.

6943. This chapter applies only to a producing or prospective pool, the surface area of which, as determined by the commission, contains public lands comprising at least 50 percent of the total surface area of the pool, measured on a horizontal plane.

6944. Lands owned by or subject to the jurisdiction of the United States may be included within a unit area pursuant to this chapter only if the officer of the United States having jurisdiction, or his duly authorized representative, approves the order of the commission which purports to affect such lands, except that this chapter shall not apply to any lands committed to any unit or cooperative agreement approved by the Secretary of Interior or his duly authorized representative.

6945. Tide and submerged lands, including, but not limited to, such lands which have been or may be granted in trust to cities, counties, districts, and other public agencies, and regardless of whether or not such lands are subject to an oil or gas lease, may be included in a unit area pursuant to this chapter. Lands so included shall be subject to the conditions and requirements specified in Article 4 (commencing at Section 6871) of Chapter 3 of this part.

6946. The proceedings for all hearings under the provisions of this chapter shall be conducted in accordance with Chapter 5 (commencing with Section 11500) of Part 1 of Division 3 of Title 2 of the Government Code, except as modified by this chapter.

Article 2. Unit Operation Order

6947. The commission upon its own motion may, and upon the application of any interested person shall, hold a hearing to consider the need for the operation as a unit of an entire pool, or a portion thereof, to prevent waste and to increase ultimate recovery. The commission may issue an order requiring unit operation of an entire pool, or a portion thereof, if it finds that all of the following requirements are met:

(a) The surface area of the entire pool contains public lands in the proportion required by Section 6943. In determining the surface area of the pool, the commission may base its determination on available information and from such geological or geophysical surveys as it deems necessary or advisable to undertake.

(b) Unit operation of the pool, or a portion therof, is reasonably necessary to prevent waste and to increase substantially the recovery of oil or gas.

(c) The value of the estimated additional recovery of oil or gas will exceed the estimated additional cost incident to conducting such operation.

6948. The order shall be fair and reasonable under all the circumstances and shall include:

(a) A description of the area embraced, termed the unit area.

(b) A statement of the nature of the operation contemplated.

(c) An allocation among the separately owned tracts in the unit area of all the oil and gas produced and not required in the conduct of such operation or unavoidably lost, such allocation to be based on the relative contribution, other than physical equipment, made by the separately owned tracts to the unit operation.

(d) A provision for the credits and charges to be made in the adjustment among the owners of the unit area for their respective investments in wells, tanks, pumps, machinery, materials, and equipment contributed to the unit operation by their respective owners. The net amount charged against the owner of a separately owned tract shall be considered expenses of unit operation chargeable against such tract.

6949. The order shall also include:

(a) A provision that the expenses of unit operation, including capital investments, be charged to the separately owned tracts in the same proportions that such tracts share in the unit production unless otherwise provided. The expenses chargeable to a tract shall be paid by the person or persons who in the absence of unit operation would be responsible for the expenses of developing and operating such tract.

(b) A provision for an operating committee to arrange for and to supervise the conduct of the unit operation, composed

of one representative for each person participating in the payment of the expense of the joint operation. Each representative's vote shall be given a value corresponding to the percentage of the unit expense chargeable against the person voting.

(c) The time the unit operation shall commence, and the manner in which, and the circumstances under which, the unit operation shall terminate

(d) Such additional provisions as the commission deems appropriate for the prevention of waste and the protection of all interested parties.

6950 An order requiring unit operation may be amended by an order entered by the commission in the same manner as an original order requiring unit operation. However, no such order of amendment shall change the percentage of oil and gas allocated to any separately owned tract by the original order, except with the consent of all persons owning interests in such tract.

6951. The commission, by entry of a new order, may require unit operation in a pool, or a portion thereof, which embraces a unit area established by a previous order of the commission. Such new order, in providing for allocation of unit production from the unit area, shall first treat the unit area previously established as a single tract, and the portion of unit production so allocated thereto shall then be allocated among the separately owned tracts included in such previously established unit area in the same proportions as those specified therefor in the previous order.

6952. The portion of unit production allocated to a separately owned tract shall be deemed, for all purposes, to have been actually produced from such tract, and operations conducted pursuant to the order of the commission shall be deemed, for all purposes, to be the conduct of operations for the production of oil and gas from each separately owned tract in the unit area in the fulfillment of all the express or implied obligations of the owner or producer of such tract under each lease and any contract applicable thereto insofar as the same relates to the pool, or portion thereof, covered by such order.

6953. From and after the effective date of an order requiring unit operation, and so long as such order remains in effect, it shall be unlawful for any person to drill or to operate any well within the area coverd by the order for the production of oil or gas from any pool covered in the order, otherwise than in conformity with the plan for unit operation.

6954. A person to whom another is indebted for expenses incurred in carrying on unit operations as provided for in this article, may, in order to secure payment of the amount

due, fix a lien upon the interest of the debtor in the production from the unit area, by filing for record, with the county recorder of the county where the property involved, or any part thereof, is located, an affidavit setting forth the amount due and the interest of the debtor in such production. The person to whom the amount is payable may, at the expense of the debtor, store all or any part of the production upon which the lien exists until the total amount due, including reasonable storage charges, is paid or the commodity is sold at foreclosure sale and delivery is made to the purchaser. The lien may be foreclosed as provided for with respect to foreclosure of mechanics' liens.

Article 3. Penalties

6957. Any person who violates any provision of this chapter, or any rule, regulation, or order of the commission shall be subject to a penalty of not more than one thousand dollars ($1,000) for each act of violation and for each day that such violation continues.

6958. The penalty provided in Section 6957 shall be recoverable by suit filed by the Attorney General in the name and on behalf of the commission in the superior court of the State of California for the county in which the defendant resides, or in which any defendant resides, if there be more than one defendant, or in the superior court of any county in which the violation occurred.

6959. Whenever it appears that any person is violating or threatening to violate any provision of this chapter, or any order, rule, or regulation issued by the commission pursuant to the provisions of this chapter, the commission may bring an action in the name of the people in the superior court of any county where the violation occurs or is threatened, to restrain such person from continuing such violation or from carrying out the threat of violation.

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PRELIMINARY REPORT
of the

SUBCOMMITTEE ON IMPACT OF ENEMY ATTACK ON ECONOMY AND CONSTITUTIONAL GOVERNMENT OF THE STATE OF CALIFORNIA

A Subcommittee of the

ASSEMBLY INTERIM COMMITTEE ON CONSERVATION, PLANNING, AND PUBLIC WORKS

House Resolution No. 53, 1956

Prepared for the Subcommittee by JAMES P. KEENE, Jr.

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January, 1957

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COMMITTEE LETTER OF TRANSMITTAL

ASSEMBLY INTERIM COMMITTEE
ON CONSERVATION, PLANNING, AND PUBLIC WORKS
SACRAMENTO, CALIFORNIA, January 21, 1957
ASSEMBLY CHAMBER, State Capitol
Sacramento, California

HON. L. H. LINCOLN
Speaker of the Assembly
MEMBERS OF THE ASSEMBLY
Assembly Chamber, Sacramento, California

This report and the appended documents indicate decided voids in federal, state, and local legislation that must be filled in order to permit the functioning of our form of government and the preservation of our way of life.

I urgently join the subcommittee in its efforts to alert the people of California and their respresentatives to the need for additional study, and the preparation of necessary legislation and constitutional amendments.

This is a crisis that merits mobilization of the best legal minds in California and all the affected interests to assist the Legislature in the preparation of the required measures.

Respectfully submitted,

FRANCIS C. LINDSAY, Chairman
Assembly Interim Committee on
Conservation, Planning, and Public Works

SUBCOMMITTEE LETTER OF TRANSMITTAL

ASSEMBLY CHAMBER, STATE CAPITOL
SACRAMENTO, CALIFORNIA, January 21, 1957

HON. FRANCIS C. LINDSAY, *Chairman*
Conservation, Planning, and Public Works Committee
California State Assembly, Sacramento, California

DEAR SIR: This preliminary report, prepared in accordance with House Resolution No. 53 of the First Extraordinary Session 1956, reviews present legislation and constitutional provisions affecting our governmental structure in case of disaster or attack. The chief concern of the subcommittee has been to study those areas which would effectuate the continuation of our civil government and our economic system following a major disaster resulting from sustained enemy attack.

The subcommittee has concluded that our legislative and administrative structure is not prepared to withstand and survive such a crisis. The voids in legislative and constitutional provisions are so great and of such portent to the continuation of our way of life that we view this lack as an emergency.

Consequently, we recommend that this session of the Legislature continue these studies and develop the necessary legislation and constitutional proposals that will assist the survival of the society we know. It is clear to this subcommittee that when we face the real problem of possible nuclear attack, programs of defense and programs dedicated to the saving of lives is not enough. Nor can we rely on martial law, or broad delegations of power to one official, or the American genius of meeting crises with de facto forms of government.

Governmental officers, the legal profession, and business leaders, working together can so prepare us that our institutions will survive to carry on the way of living we cherish.

Respectfully submitted,

VERNON KILPATRICK, Chairman
JACK A. BEAVER
ALLEN MILLER
Subcommittee on Impact of Enemy Attack on Economy and Constitutional Government of the State of California

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FINDINGS AND RECOMMENDATIONS

The subcommittee's studies thus far have disclosed a vast range of vital problems in the field of preparing our society to withstand a nuclear attack, and to resume its operation in the wake of such an attack. So far, the following problems have not been attacked in any organized manner:

1. Problems of Succession to Elective Office. Methods must be devised to assure that the Governor's position is legally filled, even though the entire present line of succession is wiped out; the same is true for both houses of the State Legislature, for boards of supervisors, and for mayors and city councils. Likewise, provisions must be made for enabling the Legislature, in whatever form it exists after an attack, to do business immediately. The foregoing, in fact, is essential to implement operation of the present California Disaster Act, which now provides with reasonable adequacy for the necessary shifts and rearrangement of function and seat of operations of state agencies.

2. Problems of Record Storage. A state-wide study should be made to determine what records are vital to the orderly continuation of our economy, and plans should be made and implemented to store these records in microfilm form in one or more bomb-proof locations throughout the State. The necessary changes in our present laws should be made to assure the legal acceptability of such records in the event of an emergency when other records are destroyed.

3. Problems of the Judiciary. Provision should be planned now for the operation of our judicial system under conditions of a post-nuclear attack situation. This will necessitate many changes of both law and procedure from our present practices. Courts will have to be given broader powers than they now possess. Procedures must be simplified and provision made for rapid recruitment and appointment of court personnel to fill in the gaps and process the anticipated case load.

4. Problems of Relationships Between Persons, the State, and Corporations. Legislation still will be needed in a number of fields substituting new procedures, rules, and principles to govern private relationships during the period of disruption. Arrangements must be facilitated regarding contracts, leases, mortgages, wills, trusts, etc., to meet contingencies arising out of nuclear attack. Many of these could be effected under existing law, while others would have to wait authorization under new statutes. Additionally, a basic plan must be devised to compensate individuals for injury, death, and the damage and disruption of property by nuclear attack. This should be primarily a responsibility of the Federal Government.

The needed legislation is partly federal, partly state, and partly local, and, in some cases, all three. But, at the present time, as far as the committee is able to learn, the Federal Government is not engaged

in any work bearing precisely on this most important field of national survival. The work of the Federal Government, both on the part of the Executive and Legislative Branches, appears to be primarily directed toward initial defensive, protective, and survival needs.

From two standpoints, then, California should not wait on the Federal Government for development of these phases of our survival plans. It is overwhelmingly clear to the committee that a very great deal of thought and planning and legislating must be done on the state and local levels, regardless of what the Federal Government may or may not do. In addition, if California thinks through the needed pattern of state-federal relationships in this field, the necessary changes in the federal laws will emerge from the study. The chances of getting the kind of changes we will need in federal legislation is much greater if we present to the Congress a package of these needed changes.

This concept of the "package" as the most desirable form of the sum total of the new legal, governmental and economic provisions against the exigencies of existence in a post-nuclear attack situation was suggested many times to the subcommittee during its preliminary studies, and appears to be sound.

This is to say that what eventually we should develop is a package of law involving all of the phases so far noted by the committee and many others which the committee has not yet had time to investigate—which would go into effect when and if the emergency occurs. With sufficient study and planning, it is easily within our power to devise such an emergency system of law that will conform to the spirit of our traditions of constitutional government, which will minimize injustice, and will enable us to cope with the terribly difficult problems of a post-attack era in an orderly, efficient and democratic manner.

To bring this about, an extensive and comprehensive study on the part of government, business and the legal profession is urgently needed, under the coordination of an official body such as this committee, which would lay down the broad guide lines.

Each unit of the State Government, of county and city governments, and of special quasi-governmental units such as water districts, school boards, etc, should study its own operations with a view toward preparing for operations in the event of the emergency, and thus finding out what changes in law and procedure are needed before this can be accomplished.

Each type of business should likewise undertake such a self-examination through committees to ascertain what must be done to prepare the various segments of our economy to sustain a nuclear attack without falling into chaos.

The Bar and the judiciary can begin at once to examine our system of laws and legal procedures, to study and analyze the experience of other nations in the same fields, and bring to the committee a report on what laws need to be changed, what new laws need to be written, to construct the package of law procedure which will help our society to survive with minimum damage.

Once these studies have been made, and the results transmitted and analyzed by our State Legislature through appropriate committees, the necessary laws can be passed, the necessary constitutional amendments

can be submitted to the people, and the Federal Government can be memorialized to take the needed legal steps which are federal in nature.

It is clear to this subcommittee that when we face up to the real problems of possible nuclear attack, programs of defense or programs which deal only with the saving of lives are not enough. Nor is reliance on martial law, nor broad delegations of power to one official, nor the American genius for creating *de facto* forms of self-government enough. Our democratic society owes it to all the people who comprise it and all the children who will be born into it, to face the hard facts of the possible future without flinching, and to do what we can now to bring us through whatever that future may bring with our precious institutions intact.

The committee is firmly convinced that planning to design adequate economic, legal and governmental defenses against the impact of enemy attack is not a task for federal officials alone working under security and classification restrictions. It is a job for businessmen, bankers, economists, political scientists, lawyers, and public officials, aided by research help where needed, able to discuss the dangers and remedies freely and publicly. A better set of plans results from this process. With more responsible citizens to face the danger squarely and to learn through participation in their design the measures that would be put into effect in case of nuclear attack, there will result sounder attitudes toward the risks of such an attack while peace is maintained, and a far more effective response to its terrible impact if war should come.

We recommend that additional hearings of this committee be held as soon as possible. The matter is urgent. The minimum amount of time required for the passage of the most necessary legislation will be substantial. Not only must legislation be prepared, but constitutional proposals must be submitted to the people. We must not delay further.

PRELIMINARY REPORT

INTRODUCTION

By the terms of House Resolution No. 53 of the First Extraordinary Legislative Session of 1956, this subcommittee was authorized to ascertain, study and analyze all facts relating to civil defense in the orderly, efficient and effective continuation of the processes of government at the state and local levels and the orderly, efficient and effective continuation of the activities of industry, business and professional services in the event of enemy attack and any other matters relating to enemy attack and the steps that must be taken to cope with effects and to continue the functioning of our society in as normal a manner as possible, including but not limited to the operation, effect, administration, enforcement, or needed revision of any and all laws in any way bearing upon or relating to the subject of the authorizing resolution.

This is the first preliminary report of the subcommittee based on hearings held in Los Angeles, California, on December 5th and 6th, 1956, and on correspondence and meetings with numerous officials of state, county and city government; leaders of the Bar and judiciary; and others; and a study of relevant, available documents. Cooperating with the committee in these preliminary phases of its investigation have been: the Office of the Attorney General, the Office of State Legislative Counsel, the California Disaster Council, the Office of the Legislative Auditor, The League of California Cities, the Los Angeles County Counsel, the Los Angeles City Attorney, the Los Angeles Bar Association, Mr. Homer D. Crotty, Attorney at Law, Office of the Los Angeles County Registrar, Office of the Los Angeles County Recorder, Congressman Chet Holifield, the Los Angeles City Director of Civil Defense, Judge Roy L. Herndon, Presiding Judge Los Angeles Superior Court, Dr. Alfred Bellamy, professor of biophysics, University of California at Los Angeles, and Mr. Les Wagner, Los Angeles Mirror-News, staff investigator J. E. McCormick. The committee gratefully acknowledges their assistance.

It appears to this committee that, while vast sums and much thought has been devoted to military preparation against possible enemy attack, the closely related and all-important field of civil defense and the planning for the civic and governmental adjustments to meet the catastrophe have been grossly neglected.

Within the field of civil defense itself a great deal of controversy exists—controversy on what are the best things to do to ensure national survival (shall we concentrate on a program of evacuation or a shelter program or a combination of both?), controversy on the role of the military versus the civil government, controversy on who can most effectively plan our national survival, and controversy as to the manner in which they shall go about their planning.

This committee is concerned with one phase of our national survival plan, a phase on which there is virtually no controversy because very

little attention has been paid to it—the preservation or immediate restoration of our constitutional form of government and economy in the face of a disaster of the magnitude inherent in an all-out enemy attack using H-bombs or A-bombs on this Nation.

It is the unanimous conclusion of our military authorities that, since the very nature of our society prevents us from being the aggressor, in case of war our military action would be, first, defensive and, second, retaliatory. It is their further unanimous conclusion that no system of defense which we can now, or in the foreseeable future will, devise can effectively shield this Nation from having H-bombs and A-bombs dropped upon it by an enemy capable of mounting an all-out attack upon us and determined to press it through.

In theory there are two types of warnings available to the United States of impending enemy attack. The first of these is the so-called "strategic warning." This warning is given when there exists a deterioration in the international situation to the point where attack by an enemy seems not only possible but likely and probable. The second is the actual tactical warning which is given when there is information that an enemy attack is actually underway. With regard to the strategic warning concept, it was pointed out to this committee that the period from October through December, 1956, was a period of maximum strategic warning. That is, that this Nation was very close to war. It was also pointed out that as far as civil defense activity went, the strategic warning had no discernible effect.

Therefore, in the event of an enemy attack upon this country, it seems probable under present circumstances that we shall have to depend entirely upon the tactical warning. The tactical warning has been estimated to be anything from many hours to a few minutes. For practical planning purposes it must be presumed to be not more than an hour and in all probability substantially less than that. We must also assume that California, because of its industrial and military importance to the United States, would be one of the prime targets in the event of such an attack; we must assume that enemy atomic or hydrogen weapons would be directed toward the key cities of California from planes, from submarines and possibly from intercontinental guided or ballistic missiles.

In our present state of unpreparedness, the consequences of such an attack would be horrifying in the extreme. Loss of life in the initial blasts would be very high, perhaps more than 50 percent of the population of the area attacked from the shock and heat waves and the radioactive fallout which would follow. Assuming that the bombs fell principally in our major metropolitan areas, destruction of property would also be very great though by no means in the nature of 50 percent of our total wealth. There would be an extensive degree of disruption of industrial and productive facilities, communication, transportation, medical and rehabilitation facilities. In our present state of unpreparedness, a large proportion of all vital records, public and private, would be irreparably destroyed. Almost all of our banks would have their physical facilities destroyed. With them, the complex records of deposits, savings, investments and credit which are one of the mainstays of our civilization, would become instantly unavailable. Almost the entire surviving population, except those engaged in the military,

medical and disaster relief, would become instantly unemployed. The web of industrial and commercial transactions would be shattered. The picture becomes even darker when we contemplate the difference between this type of disaster and other types to which we have become accustomed and with which we have had experience. Normally, a stricken area can rely upon other parts of the State and the Nation to rush aid and succor to it, but in the case under consideration, perhaps every other major center of the Nation would be in the same plight.

Turning directly to the subject of government and economy, with which this committee is primarily concerned, in such an attack it is probable that all or a very large proportion of the state officials, including the State Legislature, and the officials of our larger metropolitan cities and counties would be wiped out, and that many of the vital records on which the operation of our form of government depends would be destroyed or unavailable. The magnitude of loss of official life might well be such that we could neither carry on under our present laws nor change those laws in order to meet the new situation.

The answer most commonly proposed to this particular dilemma is that in the event civil government were unable to function or even if it were, martial law would be declared and would endure until the emergency had passed But this is, at best, a most unsatisfactory answer and a most inefficient way of conducting the business of the community, however abnormal that business may be. The principal reason for this was clearly stated by Dr. Charles Fairman in his testimoney before the subcommittee chaired by Congressman Chet Holifield. Dr. Fairman said,

> As I see it, the universal need on the morrow of a nuclear attack would be to re-assure, to inspire, to lead and give direction to the stricken people. For the long pull toward restoration, the people will respond far more willingly to civil leaders than to Army officers. In the workings of our civil government, laws come down but the impulses that cause the laws to be made come up from the people. In military administrations, commands go down but there is no great current of popular control going up. This unavoidable charactertistic of military administration is a cogent reason why it is utterly unsuited to the restoration of the American people after a nuclear attack.

Secondly, in the event of a nuclear attack, our military forces would be exceedingly busy carrying out their own primary mission, that of the military defense of this Nation. They would be, however willing, unable to divert manpower and supplies to what are essentially the functions of civil government.

Thirdly, martial law, which is alien to the spirit of America, once imposed, is very hard to remove. Witnesses before this committee pointed to the experience of Hawaii during World War II. There, hostilities, involving the Japanese attack on Pearl Harbor, lasted for only one hour and a half, but the martial law which was thereupon imposed lasted for three years. The civil courts of Hawaii were not reopened for 10 months after the Pearl Harbor attack and then only for limited purposes. It

was not until a year and a half after Pearl Harbor that the first jury trial was held and no writ of habeas corpus was allowed until long after that date.

The committee concedes that in the first hours and days following a devastating attack upon this Nation some form of martial law may be necessary to preserve order. But, in the long run, because of the nature of the problems involved in such devastation to the Country, if martial law were to continue, the military would have to duplicate the functions of civil government. This it would be unable to do with anywhere near the degree of efficiency which civil government itself can accomplish, nor could a military administration command the loyalty and cooperation of the people to anywhere near the extent the people will willingly give to their own elected representative government.

To a democratic people, however severe their problems may be, it is best to solve them in a democratic manner. To a people accustomed to constitutional government at every level, the best and most efficient government which can be devised to meet the problems of a long-continuing emergency such as a nuclear attack would impose upon us, is a continuation of that constitutional government, adequately designed to meet the demands of the emergency situation.

With this in mind, let us examine the current state of some of our laws, both state and local.

LEGAL AND ADMINISTRATIVE FRAMEWORK

There exists on the statute books of the State of California and on the books of political subdivisions, a number of laws designed to facilitate effective mobilization of the resources of the community to meet the immediate problems of disaster or extreme emergency. On the state level, the most important of these is the California Disaster Act which is Chapter 1 of Division 7 of the Military and Veterans' Code commencing with Section 1500. Under this law, the Governor with the advice (and in some cases, consent) of the California State Disaster Council has broad powers to act in case of a state of extreme emergency such as a nuclear attack on California would certainly be. During such a period the Governor is granted complete authority over all agencies of the State Government and the right to exercise within the areas of the emergency all the police powers vested in the State in order to effectuate the purposes of the law.

He may issue and enforce rules and orders which he considers necessary for the protection of life and property. He may commandeer or utilize any private property or personnel necessary for such purposes except that he is not authorized to commandeer any newspaper or any newspaper wire service but may utilize any newspaper wire service in such manner as interferes as little as possible with the use thereof for the transmission of news.

The Governor is granted broad powers to order public employees of local agencies to perform duties outside the territorial limits of their agencies. He may direct all agencies of the State Government to utilize their personnel, equipment and facilities for activities designed to prevent or alleviate actual or threatened damage due to the disaster and such agencies may expend any of their moneys for such activities irrespective of the particular purposes for which the money had been appropriated.

The Governor may suspend the provisions of any regulatory statute or statute prescribing the procedure for the conduct of state business or the rules or orders of any administrative agency where he determines and declares that strict compliance therewith would in any way prevent, hinder or delay the mitigation of the disaster.

The California State Disaster Council consists of the Governor, who is Chairman, the Lieutenant-Governor, the Attorney General, and appointed members who represent city and county governments, city or county law enforcement services, city or county fire services, and the American Red Cross. The President pro Tempore and the Speaker of the Assembly also meet with and participate in the work of the council within constitutional limits.

The principal functions of the Disaster Council are to act as an advisory board to the Governor with reference to the disaster program, to consider and to recommend mutual aid plans, to consider and to recommend rules and regulations to be promulgated by him, and to consider and to recommend to the Governor for approval a state disaster

plan. The Governor is authorized to assign all or part of his powers and duties under the chapter to the California Disaster Office, which is to be established as part of his own office staff and headed by a Director of the Disaster Office, who is appointed by the Governor with the approval of the Senate.

Whenever it appears that a state of extreme emergency proclaimed by the Governor will continue for more than seven days, the Governor is required to call a meeting of the Disaster Council to commence not later than the expiration of such seven days. All of the powers of the Governor under such proclamation terminate when the Governor has failed to call such a meeting of the Disaster Council or he has not, within 30 days after issuing such proclamation, convened the Legislature for the purpose of legislating on subjects related to the state of extreme emergency, except where the Legislature is already convened with power to legislate on such subjects.

1. SUCCESSION AND LEGISLATIVE QUORUM IN STATE GOVERNMENT

This committee notes that the California Disaster Act was not framed with the possible consequence of a nuclear attack on California in mind. As stated before, it is entirely conceivable that not only the Governor but the entire line of succession to the Governorship and a majority of one or both houses of the Legislature might be wiped out in the event of such an attack. In such case, obviously, there would be no person legally able to effecuate the provisions of the law designed to cope with an extreme emergency. **It appears to the committee that one of the first acts which should be considered is that of lengthening the line of succession to the chief executive office of the State.**

Our Constitution now provides that in the event that all of the officers listed as successors to the Governor are killed as well as he, that the Senior Deputy Secretary of State shall convene the Legislature by proclamation to meet within eight days after occurrence of the vacancy in join convention of both houses and in extraordinary session for the purpose of choosing a person to act as Governor until the office may be filled at the next general election appointed for election to the office of Governor.

Assuming that the Senior Deputy Secretary of State to be alive to convene the Legislature, is it not possible that the State Government would be stranded for lack of a quorum to choose a person to act as Governor?

In the event that there should be such a lack of quorum of either or both houses of the Legislature, under present law, extreme difficulties would ensue. Under present laws, vacancies in the Senate and the Assembly can be filled only by elections following the issuance of writs of election by the Governor. The holding of such elections not only involves a certain necessary amount of time but may actually be considerably delayed if the local registration of voter records are destroyed. Further, the Constitution imposes rigid limits on the minimum number of votes required to take legislative action. No action could be taken, in any case, if one-half or more of the members of either house lost their

lives in a disaster and, as to many types of legislative action, this would be true if more than one-third of the members of either house failed to survive.

It appears to the committee, therefore, that not only must a line of succession to the governorship be established of such length and depth as to make certain that there will be a person surviving legally able to act in that capacity, but that also **legal methods must be provided to enable a legislative quorum of sufficient size to take any necessary action to be assembled and enabled to do business.**

The latter can be accomplished in a number of different ways. The surviving Members of the Assembly can be authorized to act, until vacancies can be filled. The Governor may be empowered to make temporary appointments himself, or to appoint a commission to carry out the function. The present constitutional provisions regarding quorum, and size of majority could, in such an emergency, be suspended.

All of the changes discussed above require action by the people to amend the Constitution before they can become law. This in turn means that detailed study should be given to the most preferable form for such legislation to take before it is brought to the ballot.

2. CITY AND COUNTY GOVERNMENT

The problem of line of succession to high elective office and of legislative quorum applies to cities and counties as well as to the State Government itself. It is of the utmost importance to the speedy restoration of a functioning society following an attack that these implements of government be re-established as rapidly as possible. Urban areas are accustomed to municipal services such as police and fire protection and utilities such as water, sewers, and electricity. Such services and utilities are furnished by units of local government, counties, cities and districts.

The State Constitution attempts to cover the situations involved in the vacancies of local offices under Section 8 of Article 5, which reads:

> Section 8. If any office shall, from any cause, become vacant, and no mode is provided by the constitutional law for filling such vacancy, the Governor shall have power to fill such vacancy by granting a commission, which shall expire at the end of the next session of the Legislature, or at the next election by the people.

However, most city charters contain provisions for the filling of vacancies in office The charter of the City of Los Angeles, for example, provides for the filling of a vacancy in an elective office by a majority vote of the members of the city council. Therefore, the constitutional provision would not be applicable because the method for filling vacancies is provided for in the charter. But if less than 10 members of the Los Angeles City Council survive an attack, there would be no quorum and therefore the council could not act. The charters of the various cities of California are by no means uniform with regard to this type of provision.

This committee should like to call the attention of local officials throughout the State of California to the necessity and desirability of amending local laws and city charters to provide a method whereby local governmental units can re-establish themselves and carry on in the shortest possible time after an attack.

PRESERVATION OF RECORDS

The orderly continuation of constitutional government at every level within the State of California depends, in a very large degree, upon the preservation of essential records. It is true that a considerable body of law exists in California relating to the restoration or duplication of lost or destroyed documents and providing remedies for those whose legal proof of land title, etc., has been destroyed. Many of these statutes grew out of the San Francisco earthquake and fire disaster of 1906. These statutes do not contemplate a situation in which a total emergency of the utmost gravity exists throughout the entire State of California which affects most of the functioning parts of its society simultaneously. Two illustrations will make this clear.

The McEnerney Act provides the method by which a person may quiet title to land where the public records in the office of the recorder of the county or city and county have been lost or destroyed by flood, fire or earthquake. The original and supplemental acts provide great detail for the form of a complaint, the issuance and service of summons, the jurisdiction of the court, the answer, the record pendancy of the action, and the rules of procedure. Another set of statutory provisions relates to the proving of the contents of lost or destroyed documents. *The Code of Civil Procedure*, Section 1937, provides that proof of the loss of an original writing must first be made before evidence can be given as to its contents. The section then provides that "* * * upon such proof being made, together with proof of the due execution of the writing, its contents may be proved by a copy or by a recital of its contents in some authentic document or by the recollection of a witness." Even the most cursory consideration suffices to disclose the difficulty of applying these acts state-wide to a post-nuclear attack situation. How much better it would be, and how much a post-nuclear attack situation would be eased, if all important records, both public and private, were available in microfilm copy stored in a spot unlikely to be bombed. A start, but only a short start, has already been made in this direction.

With regard to state records, to the present knowledge of the committee, there is no comprehensive state system nor any specific code sections which apply to the preservation of state records in the event of disaster. However, the Secretary of State has taken steps to protect the records under his control that he considers vital. He has placed in storage in the atomic vault near Felton in the Santa Cruz Mountains a microfilm copy of the original laws of the State of California, original journals of the Legislature, the State Constitution and the Spanish Archives. The Secretary of State plans to microfilm all deeds to property owned in the State of California and store these copies in the atomic vaults near Felton.

The State Employees' Retirement System stores microfilm copies of board minutes, control account records, investment records and other permanent accounting records in a bank vault in secluded areas in the

northern part of the State. Also, the Compensation Insurance Fund has attempted to employ the dispersal principle by storing microfilm copies of their important records.

The Office of the Legislative Auditor is currently making a study of all state records to determine what state records should be moved from costly office space to the central record depository, what records should be destroyed after retention periods have been established, and what records should be in storage away from target areas in the event of disaster. This report is anticipated sometime during the month of January, 1957, and should be of considerable help in laying the groundwork for a comprehensive program of the microfilming and storage of vital state records against the possibility of atomic or hydrogen attack. This the committee considers vital.

Among other efforts in the same direction, the committee notes that the County of Los Angeles has established such a record storage center —Biscailuz Center in the hills adjacent to Los Angeles. The Los Angeles County Recorder has microfilmed some 65,000 volumes out of 77,000 total volumes and stored these at the center. Some 12,000 volumes of records which are either accessory or out-dated have not been microfilmed and 7,000 volumes of births, deaths, and other recordings have not been microfilmed because copies are available elsewhere. It is also worthy of note that according to testimony before the committee these records at the Biscailuz Center occupy 40 square feet of floor space whereas the originals required 30,000 square feet of floor space. Other city and county agencies have been invited to take advantage of this storage facility at a nominal cost but, in most cases, have not yet done so. For example, in the vital matter of the list of registered voters, the Los Angeles County Registrar prints 40 copies of the list of registered voters, maintains at least one bound copy in the office of the county registrar, and has one on file with the State Librarian but, so far, it has not filed any copies of this list either bound or microfilmed at Biscailuz Center Doubt, however, exists as to whether Biscailuz Center would be spared in an H-bomb blast, as the center is only a few miles from the Civic Center, Los Angeles.

Legal authority now exists for officers charged with keeping public records to take such steps as may be necessary to preserve them in the event of disaster. But, as with most other laws of this type, the contingency of a nuclear attack was not anticipated. In this case, either the steps to preserve the records are taken *before* the disaster, or they cannot be taken at all.

Finally, the laws regarding the legal standing of microfilm copies as original records need clarification. The committee notes that the County Recorders' Association is now sponsoring such legislation which should be helpful.

With regard to public records, this committee suggests that the most serious consideration be given to a state-wide determination of what are vital records, to their microfilming, and to the establishment of perhaps several state depositories in which these microfilm copies of vital public records can be stored against the possibility of widespread nuclear attack.

BUSINESS AND LAW

The problems of the maintenance of constitutional government, however difficult, seem almost comparatively straightforward when set against intricate and complex snarls which would beset us in the economic and legal fields in the event of nuclear attack.

Our economic system is one in which a vital role is played by credit in the operation of a vast, intricate set of contractual and proprietary relationships.

The strain that successful though limited attack would impose on the credit system would be terrific. The immediate losses, physical and economic, sustained in the stricken areas alone would render insolvent a great many firms with all or major parts of their businesses in those areas. Solvency ordinarily depends on the maintenance of a going concern and not on the existence of claims for compensation.

In addition to the credit problems of the ordinary sort which we have noted in part, we would have a wide range of problems based on the effects of attack on long-term contracts. The limitations of improvised governmental action to cope with crises would be more than matched by the managerial problems in private industry. A surprise attack on Los Angeles, San Francisco, Chicago, Detroit or New York, if made during business hours, would remove leadership from a wide segment of American business. Closely held corporations might lose not merely their officers and directors but even their shareholders. Plants in the country would survive even though the top management located in the large cities were lost. Even if a protracted crisis had led many firms to put into effect existing plans to keep skeleton forces of officials and trained staff out of the target area, the burdens thrust on them would be far heavier than the full complement had been used to carrying.

What remained of the legal profession would be enormously hard-pressed if a daylight attack succeeded. The attorneys are the very people to whom the stricken banks and business corporations would ordinarily turn to meet problems of the sort which would multiply immediately in the wake of a nuclear attack. Attorneys and their offices are just as vulnerably located as the banks and corporate offices. Those who survived would face perhaps 20 times the normal demand for their services. In normal times the court system is directly involved in only a small fraction of the community's affairs. Only a small part of the Nation's firms go bankrupt even in a depression year; only a tiny fraction of all contracts give rise to disputes involving litigation; only a relatively few propertied people die each year. Nuclear attack would alter this situation rapidly. As insolvency is multiplied, demands for bankruptcy and arrangements would expand explosively. Contract disputes would also proliferate as the basic presumptions of the contracting parties were destroyed. Supply and requirements contracts would almost certainly be disrupted. Distributorships and patent licenses would be affected. Executive employment contracts at high

salaries could embarrass firms. Regulated contracts of utilities and carriers would need re-examination. The corporate mortgage with its various covenants might be unduly restrictive after a nuclear attack had destroyed the factories. Long term lessees might, indeed probably would, experience the same trouble that automobile dealers had with their showrooms in World War II.

The pressure on the courts handling decedents' estates and such family relationships as guardianships would mount fantastically in the areas that had sustained attack and, apart from the dislocation of lives involved, the problems of ownership that would arise if estates were frozen could seriously impede needed economic adjustments. For example, who would vote the stock of closely held corporations when the shareholders of record are dead or missing? Who is entitled to manage and sell property, to compromise disputed claims, to have custody over minors and incompetents? In normal times, the orderly settlement of estates enables us to answer these and many like questions, sometimes slowly, after a man of property has died. But suppose that the death rate among such men has mounted a thousand or two thousand percent in a month?

And where, quite literally, would one find the courts having the jurisdiction over these corporate and property problems? Where, for example, in the event that Los Angeles had sustained a nuclear attack, would be the United States District Court for Southern California, which has its seat in Los Angeles? Where would the Probate Court of Los Angeles County be? Where would the California Supreme Court be if San Francisco were hit by a nuclear bomb while the court was in session?

Similar questions can be multiplied almost endlessly. Disruption caused by atomic attack might require suspension of the statute of limitations; would compel the altering of judicial time tables so that rights would not be lost through failure to file, etc. Should this be state-wide in the nature of a moratorium or should it be an extension of the existing rules on relief from judgments because of mistake, inadvertence and neglect?

Obviously the case load of the courts would require masters, referees, commissioners, pretrial procedures, and sharp limitations on appeals. It follows that the planning for such an eventuality must, of necessity, be done as soon as possible, and, in addition, some system established to provide for temporary appointment of qualified members of the legal profession to act in an official capacity during the emergency.

The multiplicity of problems involved in adjusting our society to successfully withstand a nuclear attack may, at first glance seem so complex and involved as to be hopeless. It is true that the prospect of solving these and countless other problems of like nature for the first time after atomic war has begun is truly desperate. If, however, collectively and individually, we plan and put into effect measures to cope with the situation, we can keep post-attack problems to manageable proportions. Indeed, the very process of thinking them through can lead to a wholesome simplification of a good many existing laws, procedures and private arrangements.

Fortunately, we are not without the benefit of the experience of other peoples in coping with similar problems. A study of foreign experience in World War II is encouraging. With the outbreak of war, England and Germany, for example, put extensive laws into effect to provide for the handling of war-created legal and economic problems. Elaborate contracts were devised to meet wartime exigencies. The courts in England and Germany were authorized to rewrite contracts when they became inequitable by reason of war conditions.

In addition to being able to draw upon the experience of other nations and upon our own experience in disasters of limited extent, we are fortunate to possess an ample number of qualified experts within the state to study and report on the problems and recommend solutions.

APPENDIX No. 1

OPINIONS OF THE OFFICE OF THE LEGISLATIVE COUNSEL

OFFICE OF LEGISLATIVE COUNSEL
SACRAMENTO, CALIFORNIA, February 24, 1956

HONORABLE VERNON KILPATRICK
3715 Abbott Road, Lynwood, California

DISASTER LEGISLATION—#1094

DEAR MR. KILPATRICK:

You have asked (1) what federal legislation has been enacted to meet a disaster caused by an all-out enemy attack, and (2) what provision is made for carrying on the Federal Government if Washington was destroyed and with it, the President, Vice President, the members of the cabinet and the Congressmen.

(1) Congress has enacted extensive provisions to provide a plan of civil defense for the protection of life and property in the United States from attack (Act of Jan. 12, 1951, Ch. 1228, 64 Stat. 1245, 50 U. S. C. App. 2251-2297). The act is popularly known as the Federal Civil Defense Act of 1950 and provides that the responsibility for civil defense be vested primarily in the several states and their political subdivisions with the Federal Government providing the necessary coordination.

The Federal Civil Defense Act provides, among other things, for:

(a) A Federal Civil Defense Administration headed by an administrator appointed by the President, charged, generally, with preparation of plans for civil defense; delegation to departments and agencies of the Federal Government of civil defense responsibilities; making provision for civil defense communications; studying and developing civil defense measures; conducting or arranging training programs for instruction of civil defense officials and other persons; dissemination of civil defense information; assisting and encouraging the states to negotiate and enter into interstate civil defense compacts; making financial contributions to states; and arranging for sale of surplus materials and facilities.

(b) A Civil Defense Advisory Council to assist the Administrator.

(c) Emergency authority, upon proclamation by President, under which federal departments and agencies may provide (1) their personnel, materials, and facilities to the Administrator for the aid of the states, (2) emergency shelter by construction or otherwise, and (3) protective or other work essential to the preservation of life and property, for clearing debris and wreckage, and for making emergency repairs to, and temporary replacement of, communications, hospitals,

utilities, transportation facilities, as public facilities of states or their political subdivisions damaged or destroyed by attack.

Further, during any emergency declared by the President, the Administrator may procure, construct, lease, transport, store, maintain, renovate or distribute materials and facilities for civil defense, and the Administrator is authorized to sell, lease, lend, transfer or deliver materials to or perform services for civil defense purposes on such terms and conditions as the Administrator shall prescribe; coordinate and direct for civil defense purposes, the relief activities of the various departments and agencies of the United States; reimburse any state (or political subdivision thereof) for compensation paid to aid the transportation, subsistence, and maintenance expenses of any employees while engaged rendering civil defense aid outside the State and for materials of the state government or any political subdivision consumed outside of the State, including transportation thereof; provide financial assistance for temporary relief or aid of any civilian injured or in want as the result of any attack; and employ temporary additional personnel without regard to civil service laws and incur such obligations on behalf of the United States as may be required to meet the civil defense requirements of an attack or anticipated attack

(2) The United States Constitution provides that in case of the removal of the President from office, or of his death, resignation, or inability to discharge the powers and duties of his office, the office devolves on the Vice-President (Art. II, Sec. 1 (6), U.S. Const.) The same provision of the Constitution provides that Congress may by law provide for the case of removal, death, resignation or inability both of the President and the Vice President, declaring what officer shall act as President. Pursuant to that provision, the Congress adopted the act of June 25, 1948 (Ch. 644, 62 Stat. 672, 3 U.S.C 19, 20), which reads:

> "Sec 19. (a) (1) If, by reason of death, resignation, removal from office, inability, or failure to qualify, there is neither a President nor Vice President to discharge the powers and duties of the office of President, then the Speaker of the House of Representatives shall, upon his resignation as Speaker and as Representative in Congress, act as President.
>
> "(2) The same rule shall apply in the case of the death, resignation, removal from office, or inability of an individual acting as President under this subsection.
>
> "(b) If, at the time when under subsection (a) of this section a Speaker is to begin the discharge of the powers and duties of the office of President, there is no Speaker, or the Speaker fails to qualify as Acting President, then the President pro tempore of the Senate shall, upon his resignation as President pro tempore and as Senator, act as President.
>
> "(c) An individual acting as President under subsection (a) or subsection (b) of this section shall continue to act until the expiration of the then current Presidential term, except that—

"(1) if his discharge of the powers and duties of the office is founded in whole or in part on the failure of both the President-elect and the Vice-President-elect to qualify, then he shall act only until a President or Vice President qualifies; and

"(2) if his discharge of the powers and duties of the office is founded in whole or in part on the inability of the President or Vice President, then he shall act only until the removal of the disability of one of such individuals.

"(d) (1) If, by reason of death, resignation, removal from office, inability, or failure to qualify, there is no President pro tempore to act as President under subsection (b) of this section, then the officer of the United States who is highest on the following list, and who is not under disability to discharge the powers and duties of the office of President shall act as President: Secretary of State, Secretary of the Treasury, Secretary of Defense, Attorney General, Postmaster General, Secretary of the Interior, Secretary of Agriculture, Secretary of Commerce, Secretary of Labor.

"(2) An individual acting as President under this subsection shall continue so to do until the expiration of the then current Presidential term, but not after a qualified and prior-entitled individual is able to act, except that the removal of the disability of an individual higher on the list contained in paragraph (1) of this subsection or the ability to qualify on the part of an individual higher on such list shall not terminate his service.

"(3) The taking of the oath of office by an individual specified in the list in paragraph (1) of this subsection shall be held to constitute his resignation from the office by virtue of the holding of which he qualifies to act as President.

"(e) Subsections (a), (b), and (d) of this section shall apply only to such officers as are eligible to the office of President under the Constitution. Subsection (d) of this section shall apply only to officers appointed, by and with the advice and consent of the Senate, prior to the time of the death, resignation, removal from office, inability, or failure to qualify, of the President pro tempore, and only to officers not under impeachment by the House of Representatives at the time the powers and duties of the office of President devolve upon them.

"(f) During the period that any individual acts as President under this section, his compensation shall be at the rate then provided by law in the case of the President."

We are unaware of any particular provision that would specify the manner in which government would be conducted if all members of Congress were casualties. However, in the absence of any martial law, upon the selection of new members of Congress in the manner prescribed by the Constitution (see U. S. Const., Amend. XVII and Art. 1, Sec. 2(4)), Congress could provide a person to act as President either through selection of an officer who would qualify under existing law or by further legislation. In the event of a disaster such as you suggest,

undoubtedly considerable legislation would be required to provide for resumption of federal activities.

Very truly yours,

RALPH N. KLEPS
Legislative Counsel

By
GEORGE H. MURPHY
Deputy

OFFICE OF LEGISLATIVE COUNSEL
SACRAMENTO, CALIFORNIA, November 29, 1956

HONORABLE VERNON KILPATRICK
3715 Abbott Road, Lynwood, California

CALIFORNIA DISASTER ACT—#3599

DEAR MR. KILPATRICK:

You have asked for an analysis of the California Disaster Act. This act is Chapter 1 of Division 7 of the Military and Veterans Code, commencing with Section 1500. Most of its provisions were the result of the enactment by the Legislature of the Civil Defense Act of 1950. Some of the provisions of this law are temporary in nature and have been continued in effect by the Legislature at each regular session for subsequent two-year periods. The chapter was further amended at the 1956 Special Session to emphasize its provisions regarding disaster as well as civil defense and to make special provisions to prepare for and cope with disasters other than those caused by war.

Provision is made for the California State Disaster Council which consists of the Governor who is chairman, the Lieutenant Governor, the Attorney General, and appointive members who represent city and county governments, city or county fire services and law enforcement services, and the American Red Cross. The President pro Tempore and the Speaker of the Assembly also meet with and participate in the work of the council to the extent they may constitutionally do so. The members of the disaster council receive no salaries but are reimbursed for their expenses incurred in connection with their duties.

The principal functions of the disaster council are to act as an advisory body to the Governor with reference to the disaster program, to consider and recommend rules and regulations to be promulgated by him, to approve certain mutual aid plans, and to consider and recommend to the Governor for approval a state disaster plan.

The Governor is authorized to assign all or part of his powers and duties under the chapter to the California Disaster Office which is established as part of his own office staff and which was formerly known as the Office of Civil Defense.

The California Disaster Office is in charge of the Director of the Disaster Office, formerly known as the Director of Civil Defense, who is appointed by the Governor with the approval of the Senate and whose salary is fixed by the Governor at not to exceed $15,000 a year. When the Governor proclaims a state of disaster within any region of the State the director acts as a co-ordinator of all state disaster activities

in connection with such emergency, and each state agency and officer is required to cooperate with him in carrying out the provisions of the disaster law.

While the Governor cannot delegate to the director his power to make rules or the power to proclaim a state of extreme emergency or a state of disaster, the director is authorized by law to exercise the power to proclaim a state of extreme emergency or a state of disaster in a proper case when the Governor has not acted because he is inaccessible. In such a case his action must be ratified by the Governor as soon as he becomes accessible, and if the Governor does not ratify the action he is required immediately to terminate the state of extreme emergency or state of disaster as proclaimed by the Director of the Disaster Office.

The Governor is also authorized to create citizen advisory committees to assist in specific fields of civilian protection, war services and disaster mitigation. Members of such committees serve at the pleasure of the Governor and receive no salaries, but are reimbursed for their expenses.

The Governor, with the advice of the disaster council, is authorized to divide the State into mutual aid regions or areas within which counties and cities may exercise their powers within or outside their boundaries either in a state of extreme emergency or state of disaster, or in periods of local peril or emergency.

Counties and cities are authorized to create local disaster councils by ordinance. Such councils are required to develop a plan for meeting any condition of extreme peril or any condition which justifies the proclamation of a state of extreme emergency or a state of disaster, which plan shall provide for the effective mobilization of all the resources of the community both public and private. The state disaster council is required to establish by regulation various classes of disaster service workers and the scope of the duties of each class, and to provide for the registration of such workers. When a local disaster council agrees to follow such regulations it is certified by the state disaster council and thereupon becomes an accredited disaster council. Disaster service workers of an accredited disaster council are entitled to workmen's compensation benefits if killed or injured in the course of their duties as provided by Chapter 10 of Division 4 of the Labor Code. The Governor is authorized to accept gifts, grants or loans of services, equipment, supplies or funds for purposes of civil defense or mitigation of disaster either from the Federal Government or from private sources and may authorize such acceptance by political subdivisions. He is also given broad powers to provide for the necessary offices and equipment and other matters necessary to provide for the establishment and furnishing of the disaster plan.

No organization for civil defense or the mitigation of disaster may participate in any form of political activity or may be employed directly or indirectly for political purposes. The Governor is authorized to adopt and modify necessary orders and rules to carry out the chapter with due consideration of the plans of the Federal Government. Any orders or rules made in the absence of a period of a state of extreme emergency are required to be in writing and are subject to the approval of the disaster council and take effect upon such approval.

The Governor must coordinate the plan and program for the mitigation of disaster, which plan and program shall be integrated into and co-ordinated with the civil defense plans of the Federal Government. He must also co-ordinate the preparation of plans and programs for the mitigation of disaster by the political subdivisions of the State, which plans shall be integrated and co-ordinated with the state disaster plan and program to the fullest possible extent.

The Governor is authorized to exercise broad powers during a period of a state of extreme emergency. A "state of extreme emergency" is defined as meaning the duly proclaimed existence of conditions of extreme peril to the safety of persons and property within the State resulting from enemy attack or threatened military action, and also as a result of other cause such as fire, flood, storm, epidemic, riot, earthquake or air pollution, which conditions by reason of their magnitude are likely to be beyond the control of the protective facilities of any single county or city and require the combined forces of a mutual aid region or regions to combat. "State of extreme emergency" does not include, and the chapter does not apply to, any condition resulting from a labor controversy.

The Governor is authorized to proclaim a state of extreme emergency in an area or region affected, or likely to be affected thereby, when he finds that some or any of the circumstances described in the definition thereof exist, and if he is requested to do so in the case of a city by the mayor or chief executive or in the case of a county by the chairman of the board of supervisors, or he finds that local authority is inadequate to cope with the peril.

During a period of a state of extreme emergency the Governor is granted complete authority over all agencies of the state government and the right to exercise within the area or regions designated all police power vested in the state in order to effectuate the purposes of the chapter. He may issue and enforce rules and orders which he considers necessary for the protection of life and property. These rules and orders become inoperative whenever the period of the state of extreme emergency has been ended either by the expiration of the period or by proclamation of the Governor declaring the period terminated.

In the exercise of these emergency powers the Governor may commandeer or utilize any private property or personnel necessary for such purposes, and provision is made for the State to pay the reasonable value thereof. However, the Governor is not authorized to commandeer any newspaper or any newspaper wire service, but may utilize any newspaper wire service in such a manner as to interfere as little as possible with the use thereof for the transmission of news. Claims for any such payment are to be presented to the State Board of Control in the manner provided for the presentation of claims against the State for taking or damaging of private property for public use.

During such a period the Governor is granted broad powers to order public employees of local agencies to perform duties outside the territorial limits of their agencies.

Whenever it appears that a state of extreme emergency proclaimed by the Governor will continue for more than seven days, the Governor is required to call a meeting of the disaster council to commence not

later than the expiration of such seven days. All of the powers of the Governor under such a proclamation terminate when the Governor has failed to call such a meeting of the disaster council or he has not, within 30 days after issuing the proclamation, convened the Legislature for the purpose of legislating on subjects relating to the state of extreme emergency, except when the Legislature is already convened with power to legislate on such subjects.

The powers of the Governor during a period of a state of disaster are not as broad a "state of disaster" as defined as meaning the duly proclaimed existence of conditions of extreme peril to the safety of persons and property within the State caused by such conditions as air pollution, fire, flood, storm, epidemic, riot or earthquake, or other conditions except as a result of war-caused disaster, which conditions by reason of their magnitude are likely to be beyond the control of the protective facilities of any single county or city and require the combined forces of a mutual aid region or regions to combat. "State of disaster" does not include any condition resulting from a labor controversy.

The Governor is authorized to proclaim a state of disaster in an area or region affected or likely to be affected thereby when he finds that some or any of the circumstances described in the definition thereof exists and if he is requested to do so in the case of a city by the mayor or chief executive, or in the case of a county by the chairman of the board of supervisors, or he finds that local authority is inadequate to cope with the peril.

During a state of emergency, as well as a state of disaster, the Governor is granted broad powers to order public employees of local agencies to perform duties outside the territorial limits of their agencies. He may direct all agencies of the State Government to utilize their personnel, equipment and facilities for activities designed to prevent and alleviate actual or threatened damage due to the disaster, and such agencies may expend any of its moneys for such activities irrespective of the particular purpose for which the money was appropriated.

During a state of disaster the Governor may suspend the provisions of any regulatory statute or statute prescribing the procedure for the conduct of state business, or the rules or orders of any state agency where he determines, and declares that strict compliance therewith would in any way prevent, hinder or delay the mitigation of disaster.

During a state of extreme emergency or a state of disaster in the event that any equipment possessed by a local agency is damaged or destroyed while being used outside of its territorial limits, the agency suffering loss may file a claim for the amount thereof against the State, but it has no claim against the State for services of personnel or for the rental, use, or ordinary wear and tear of equipment, except such extraordinary services incurred by the local agencies in executing mutual aid agreements.

In such cases the laws relating to immunities from liability and exemption from laws or ordinances and pension, relief, disability, workmen's compensation and other benefits which apply to officers or employees of a local agency when performing their functions within their territorial limits shall apply to them to the same degree in per-

formance of their functions outside their territorial limits as provided by this law.

Any physician and surgeon (whether licensed in this or any other state), hospital, nurse, or dentist that renders services during a period of any state of extreme emergency or any state of disaster, at the express or implied request of any state officer or local disaster council is not liable for any injury sustained by any person by reason of such services regardless of the circumstances, except that such immunity does not apply in the event of a wilful act or omission.

Volunteer disaster workers who are duly enrolled and registered have the same immunity as officers and employees of counties or cities performing similar work, and local governmental agencies are not liable for personal injury or property damage sustained by duly enrolled or registered volunteers engaged in or training for disaster preparedness or relief activity.

Any violation of the provisions of the chapter or a refusal or willful neglect to obey any lawful rule or order promulgated or issued as provided therein constitutes a misdemeanor punishable by a fine not exceeding $500 or by imprisonment not exceeding six months or by both fine and imprisonment.

Very truly yours,

RALPH N. KLEPS
Legislative Counsel
By LAWRENCE G. ALLYN
Deputy

OFFICE OF LEGISLATIVE COUNSEL
SACRAMENTO, CALIFORNIA, November 29, 1956

HONORABLE VERNON KILPATRICK
3715 Abbott Road, Lynwood, California

FUNCTIONING OF GOVERNMENT FOLLOWING DISASTERS—#3343

DEAR MR. KILPATRICK:

You have asked us to review a letter addressed to you by Mr. William H. Neal, Assistant City Attorney of the City of Los Angeles, and our previous opinions to you on this subject and advise you as to any conflict.

We do not believe there is any essential conflict between our opinions to you and Mr. Neal's letter.

Mr. Neal points out that most city charters provide for the filling of a vacancy in an elective office by a majority vote of the members of the city council and states that some legislation is desirable to provide for filling such vacancies where a disaster results in a lack of a quorum of a city council by reason of death or incapacity of more than a majority of the council

Mr. Neal also points out that in an emergency it may be that a de facto government may take over to meet the needs of a situation and cites cases in which the courts have upheld the acts of de facto city governments in emergency situations.

In our opinions to you we discussed only the express constitutional and statutory provisions that relate to the continuance or reestablishment of local and state governments following a disaster and the need for further legislative action if such continuation or reestablishment is to be provided for in an orderly and unquestionably valid manner. We did not consider the question of the possibility of de facto governmental action since there is so little case law in this field and any expression of opinion in that respect would be largely speculative and for the further reason that your primary concern was to consider legislation to provide for de jure continuation or reestablishment of governmental agencies.

There is another point not discussed in our opinions that we feel should be brought to your attention. We did not consider the possible inherent powers of the Governor under a declaration of martial law since there is not enough case law on this subject to afford a basis for any positive opinion. Also we did not consider the broad powers that the Legislature has endeavored to invest in the Governor under the California Disaster Act (Chapter 1 of Division 7 of the Military and Veterans Code) since this act has never been specifically construed and there is very little judicial authority as to the extent the Legislature can add to the war powers of a Governor (see Re Opinion of the Justices by the Massachusetts Supreme Judicial Court, 150 A.L.R. 1482, and following note).

In the event of an atomic attack it is most likely that martial law will be declared as well as a state of extreme emergency as provided in the California Disaster Act. While it may well be that if the Governor, purporting to act pursuant to such declarations, adopted any reasonable methods designed to continue or restore state or local government his action would be upheld eventually by the courts as establishing de facto if not de jure governmental agencies, we can express no unqualified opinion on this subject that could be supported by judicial decisions. As previously stated, we believe that legislative action is necessary to provide for the orderly and de jure continuance or restoration of state or local governments in the event of an atomic disaster.

Very truly yours,

RALPH N. KLEPS
Legislative Counsel
By LAWRENCE G. ALLYN
Deputy

OFFICE OF LEGISLATIVE COUNSEL
SACRAMENTO, CALIFORNIA, November 21, 1956

HONORABLE VERNON KILPATRICK
3715 Abbott Road, Lynwood, California

HOLDING OF ELECTIONS AFTER DISASTER—#3324

DEAR MR. KILPATRICK:

You ask what might be possible to provide for prompt elections on state or city levels in the event that voters' registration lists were destroyed in a major disaster.

One possible solution would be to provide, by appropriate amendments to the Elections Code, that voters under such circumstances could swear to affidavits that they were residents of the precinct in which they vote and were qualified to vote therein, which affidavits could be sworn to before the election officers of the precinct and delivered to those officers at the same time as the voters cast their ballots. In other words, the voters would be authorized to register and to vote at the same time and place as the election was held. A precedent for this procedure can be found in Chapter 1 of the statutes passed at the Special Session of our Legislature that convened on January 27, 1944, which made similar provisions for absentee voters under the War Voters Law except that the affidavits were mailed with the absent voter ballots.

Another possible solution you may wish to consider is legislation to provide for photocopying or microfilming the voter registers in the more populous counties and the depositing of these copies in some safe place either within or without the county. However, we have no information that would enable us to advise you of the feasibility of such a procedure, and it undoubtedly would be more expensive and cumbersome than our other suggestion.

Very truly yours,

RALPH N. KLEPS
Legislative Counsel
By LAWRENCE G. ALLYN
Deputy

OFFICE OF LEGISLATIVE COUNSEL
SACRAMENTO, CALIFORNIA, November 21, 1956

HONORABLE VERNON KILPATRICK
3715 Abbott Road, Lynwood, California

FUNCTIONING OF LEGISLATURE FOLLOWING DISASTER—#3323

DEAR MR. KILPATRICK:

You have asked what provision could be made to insure continuity of the Legislature in the event of a major disaster either by providing for appointment by the Governor to fill vacancies or by constituting the surviving members a quorum until an election can be held.

You also ask whether any type of emergency legislation is possible in view of the fact that a constitutional amendment might require at least two years to enact.

In order to provide either for the filling of vacancies in the Legislature by the Governor in the event of a major disaster or to provide that the surviving members constitute the Legislature and correspondingly reduce the number of members of each house that constitute a quorum and the number necessary to pass a bill, it would require a constitutional amendment since the provisions of law regarding these matters are now contained in Article IV of the State Constitution. Either method of procedure appears to us to be feasible and presents no legal problem. The choice of methods is entirely one of policy.

A constitutional amendment must, of course, be submitted to the electors of the State for their approval. However, such approval need not be deferred necessarily until the next general election. The Legislature has power to enact a law calling a special election at which such a constitutional amendment could be submitted to the voters. Pursuant to Section 1 of Article IV of the Constitution, acts calling special elections can be made to take effect immediately so that such an election could be held within a few months after such an act is passed after allowing sufficient time for the preparation of arguments for and against the measure, the printing of ballot pamphlets and ballots and the other procedural steps necessary for the conduct of the election.

Very truly yours,

RALPH N. KLEPS
Legislative Counsel
By LAWRENCE G. ALLYN
Deputy

OFFICE OF LEGISLATIVE COUNCIL
SACRAMENTO, CALIFORNIA, November 15, 1956

HONORABLE VERNON KILPATRICK
3715 Abbott Road, Lynwood, California

EFFECT OF DISASTER ON MEMBERS OF LEGISLATURE AND CONGRESS—#3315

DEAR MR. KILPATRICK:

You have asked us to assume that an atomic disaster occurs in one of the large cities of the State that renders the city uninhabitable for several years due to radioactivity, assuming further that the Members of the Legislature and of Congress from districts within the city survive but are forced to reside elsewhere. You ask:

(a) Would the legislators continue to be members of the Legislature despite the fact that no one resides in their districts and despite the fact that the particular legislators no longer live in their districts?

(b) What would the effect be when their terms end and no election can be held in the district?

You also ask the same questions with respect to Members of Congress from districts in the area.

It is our opinion that the legislators would continue to be members of the Legislature for the remainder of their terms.

When the terms of these members expire there will be a vacancy that could not be filled except by an election.

The same answers apply equally to members of Congress.

The only residence requirement with respect to members of the Assembly is contained in Section 4 of Article IV of the State Constitution, which provides that a member must be a citizen and inhabitant of the State three years and of the district for which he shall be chosen for one year next before his election. His membership would not be affected by removal from the district after his election. Further, under the principles of law relating to residences a member would not necessarily lose his status as a resident of the district if he ceased to live in

the district because it was uninhabitable, provided it was his intention ultimately to resume living in the district when able to do so.

There is nothing in the Constitution or statutes that would cause a member to lose his status as such because of a change in population of the district even though such change is so great that no person actually lives in the district. Further, the same rules of residence would apply to electors from the district as apply to members.

As to the second question, Members of the Assembly are elected biennially for a term of two years as provided in Section 3 of Article IV of the State Constitution. There is no provision for a member to hold over until his successor is elected and qualifies. Section 12 of Article IV provides that when vacancies occur in either house the Governor shall issue writs of election to fill such vacancies. There is no alternative method of filling vacancies in the Legislature, such as by appointment. Consequently, the uninhabitable district would not have a representative in the Assembly until an election could be held.

So far as Members of the House of Representatives are concerned, the only residence provision we have found is in Section 3 of Article I of the United States Constitution, which requires only that representatives be inhabitants of the State in which they are chosen. While our State Constitution and the Elections Code provide for the establishment of congressional districts, we found no express requirement that members of Congress for those districts must reside in them either at the time of their election or during their terms, nor did we find any court decision indicating that this requirement is necessarily implied.

Section 2 of Article I of the United States Constitution provides that the House of Representatives shall be composed of members chosen every second year, and the Twentieth Amendment provides that the terms of representatives end at noon on the third day of January in the years in which such terms would have ended had that amendment not been ratified. Section 4 of Article I provides that when vacancies happen in the representation of any State the executive authority thereof shall issue writs of election to fill such vacancies.

In view of the foregoing constitutional provisions it is our opinion that Members of the Assembly and of Congress would continue to serve out their terms if their districts become uninhabitable due to radioactivity but that vacancies would exist at the end of those terms which could be filled only by the holding of proper elections. A possible remedy would be to authorize the Legislature under such circumstances to reapportion Assembly and Congressional districts and to create new districts from which members could be elected. This would require a constitutional amendment since our State Constitution now permits such action once in ten years following the decennial federal census.

Very truly yours,

RALPH N. KLEPS
Legislative Counsel
By LAWRENCE G. ALLYN
Deputy

OFFICE OF LEGISLATIVE COUNSEL
SACRAMENTO, CALIFORNIA, October 5, 1956

HONORABLE VERNON KILPATRICK
3715 Abbott Road, Lynwood, California

PRESERVATION OF GOVERNMENTAL RECORDS DURING DISASTER—#2792

DEAR MR. KILPATRICK:

You have asked what provisions have been made by state law for the preservation of essential records of state agencies in the event of a disaster such as an atomic attack.

There does not appear to be any provision of law specifically providing for storage of agency records in designated bomb proof vaults.

Apparently, Section 1229 of the Government Code is the only section that provides for preservation of records where modern wartime emergency conditions were contemplated. It grants the public officer charged with custody of the records the power to take any action, including the power to transfer the records to any place within the state, necessary for preservation of the records during certain emergencies. The section reads as follows:

> "Any public officer who is charged with the custody of public records may take any action, including the transfer of such records to another place within the State, necessary for the safekeeping of such records during any duly proclaimed extreme emergency pursuant to Division 7 of the Military and Veterans Code."

The "extreme emergency" referred to in the above section is defined in Sections 1505 and 1505.5 of the Military and Veterans Code as follows:

> "As used in this chapter, 'state of extreme emergency' means the duly proclaimed existence of conditions of extreme peril to the safety of persons and property within the State caused by an enemy attack or threatened attack by land, sea, or air, or when upon the advice of the commanding general of this area, such an attack is imminent, an air raid alarm, sabotage, or other cause such as fire, flood, storm, epidemic, riot or earthquake, which conditions by reason of their magnitude are or are likely to be beyond the control of the protective services, personnel, equipment and facilities of any single county, city and county, or city and require the combined forces of a 'mutual aid region or regions' to combat. 'State of extreme emergency' does not include nor does any provision of this chapter apply to any condition resulting from a labor controversy."
>
> "A 'state of extreme emergency' exists immediately and without a proclamation thereof by the Governor whenever this State is attacked by an enemy of the United States by the use of atomic weapons. A period of a state of extreme emergency existing as provided in this section shall be ended in the same manner as a state of extreme emergency proclaimed by the Governor."

Preservation of historical items and some state records is provided for by storage in the State Archives under the custody of the Secretary of State. The provisions governing the operation of the archives are set forth by Sections 12220 to 12229 of the Government Code and are as follows:

"12220. As used in this article, 'item' includes but is not limited to any paper, document, book, map, or other type of record.

"12221. The Secretary of State is the custodian of the public archives of the State.

"12222. The Secretary of State shall maintain and properly equip safe and secure vaults for the preservation, indexing, and use of the archives.

"12223. The Secretary of State shall receive into the archives any item that is required by law to be delivered to or filed with him.

"12224. The Secretary of State may receive into the archives any item that he deems to be of historical value and shall receive into the archives any other item from a State agency if directed to do so by the Department of Finance.

"12225. With the approval of the Department of Finance, the Secretary of State may at any time return to the State agency from which it was received any item in the archives which he does not deem to be of historical value.

"12226. With the consent of the Secretary of State, the governing body of a county or city may by order or resolution direct the transfer to the Secretary of State for inclusion in the State archives, of official items it deems have historic interest or value, and which are in the custody of any officer of the county or city. Accurate copies of the transferred items shall be substituted for the originals when the governing body deems necessary.

"12227. The Keeper of the Archives is responsible for the preservation and indexing of material deposited in the State archives, and shall make the material readily available for use.

"12228. The Keeper of the Archives shall give an appropriate receipt for all material received by him as a part of the archives.

"12229. The Secretary of State may maintain any item in an active file in his office for such time as he deems proper before transferring it to the archives."

Some other state records are preserved by the Central Record Depository under the custody of the Secretary of State. The provisions governing the operation of the above are contained in Sections 12260 to 12264 of the Government Code and are as follows:

"12260 The Secretary of State shall establish in his office a bureau to be known as the Central Record Depository, for the receipt and custody of all records required or permitted by law to be filed or deposited in the office of the Secretary of State, and may employ such personnel as may be necessary for the proper and efficient operation of the bureau.

"12261. The Secretary of State may, with the approval of the Department of Finance, contract with any qualified person for a

professional survey of records in his custody, in order to establish a uniform method of filing which shall be followed by all state agencies filing records with the Secretary of State.

"12262. The Secretary of State may, with the approval of the Department of Finance, do any or all of the following:

(a) Acquire such filing equipment, lighting equipment, and other equipment as may be necessary for the proper functioning of the bureau.

(b) Provide suitable space for the occupancy of the bureau, and cause such alterations and repairs to be made in his offices and the space under his jurisdiction as may be necessary or convenient for that purpose.

(c) Adopt, amend, and rescind rules and regulations for the receipt and filing of state records in his custody.

(d) Do all things necessary to preserve valuable state records.

"12263. The Secretary of State may, after consultation with the respective interested state agencies, determine as to any record or class of records, the period for which it shall be kept before being destroyed, whether it shall be microphotographed before being destroyed, or whether it shall be microphotographed for the purpose of making a duplicate record.

"12264. The public records of any state agency may be microfilmed or otherwise photographically reproduced and certified on the written authorization of the head of the agency. The microfilming or photographic reproduction must meet the standard specification of the United States Bureau of Standards.

"The certification of each such reproduction or set of reproductions shall be in accordance with the standards, or have the approval, of the Attorney General The certification shall contain a statement of the identity, description, and disposition or location of the records reproduced, the date, reason, and authorization for such reproduction, and such other information as the Attorney General requires.

"Such certified photographic reproductions shall be deemed to be original public records for all purposes, including introduction in courts of law and state agencies."

Very truly yours,

RALPH N. KLEPS
Legislative Counsel

By AUSTIN N. BARBER, Deputy

APPENDIX No. 2

LETTER OF THE LEGISLATIVE AUDITOR ON PRESERVATION OF ESSENTIAL STATE RECORDS IN EVENT OF DISASTER

JOINT LEGISLATIVE BUDGET COMMITTEE
CALIFORNIA LEGISLATURE
SACRAMENTO, CALIFORNIA, October 2, 1956

HONORABLE VERNON KILPATRICK
Assemblyman, 55th District
3715 Abbott Road, Lynwood, California

DEAR ASSEMBLYMAN KILPATRICK:

In reply to your telephone call of September 28, 1956, regarding the California system and provisions for preservation of essential state records in event of disaster, we submit the following.

To our knowledge at present there is no comprehensive state system nor any specific code provisions which apply to the preservation of state records in the event of disaster. However, the Secretary of State has taken steps to protect the records under his control that he considers vital. He has placed in storage in the atomic vault near Felton in the Santa Cruz Mountains a microfilm copy of the original laws of the State of California, original Journals of the Legislature, the State Constitution and the Spanish Archives. The Secretary of State plans to microfilm all deeds to property owned by the State of California and store this microfilm copy in the atomic vaults near Felton.

The State Employees Retirement System stores microfilm copy of board minutes, control account records, investment records and other permanent accounting records in a bank vault in Grass Valley. Also, the Compensation Insurance Fund has attempted to employ the dispersal principal by storing microfilm copies of their important records in their Fresno office.

Our office is currently making a study of all state records to determine what records should be moved from costly office space to our central records depository, what records should be destroyed after retention periods have been established and what records should be in storage away from target areas in the event of disaster. We anticipate that this report will be completed during the month of January.

A survey by our office of the storage and use of records of the Bureau of Vital Statistics of the Department of Public Health was reported to the Joint Legislative Budget Committee on December 1, 1955. A copy of this report is attached. This survey indicated that a microfilm copy is being made of these records but there has been no provision for disaster security storage. Further study is being made of this problem due to a difference of opinion in regard to whether the microfilm copy

or the original document should be used for reference in making duplicate copies.

We will be happy to supply you with copies of the results of our current studies of records management as they are completed or as they progress, if you wish.

Sincerely,

A. ALAN POST
Legislative Auditor

THE STORAGE AND USE OF RECORDS OF THE BUREAU OF VITAL STATISTICS, DEPARTMENT OF PUBLIC HEALTH

Prepared by the Legislative Auditor
December 1, 1955

The purpose of this report is to determine whether the procedures followed by the Bureau of Vital Statistics concerning the birth, marriage, and death certificates filed with the Department of Public Health pursuant to Division 9, Chapters 4, 5, and 6 of the Health and Safety Code provide the greatest possible efficiency and economy.

Facts obtained from the Bureau of Vital Statistics indicate that approximately 15 and one-half million pieces of paper are presently being filed. The bureau has filmed all of the certificates and made a negative roll. All of the original records are stored with the film in the basement of a building at 631 J Street in Sacramento.

The bureau has given consideration to a program which would provide: (a) protection of all vital records, (b) an adequate copy for office use, and, (c) increased utilization of office space and equipment through permissive legislation to destroy the original records. These are sound objectives for an effective records management program. However, the $115,000, spent in the last eight years has failed to accomplish these objectives; this consists of $70,000 for restoration and $45,000 for microfilming.

The present vital records protection program consists of microfilming the original certificates of births, marriages, and deaths It is generally recognized that an effective program of this type must have procedures to disperse duplicate copies of vital records to locations which provide protection of these records in times of disaster. There should also be a plan to evacuate or remove all records for which no duplicates exist to a location of safekeeping in times of disaster

The bureau has, as yet, gone only so far as to provide a copy of all documents through microfilming. However, this copy is being stored in the same rooms as the original records, thereby largely eliminating the protection which is offered in the event of disaster by having a duplicate.

It is further noted that the building in which the records are stored, while being reasonably fireproof, is not a desirable place to house records. The area does not have adequate air conditioning, humidification, or ventilation for proper storage of records of film. It is our opinion that little protection has been provided for these records in the duplication of them through the use of microphotography, because no attempt has been made at dispersal.

After a review of the material submitted by the bureau and an inspection of the premises, we submit the following record-keeping plan for the department, which we believe adequate and the most economical at this time.

1. The generally accepted standard is that if there are less than 10 references per cubic foot a year, records are considered inactive and may be scheduled for storage with the Central Record Depository. Active records should be retained in the office building. From an observation of the present file operation, it would appear that a large percentage of the records could be scheduled for record center storage.

Assuming that a 50 percent distribution of files could be accomplished (one-half in office and one-half in storage) the following storage costs would be applicable: Total records holdings of the bureau, i.e., birth, marriage, and death certificates, are estimated to be 2,500 cubic feet. Scheduling one-half of this for storage indicates that 1,250 cubic feet of files could be stored in 1,250 cartons on 21 shelving units. This is a storage ratio of 10 cubic feet of records stored to one square foot of floor area occupied. The present ratio in the office is less than two cubic feet for one square foot.

Records should be stored in facilities which are available in the Central Record Depository of the Secretary of State's office. Information concerning these facilities is outlined in Exhibit A.

The cost of the containers (approximately 13 cents) and the shelving units (approximately $35 per section) would represent an initial total cost of $900 and, under present conditions, would have to be borne by the bureau Cost to the State from that time on, based on present space rates, would be about $180 a year.

Even at the present rate of records increase (approximately 13 percent annually), the documents can be stored for far less than the cost of a second microfilm copy.

2. Microfilm presently being stored in the basement should be removed and stored in a location designed to preserve records against the elements and disasters, such as bombing attacks, floods, and earthquakes Original records would then be used for all references. This is substantially in agreement with the recommendation made in a 1951 report of the Management Analysis Section of the Department of Finance, with the exception that that report envisioned the use of microfilm for reference instead of the original records Our recommendation does not contemplate the destruction of original records in the near future.

Considering that $70,000 already has been spent on rehabilitation of these documents, it is reasonable to assume that, stored under proper conditions, they should provide many more years of service with a minimum expenditure Also significant is the diminishing rate of reference in relation to the age of the records.

The advantages of the plan outlined above are:

a. It would release office space and equipment.

b. It would provide realistic protection for vital records.

c. It would provide for planned records retirement.

d. The continued use of the original records for office use would eliminate the necessity for a duplicate microfilm copy for this purpose, thus saving cost of additional microfilm equipment and supplies.

In our opinion, the existing photostat equipment used to produce certified copies from the originals is adequate for present needs.

Exhibit A

FACILITIES OF THE STATE ARCHIVES AND CENTRAL RECORD DEPOSITORY

Office of the Secretary of State
State of California

Plant

On or about March 1, 1956, the State Archives and Central Record Depository will become the prime occupant of the Old State Printing Plant at 1020 O Street. Approximately 40,000 square feet of operational area has been assigned for immediate use. In the future, it is expected that normal expansion will require the use of the entire structure, and it will become known as the State Archives and Record Center Building. Constructed of reinforced concrete, this sturdy fireproof building will provide safe, secure, and economical housing. Temperature, humidity controls and an alert fire-alarm system will be additional safeguards for the State's records.

Storage and Service

Storage facilities will be available as usual, including the use of the most economical and modern record center storage equipment; namely, a special type cardboard container (housing both letter and legal size material) and a steel shelving unit. Records will be received from the agencies and checked against their inventories; a signed receipt will then be issued and transmitted to the agencies for the records If information is required from the records, it will be given in 85 percent of the instances over the telephone. Plans have been made for the installation of a two-way internal communication system in the building that will enable the staff to render rapid reference service to the agencies This system also will save innumerable steps for the staff and, thereby, reduce operational costs. In other instances, the agencies may send a representative to search the records; the records may be transmitted to the local agencies through the state mail service, and, for the out-of-city agencies, the records can be mailed or expressed

Reproduction

Copies of records will be made by photostat process in the reproduction section of the office of the Secretary of State. This service can be rendered within a reasonable time, and emergency requests can be expedited.

Disposition

As in the past, the disposition of most records authorized for destruction will be by sale as waste paper. This will include the deposited records at the end of their retention periods, as well as any records the agencies wish to transport to the depository for inclusion in the shipments to the waste paper dealer.

APPENDIX No. 3

LETTER OF THE ATTORNEY GENERAL ON LEGISLATION FOR CONTINUITY OF STATE AND LOCAL GOVERNMENT IN EVENT OF ATOMIC ATTACK

OFFICE OF THE ATTORNEY GENERAL
SAN FRANCISCO, December 5, 1956

HONORABLE VERNON KILPATRICK, *Member of the Assembly, Fifty-fifth District*
Chairman of the Assembly Subcommittee on the Impact of Enemy Attack on Constitutional Government, Los Angeles, California

DEAR MR. KILPATRICK:

After a number of discussions with our office, you have asked for my views upon the need for standby legislation to provide continuity for or restoration of state and local government in the event that California receives an atomic attack.

The consideration which your committee is giving to this problem is definitely needed. In my opinion the essential point is to recognize the desirability and need for study of this problem and the making of plans to make possible continuation of civil government or its restoration at an early moment. In some quarters there is an attitude, often not expressed, that such study and planning is a waste of effort and time because if an atomic attack is made the Army will take over anyway and impose martial rule. That type of thinking is unfortunate. In the first place, *present* federal thinking places primary operating responsibility on state and local governments. Martial rule would be established only when the civilian government is unable to function satisfactorily. This basic approach recognizes that people will respond best to the leadership of representative civil government. Hence, our efforts should be directed toward making government adequate to the situation.

However, the problems—many of which are novel—and their solutions present so many matters of policy that I should think that study and planning should be the work of a special advisory committee composed of representatives of the California Disaster Office, representatives of the state and local bar associations, the Legislative Counsel, and the Attorney General. With the impending meeting of the Legislature, it might be advisable to introduce a number of spot bills, covering the subjects which are presently recognized as requiring legislation, with a view toward supplying the specific legislation when the Legislature reconvenes in March. Meanwhile, with the help of the present hearing of this Committee, an agenda of problems could have been drawn up and specific legislation prepared.

You have inquired regarding the following matters:

1. Legislation to provide for appointment by the Governor to fill vacancies or to constitute the surviving members a quorum until elections can be held.
2. Legislation to reconstitute voters registration lists destroyed in order to provide for elections on city and state levels.
3. If Legislators would continue to be members of the Legislature, despite the fact that neither the Legislators nor their constituents reside in their districts. Secondly, what would be the effect when their terms end and no election can be held in their district?

I have read the opinions of the Legislative Counsel on the above matters. With respect to the first question, I agree with the conclusion of the Legislative Counsel that a constitutional amendment would be required to provide for either method by which the Legislature could resume functioning.

I am also in accord with the suggestion that, by appropriate amendments to the Elections Code, voters could place themselves on the registration lists through affidavits.

With respect to the third question, it also is correct that the Legislators would continue to be members of the Legislature for the remainder of their terms, but that at present the terms of these members would expire and the resulting vacancies could not be filled without an election. It is also my view that a constitutional amendment would be required in order to permit members of the Legislature to continue to serve beyond the expiration of their terms until elections could be held.

As you know, the Attorney General is one of the designated members of the California State Disaster Council and I shall read the suggestions which are made at this hearing to determine what action upon them the Council should be asked to take.

Very truly yours,

EDMUND G. BROWN
Attorney General

APPENDIX No. 4

LETTER OF WILLIAM H. NEAL, ASSISTANT CITY ATTORNEY, CITY OF LOS ANGELES, ON RESTABLISHMENT OF LOCAL GOVERNMENT IN CASE OF DISASTER

OFFICE OF CITY ATTORNEY
LOS ANGELES, CALIFORNIA, August 30, 1956

HONORABLE VERNON KILPATRICK,
Assemblyman, 55th District,
3715 Abbott Road, Lynwood, California.

Re: Local government reestablishment in case of war or other disaster resulting in death or incapacity of majority of governing body De facto government.

DEAR MR. KILPATRICK:

At the request of Mr. J. E. McCormack, representing your interim committee, I am submitting herewith some personal views as to the maintenance of local government services after an enemy attack during war or other disaster wherein the majority of the members of a local governing body may have been killed or so incapacitated as to be unable to carry on their official functions.

You have been advised by both the Attorney General and the Legislative Counsel that no present laws adequately cover the situation which your committee has under contemplation. With this interpretation I generally agree. The State Constitution attempts to cover such situations in Section 8 of Article 5, which reads:

> "Sec. 8. When any office shall, from any cause, become vacant, and no mode is provided by the Constitution and law for filling such vacancy, the Governor shall have power to fill such vacancy by granting a commission, which shall expire at the end of the next session of the Legislature, or at the next election by the people."

This provision is a carry-over from the 1849 Constitution which was construed in *People* v. *Cazneau*, 20 Cal. 504 (1862) to mean that this constitutional provision was applicable only when no law prescribed a mode or method for filling vacancies in office. The words "Constitution and law" in Section 8, Article 5 have been construed to mean "Constitution or law." (*People* v. *Nye*, 9 Cal. App. 148 (1908).)

Most city charters contain provisions for the filling of vacancies in office. The charter of the City of Los Angeles provides for the filling of a vacancy in an elective office by a majority vote of the members of the city council (Section 267). Therefore, the constitutional provision would not be applicable because the method for filling vacancies is provided for in the charter. A case arose in the City of Eureka with the adoption of a new charter in 1895 over the filling of the office of harbor

master. The State Supreme Court in *Quigg* v *Evans*, 121 Cal. 546 (1898), decided that case by saying: "There being no mode specifically provided by law or by the Constitution for filling such vacancy, the Governor was authorized to do so under the provision of the Constitution already quoted."

It occurs to me that some legislation is desirable to take care of situations where, although a law may provide for the filling of vacancies in office, it was impossible to comply therewith because of a lack of a quorum to act by reason of death or incapacity of more than a majority of the local government having the power of election or appointment. This might be accomplished by vesting such power in the Governor.

There do not appear to be any California decisions upon the precise question with which your committee is confronted However, Californians have always been able to handle emergency situations with respect to local government. Before the State was organized and admitted to the Union local governments were established by the residents of California mining camps which exercised both civil and criminal jurisdictions and passed local laws governing mining camps. Many of these local laws and customs were later recognized as legal by the State Supreme Court (Mining Camps, a Study in American Frontier Government, by Charles Howard Shinn (Knolf, 1948, reprint, pp. 258 and 259, and cases there cited))

In an emergency de facto governments may take over to meet the needs of a situation and until legal machinery may fill the hiatus left by the death or incapacity of a de jure government be re-established. Such de facto governments have been recognized by the courts in many cases. The rule is that a de facto corporation may not be collaterally attacked. Only the state itself may question the legality of the de facto organization. With respect to the rule which forbids the collective attack upon the existence of a municipal corporation, the Supreme Court of New Mexico, in *City of Albuquerque* v. *Water Supply Co.*, 174 Pac. 217 (1918), reviews many cases on the rule, and quotes from *City of Topeka* v. *Dwyer*, 78 Pac. 417 (Kansas, 1904) as follows:

> "The rule rests wholly in expedience, and operates in defiance of other legal doctrines. The consequences to society of allowing private collateral attacks upon the existence of cities would be intolerable, and hence courts are concerned with the question, not if there exists a valid law, but if considerations of the public welfare shall forbid any inquiry as to whether or not there is a valid law; not if constitutional limitations have been transgressed, but if the public tranquility and the effective administration of government require that the matter of validity or invalidity shall be ignored, and a situation of affairs be arbitrarily recognized as if it were legal, whether in fact it be so or not."

In a case which arose in California, *Tulare Irrigation District* v. *Shepard*, 185 U. S. 1 (1902), the United States Supreme Court held that validity of the organization of an irrigation district, under the California Irrigation Act of 1887, because of insufficiency of notice, cannot be raised as against bona fide holders of bonds issued by such district

which met all requirements to constitute a de facto corporation, which requirements are set forth in the decision as follows:

> "From the authorities * * * it appears that the requisites to constitute a corporation de facto are three (1) a charter or general law under which such a corporation as it purports to be might lawfully be organized; (2) an attempt to exercise thereunder; and (3) actual user of the corporate franchise. The case at bar contains the requisites."

An interesting case upon the ingenuity of the American people to set up local governments whenever and wherever they may settle arose out of the opening of the Oklahoma country to settlement and occupancy in 1889. A large number of people settled for townsite purposes upon the lands now occupied by the City of Guthrie. The Act of Congress, approved March 2, 1889, contained a provision that no entry of lands for townsite purposes shall embrace more than 320 acres in any one entry. To avoid this inhibition, and segregate more lands for the purpose of trade and business, four separate entries were made of these lands, consisting of 320 acres each, and were severally denominated Guthrie, East Guthrie, Capitol Hill and West Guthrie. The townsite settlers and occupants of each of these subdivisions organized what were called provisional governments with charters adopted by the people at public meetings held for such purpose, and each selected municipal officers, made public improvements, graded streets, erected buildings, constructed bridges, adopted laws and ordinances, and arrested, punished and imprisoned violators of such ordinances. These provisional governments assumed and exercised all the powers, functions and authority of legally-constituted municipal corporations, and continued to exercise the same until 1890 when they were consolidated and organized as a village corporation. During the existence of the several provisional governments they each contracted and created in various ways pertaining to their municipal affairs certain debts, which remained unpaid at the time the said provisional governments were converted into a legally constituted municipal corporation. The territorial legislature passed an act requiring the consolidated City of Guthrie to pay the debts of the former provisional governments. The United States Supreme Court in deciding the case said:

> "The first question to be determined in this controversy is as to the legal status or character of the so-called 'provisional governments.' It is a well-established rule of law that before there can be a *de facto* municipal corporation there must be some authority for a *de jure* corporation. A *de facto* corporation cannot exist where there is no law authorizing a *de jure* corporation. * * * These provisional governments grew out of a necessity made by the absence of legal authority. They were aggregations of people associated together for purpose of mutual benefit and protection. Without any statute law, they became a law unto themselves, and adopted the forms of law and government common among civilized people, and enforced their authority by the power of public sentiment. They had no legal existence. * * * The *de jure* corporation having succeeded to all the property, public improvements, people,

and territory of the provisional governments, has the legislature power to compel the *de jure* government to pay the debts of its illegal unauthorized predecessor? It is a fundamental rule that a legislature may, by a retroactive statute, cure or ratify any defect which it might have, in the first instance, authorized unless prohibited by some constitutional or organic provision; or it may, by a retroactive statute, legalize any proceedings that it might have authorized."

The court held that the act passed by the territorial legislature was legally valid and that the City of Guthrie was compelled to pay such debts in accordance with the territorial statute.

These are some rambling thoughts which bear upon the problem which confronts your committee. If I can be of any further assistance to you or your committee please advise me.

Very truly yours,

WILLIAM H. NEAL,
Assistant City Attorney.

APPENDIX No. 5

PROGRESS REPORT OF LEGISLATIVE AUDITOR ON RECORD DISPOSAL STUDY

JOINT LEGISLATIVE BUDGET COMMITTEE
SACRAMENTO, CALIFORNIA, January 15, 1957

HON. VERNON KILPATRICK
Assemblyman, 55th District
State Capitol, Sacramento, California

DEAR ASSEMBLYMAN KILPATRICK:

Pursuant to our letter of October 2, we are furnishing you the following progress report on our record disposal study.

We wish to recommend for your consideration the introduction of skeleton bills on the following topics. A brief statement of our tentative findings follows each heading. Our report, when completed, will be released through the Joint Budget Committee, and we shall see that you get one at the earliest possible moment. This will contain further detailed justifications of the present recommendations.

1. An act to add Section 12264 to the Government Code, to establish a Joint Interim Committee on Essential Records, and declaring the urgency thereof, to take effect immediately.

Summary Justification. A nuclear attack on California would find only the official archives of the State, and two relatively minor administrative record groups microfilmed *and in adequate bombproof storage.* An immediate determination should be made, under legislative guidance and mandate, of which records *are essential to the continuance of government* after such a disaster. Recommendations should be presented by each agency to the Committee, standards set, and the absolute minimum of *essential* records microfilmed immediately. The bill should be implemented with funds, tentatively in the amount of $150,000.

2. An act to add Section 12260.1 to the Government Code, declaring the intention of the Legislature to designate the building at 1020 O Street, Sacramento, as the California Central Record Depository and Archives.

Summary Justification. This building is now divided between the Central Record Depository and Archives, and a sorting and mailing activity of the Personal Income Tax Division of the Franchise Tax Board. A conflict of interest has arisen, which will reach an acute stage about September 30, 1959, so far as we can determine at present. At that time additional space will be required, and one activity or the other will be forced to move. We believe that loft space for the Franchise Tax Board can be obtained more economically than adequate warehousing space can be obtained for the Central Record Depository and Archives. Architects of the Space Allocation Section of the Depart-

ment of Finance, and of the Division of Architecture of the Department of Public Works, should be heard, as well as representatives of the agencies affected.

If the Central Record Depository and Archives is required to move, legislation should be introduced at this session to purchase or build housing for it. Rental space or buildings at the State Fairgrounds can be used, in an emergency, for the Franchise Tax Board.

3. An act to add Section 12260 2 to the Government Code, to authorize the Secretary of State to establish and operate a Branch Record Depository in the Los Angeles area.

Summary Justification. The intent of this proposal is to economize on office space, and to provide adequate physical custody and reference service for documents having a low rate of reference. It is intended that this be used only for such documents as the agencies feel they must have available for immediate reference, all others to be shipped to Sacramento.

We recommend a first year budget of $18,791 for this activity. The Secretary of State should be authorized to operate this Branch Record Depository, notwithstanding any other provisions of law which may conflict with it. He should also be given permission to operate it in leased space.

4. An act to amend Section 12465 of the Government Code, Destruction of reports: Microfilming before destruction. "All reports from county and city officials and individuals which have been in the custody of the Controller for a period of five years may be destroyed. ~~When they are in excess of 10 years old, the Controller may also destroy after they have been microfilmed claims upon which warrants have been issued, canceled warrants, and other records involving the expenditure of state money. Microfilming before destruction of the documents herein mentioned need not be done if in the opinion of the Controller and the Director of Finance there is no need to preserve a record of the documents to be destroyed. This section does not apply to books of original entry.~~ *Paid invoices may be destroyed by the Controller, after final audit, with the concurrence of Director of Finance (Auditor General?). Claim schedules, canceled and paid warrants, and documents relating thereto may be destroyed by the Controller, with the concurrence of the Director of Finance (Auditor General?) at the end of five years from the close of the fiscal year in which they were produced. The Controller may destroy pay roll supporting documents and attendance reports at the end of four years from the close of the fiscal year in which they were produced, with the concurrence of the Director of Finance (Auditor General?).*"

Summary Justification. We find that the documents listed above are being held far beyond the expiration of the Statutes of Limitations, with possible minor exceptions. In general, this recommendation is satisfactory to the officials concerned. The Controller takes exception to a five-year retention period on Motor Vehicles Tax Refund documents;

we, in turn, believe the Controller's practice in collecting on refunds made 10 years previously should be reviewed by the Legislature. Note that this is *permissive* legislation, and the Controller remains free to hold documents longer if he deems it necessary. We find microfilming of these documents is not justified from a cost standpoint.

We appreciate your interest in this matter, and stand ready to be of assistance as required.

Sincerely,

A. ALAN POST
Legislative Auditor

APPENDIX No. 6

PRELIMINARY REPORT OF THE SPECIAL COMMITTEE ON LEGAL PROBLEMS IN DISASTER

OF THE LOS ANGELES BAR ASSOCIATION

I. Introduction. This special committee of the Los Angeles Bar Association was appointed in October pursuant to a request made by Hon. Vernon Kilpatrick, Chairman of the Assembly Subcommittee on the Impact of Enemy Attack on Constitutional Government. The task given the Los Angeles Bar Association special committee was to study legal problems that may arise in time of disaster with particular reference to the impact of enemy attack on constitutional government so as to provide, in advance, appropriate legislation to eliminate distress and confusion and to assure the continuation of the administration of justice through the disaster period. The special committee was given only six weeks to study and report. With such a short time all that the committee can do is to investigate the problems that might arise.

Current civil defense estimates are that in the initial enemy attack, 70 percent of the bombs would be delivered on target and that there would be sufficient bombs to hit all critical target areas. Charles Fairman, "Government Under Law in Time of Crisis," page 88. Our retaliatory attacks would destroy the enemy's attacking ability, but it is assumed that he might be able to mount some repeated attacks for secondary target areas. Victory in such a war might well go to the society that could hold together in face of such catastrophies. David F. Cavers "Legal Planning Against the Risk of Atomic War," 55 Col. L. R. 136.

Los Angeles is important. The assessed valuation of Los Angeles County for 1953-54 was greater than the assessed valuation of 39 states —only nine states (including California) exceeded it in assessed valuation. As of January 1, 1955, with 5,186,000 inhabitants, only eight states (including California) exceeded it in population. Los Angeles City in 1955 was exceeded in population by only 27 states and in assessed valuation by only 21 states. (In judging these figures keep in mind that Los Angeles County assessments are conservative—estimated at 35 percent of actual value.)

Los Angeles is busy. The Los Angeles metropolitan area (Los Angeles and Orange Counties) in 1954 was in third place nationally in value added by manufacture, only New York and Chicago exceeding it. In June, 1956, the Los Angeles metropolitan area had 704,000 workers in manufacturing and in July, 1956, a total number of 2,367,000 persons gainfully employed. In 1954 the number of industrial establishments was 14,492, second only to New York. In 1954 Los Angeles County Agricultural production was fourth nationally with products valued over $170,000,000. The Los Angeles fishery has the greatest dollar volume in the United States. In 1954 the Los Angeles metropolitan

area had 13 industries with a dollar volume of over $100,000,000 each and eight over $200,000,000 each. Said figures do not include movies which employ about 34,000. Los Angeles is the number one county in the Nation in retail store sales (passing Cook County, Illinois, in 1954).

It is probable, then, that the Los Angeles area would be hit. Since it is so spread out, it might be hit repeatedly. If the whole State of California were destroyed or uninhabitable the problems presented to the special committee might become moot. Such total destruction, however, is not contemplated. For the purposes of this report it is assumed that the results of the atomic attacks would be far more serious than the earthquakes, fire and floods experienced by the State because the nerve centers would be destroyed or injured. Large parts of California, however, would be relatively undamaged.

II. Study Important. In the face of a hard first hit plus possible repeated attacks could the Los Angeles area maintain social cohesion? Probably injured would be fleeing the hard-hit areas and secondary target areas would be evacuating. Some of the problems caused by such a situation will be mentioned later, but it is unlikely that present legal machinery is adequate.

Some think "when the 'real thing' comes the Army will have to 'take over' "—that a "dictator * * * backed by martial law, would be the only solution * * *" Charles Fairman "Government Under Law in Time of Crisis" supra, pages 108 and 110. But the Army feels that "they have got enough to do as it is * * *" and "* * * do not like to take on these responsibilities * * *" but "They cannot escape being forced to act * * * The failure of * * * the people to understand the danger * * * is incomprehensible * * * ." Charles Fairman, supra, page 111.

This special committee submits that a study of disaster legal problems is important. Present legal machinery should be studied to determine if it is adequate for such disasters and if it is to show how it would work. If it is not (and the committee believes that such is the case) study should be made of improvements to do the job.

This special committee does not believe that lawyers will long tolerate martial law. See Fessenden, "Martial Law and the State of Seige," 30 Cal. L. R. 634; Anthony Garner, "Martial Law in Hawaii," 30 Cal. L. R. 371 and 600; "Martial Law, Military Courts and the Writ of Habeas Corpus in Hawaii," 31 Cal. L. R. 477; Walter Armstrong, "Martial Law in Hawaii," 29 A. B. A. J. 698. But there might be no choice.

Advance planning to insure the continuation of civil control would help in preventing martial law or in getting it withdrawn if it were imposed. Homer Crotty, "Administration of Justice and the H-bomb," 37 A. B. A. J. 893. It would be a contribution to our citizens worthy of our profession.

III. Categories of Problems. Problems facing persons studying disaster problems can for convenience be grouped under the following headings:

A. Law and order.
B. Preservation of records.
C. Emergency rules of law.

They will be discussed under those headings.

IV. Law and Order. Law and order problems seem to resolve themselves into the prompt re-establishment of state and local government. This mainly involves the replacement of personnel. Such problems present two questions:

(1) Are present provisions adequate, and if not what changes are necessary?

(2) Will changes proposed insure that the personnel is qualified?

A. Re-establishing State Government. Re-establishing our State Government after an atomic attack raises basic questions of California constitutional law. For example Article IV, Section 8 provides:

> "A majority of each house shall constitute a quorum to do business, but a smaller number may adjourn from day to day, and may compel the attendance of absent members in such manner, and under such penalties, as each house may provide."

and Article IV, Section 12 provides:

> "When vacancies occur in either house, the Governor, or the person exercising the functions of the Governor, shall issue writs of election to fill such vacancies."

Suppose the attack, hitting California urban areas but leaving the rest of the State largely undamaged, killed or seriously injured more than a majority of one house or both houses. Would the State Government be paralyzed until an election? (Note, it would not be a simple matter to hold an election under such circumstances.)

Suppose further, that all of the officers listed in Article V, Section 16 as successors to the Governor were killed. Said section provides that:

* * * * *

> "In any case in which a vacancy shall occur in the Office of Governor, and provision is not made in this Constitution for filling such vacancy, the Senior Deputy Secretary of State shall convene the Legislature by proclamation to meet within eight days after the occurrence of the vacancy in joint convention of both houses at an extraordinary session for the purpose of choosing a person to act as Governor until the office may be filled at the next general election appointed for election to the Office of Governor."

* * * * *

Assuming the Senior Deputy Secretary of State to be alive to convene the Legislature, is it possible that the State Government would be stranded because of lack of a quorum to choose a person to act as Governor?

In any emergency the presence of a Legislature to pass laws and a Governor to enforce them would be vital. Likewise vital are courts which could be hamstrung if no Governor were available to appoint

new judges. See Constitution Article VI, Sections 3, 4a, 8. Study should be made to find answers to these problems.

B. Re-establishing Local Government. Urban areas are accustomed to municipal services such as police and fire protection, and utilities such as water, sewers and electricity. Such services and utilities are furnished by units of local government, counties, cities and districts. It is vital that the legislative bodies of these local units be re-established to deal with the problems that arise. It is possible that there might be no remaining members of the legislative body. Study should be made as to methods of speedy reappointment. It is suggested that local government re-establishment should not depend upon prior re-establishment of the State Government, for, as shown above, the State might not have a government. Perhaps a solution to the local problem would be alternate stand-by officers already appointed.

V. Preservation of Records. The special committee was informed that studies were already being made as to preserving public records, so no work was done on this very important problem.

Members of the committee, however, did consult with their clients to see if said clients had duplicate records that would enable them to re-establish their businesses. With a few exceptions the universal answer was "no." Businesses with branches in other areas still had central records. While this is efficient business management, it is no protection after an atomic attack. Attorneys have important records in their offices. Studies should be made on preserving such private records.

VI. Emergency Rules of Law (Legal First Aid). After an atomic attack problems certainly will arise that have not been anticipated. It is vital to have a State Legislature that can deal with such problems by passing the necessary laws. The committee, then, did not consider any permanent law changes, but emergency rules only. Such emergency rules should be considered as "legal first aid."

A. Court Problems. The most litigation arising from atomic attack would probably occur in the areas worst hit. Shifts in population would result in more work for courts in outlying areas.

> "Should the business of a destroyed court be transferred to other courts or should the court simply be reconstituted and given other quarters? In either case, the safe deposit of microfilmed court records would be desirable. What provision should be made for the rapid replacement of dead and disabled judges and court personnel, due regard being given to the fact that the normal source of replacements would be in target areas? What changes in the rules as to jurisdiction and venue might be necessary in view of the likely shifts in courts and population? Certainly all rules as to constructive service should be reviewed." Cavers, supra, 55 Col. L.R. 152.

Disruption caused by atomic attack would justify tolling of the statutes of limitations. It would compel the altering of judicial time-tables so that rights would not be lost through failure to file, etc. Should this be state-wide, in the nature of a moratorium, or should it be an

extension of existing rules on relief from judgments because of mistake, inadvertence or neglect?

The case load burden might require masters, referees and commissioners, pretrial procedures, sharp limitations on appeals.

Remembering that the aim is to have legal "first aid" it is apparent that less damaged areas must do all of the work. Study should be made to see if legal machinery can meet the test and to suggest helpful legislation.

B. Business Problems. Long term contracts present a set of serious problems. The corporate mortgage with its various covenants might be unduly restrictive after an atomic attack had destroyed the trustee. Long term lessees might experience the same trouble that automobile dealers had with their showrooms in World War II. Supply and requirements contracts would almost certainly be disrupted. Distributorships and patent licenses would be affected. Executive employment contracts at high salaries could embarrass firms. Regulated contracts of utilities and carriers could result in legal roadblocks if the basis of determining rates changed. It is suggested that some of these problems can be met in advance by draftsmanship, but the usual *force majeure* clauses may not be desirable. "During World War II, courts in England and Germany were authorized to rewrite contracts when they became inequitable by reason of war conditions." Cavers, supra, 55 Col. L. R. 148. Study should be made of this form of "legal first aid." Perhaps the use of arbitration would not add to the court burdens.

Destroying the nerve centers of corporations can create serious problems. Some of the questions needing study are:

> "How should the chain of corporate command be extended and under what conditions should command be shifted? What emergency powers should be conferred on officers? What provisions should be adopted to govern special post-attack meetings of directors, reducing notice and quorum requirements? Should the SEC modify its rules as to proxy solicitation, to become effective upon attack? Would it be advantageous to create voting trusts of corporate shares, to become effective upon attack? What measures should be taken to facilitate the calling and holding of shareholders meetings and proof of share ownership and transfer?" Cavers, supra, 55 Col. L.R. 149.

Family and estate problems would face each of us and most of our clients. Some of the questions Professor Cavers feels need study are:

> "1. *Testamentary dispositions.* To what extent could the use of powers conferred on safely situated family friends or relatives make possible the post-attack revision of estate plans? Would a given plan provide sufficient liquidity to meet survivors' immediate needs, in the view of the closing of securities markets and delays in payment of insurance proceeds? How should the risk of sharp post-war inflation be taken into account? Should the courts have power to revise dispositions where changed conditions due to attack had rendered wills and trusts unjust or ineffective to achieve the testator's or settlor's objectives?

"2. *Administration.* What should be done in advance to provide probate courts with personnel and physical facilities both to take the place of destroyed courts and to handle the greatly increased case load? What relaxation might be made as to jurisdictional requirements? What measures could be taken for protecting and insuring the accessibility of probate court records? Could *ante mortem* probate be used for wills? How should provision be made for substituting representatives and trustees where those designated in estate instruments (including *inter vivos* trusts) had been killed or incapacitated or, as in the case of corporate trustees, had become understaffed to handle the expanded case load? What simplifications are needed in the requirements as to guardians *ad litem?* What should be done to the notice requirements and timetables for probate courts and administration proceedings? Should administration through the courts be dispensed with entirely in estates below a specified size, say, 50,000 pre-attack dollars?

"3. *Proof.* Are present laws relating to proof of death and of survivorship in common disasters sufficient for atomic attack situations? What measures, if any, should be taken to facilitate proof of lost instruments? What measures could be adopted to facilitate the transfer of securities in cases involving problems of proof? To what extent should banks and safe deposit companies be entitled to recognize claimants to deposits and valuables without strict proof of right? Should special protection be given to personal representatives distributing on the basis of what by peacetime standards would be inadequate and inaccurate proof as to ownership? Should stricter post-attack rules of proof be set up to cover creditors' claims?

"4. *Insurance.* What moratoria might be provided for life insurance premiums and claims? What measures should be planned to assure the orderly rehabilitation of insurance company portfolios and the early recognition of claims, at least up to a limited amount? To what extent and under what conditions should new insurance policies be allowed to be written while atomic attacks were continuing? Would it be desirable to extend the facility of payment clause to other forms of insurance than industrial life? Could and should insurance policies be included in any powers granted for the post-attack revision of estate plans? What adjustments, if any, should be made in the division of state and federal regulatory powers over insurance?" Cavers, supra, 55 Col. L.R. 150-51.

VII. Conclusion. Even though the special committee has been very limited in its time, certain conclusions are apparent. These are as follows:

A. The problems presented are important and deserve thorough study.

B. The most important is the re-establishment of state and local government, including the courts, as all other problems hinge on having officers available to deal with the problems.

C. Some one agency needs to act as coordinator for the study of these problems. That agency could be the Assembly Subcommittee on the Impact of Enemy Attack on Constitutional Government, or any other agency qualified to, and which would undertake the task of coordinating the studies to be made.

D. There is an ample supply of qualified people in California to study and report on these problems. Among the groups who would be qualified to study and report on various aspects of these problems from a legal standpoint, would be the following:

The State Bar of California

Local Bar Associations (particularly larger associations such as the Los Angeles Bar Association, the San Francisco Bar Association, the Alameda County Bar Association, etc.)

The Judicial Council
The Attorney General
The Legislative Counsel
The League of California Cities
The County Supervisors Association
The Irrigation Districts Association

E. Specific problems should be assigned to the respective study groups. Because the various problems overlap, there will be some duplication of work, but if each study group knew what others were doing, they could check with each other as their studies progressed.

F. This special committee of the Los Angeles Bar Association would be willing to participate as a study group in a coordinated study of these problems in such specific field as might be assigned to it.

Respectfully submitted,

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ADAPTING GOVERNMENT TO METROPOLITAN NEEDS

A REVIEW OF ORGANIZATIONAL DEVICES

Prepared by
BUREAU OF PUBLIC ADMINISTRATION
University of California, Berkeley, California

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LETTER OF TRANSMITTAL

ASSEMBLY INTERIM COMMITEE
ON CONSERVATION, PLANNING, AND PUBLIC WORKS
ASSEMBLY CHAMBER, STATE CAPITOL
SACRAMENTO, CALIFORNIA, January 23, 1957

HON. L. H. LINCOLN
Speaker of the Assembly
MEMBERS OF THE ASSEMBLY
Assembly Chamber, Sacramento, California

GENTLEMEN: This report on metropolitan governmental organization, submitted pursuant to House Resolution No. 239, 1955, was prepared at the request of the Interim Committee on Conservation, Planning, and Public Works in an attempt to furnish the exploding metropolitan communities of California information upon which they can assess their metropolitan problems and develop new governmental forms.

All of the nine subcommittees of this committee have, during their interim studies, come face to face with the importance of simplifying the consolidation of governmental units in our heavily populated urban areas. The involved cities and counties struggling with these problems were found to be in need of a review of efforts in the other states to establish over-all governmental structures.

The purpose of this study by the Bureau of Public Administration, University of California, therefore, is to furnish assistance to both the local units of governmental administration in California and to the Legislature in their joint efforts to meet the growing metropolitan problems of this State.

While the staff of our committee worked closely with the authors of this study in the content and scope of the report, the authors themselves and the Bureau of Public Administration under Professor Chernin are solely responsible for the facts presented and their emphasis.

Sincerely,

FRANCIS C. LINDSAY, Chairman

LETTER OF TRANSMITTAL

UNIVERSITY OF CALIFORNIA
BUREAU OF PUBLIC ADMINISTRATION
BERKELEY 4, CALIFORNIA, January 21, 1957

ASSEMBLYMAN FRANCIS LINDSAY, *Chairman*
Assembly Interim Committee on Conservation,
Planning and Public Works
State Capitol, Sacramento, California

DEAR ASSEMBLYMAN LINDSAY: In response to your request for a survey of metropolitan governmental organizations, I am submitting herewith our final report, entitled: *Adapting Government to Metrolopitan Needs: A Review of Organizational Devices.* This report first discusses regional planning commissions, then it reviews metropolitan special districts and authorities, and concludes with an examination of selected attempts at comprehensive governmental reorganization. It is my sincere hope that the information presented will be of some assistance to the members of your committee and other legislators in their consideration of measures relating to the governmental problems of metropolitan areas.

The Bureau of Public Administration wishes to express its appreciation to Samuel E. Wood of your staff, Professor Victor Jones, Department of Political Science, and Professor T J. Kent, Jr., Chairman of the Department of City and Regional Planning, University of California, for their valuable advice and guidance in our work on this study. George Duggar of the bureau staff also served in an advisory capacity. We wish the thank Frank C. Moore and the Governmental Affairs Foundation for their generosity in making certain unpublished manuscripts available to us and in providing helpful research assistance.

Yours sincerely,

MILTON CHERNIN
Acting Director

SUMMARY

Many attempts have been made to develop remedies for the problems of metropolitan government, with varying degrees of success. This report concerns itself with (1) regional planning commissions, (2) metropolitan districts and authorities, and (3) selected efforts at comprehensive governmental reorganization

REGIONAL PLANNING COMMISSIONS

I Regional planning commissions are often employed as a means of attempting to solve certain governmental problems of metropolitan areas.

II The major advantage of such commissions lies in the fact that they provide an agency for the drafting of area-wide plans, and for aiding and coordinating the planning efforts of the individual local governments.

III. The primary weakness of regional planning commissions is the absence of an area-wide legislative body to put the regional plans into effect.

IV. Regional planning commissions must rely heavily on the techniques of persuasion and public relations if they are to have any influence A number of commissions have developed elaborate arrangements for civic participation and support—the Detroit Metropolitan Area Regional Planning Commission and the Allegheny Conference on Community Development (Pittsburgh), for example

V. Survey of seven representative regional planning commissions:

1 Area Covered by the Commissions Most of the commissions have jurisdiction over major portions of the metropolitan area within which each operates, although there were indications in several instances that additional area could well have been included.

2 Functions There is a good deal of variety in the work actually being done by regional planning commissions, but there are two general approaches: (1) To prepare master plans for the region, which can serve as a guide for the preparation of plans by the individual cities and counties. (2) To provide direct technical assistance for the planning agencies of local governments within the region.

3. Representation on the Commissions. Normally the participating local governments choose the commissioners, although there are two gubernatorially appointed commissions. Most of the commissions are of moderate size, ranging from 5 to 18, but two are quite large, numbering 50 and 56, respectively. Each of the two large commissions delegate much of their work to an executive committee.

4. Financial Support. Six of the commissions depend on contributions from the participating local governments and from private sources. The seventh—the Maryland-National Capital Park and Planning Commission—is authorized to levy its own tax.

METROPOLITAN SPECIAL DISTRICTS AND AUTHORITIES

I. Special districts and authorities are widely used as attempted solutions to problems of metropolitan government.

II. The primary advantages of special districts and authorities are their flexibility of area and their political acceptability.

III. Their chief disadvantages include the tendency to create too many overlapping districts in any one metropolitan area; an excessive autonomy, which usually means that a district's function is removed from the normal channels of political responsibility and control; and limited fiscal powers, often making it difficult to finance necessary activities.

IV. A number of questions should be studied when consideration is given to the establishment of a metropolitan district or authority:
   1. How much of the metropolitan area is to be included in the jurisdiction of the district or authority? If not all the area, why not?
   2. Can a multipurpose district or authority be employed?
   3. How can the district's activities be coordinated most effectively with those of the other local governments?
   4. How can the district best be made responsive to public opinion and public needs?
   5. How can the district's revenue structure be made strong enough to support the services required?

V. Survey of 16 Selected Metropolitan Districts and Authorities:
   1. Area Served. Most of the districts include all or major portions of the metropolitan areas within which they have been established, their populations sometimes being numbered in many millions and their area in thousands of square miles. They normally encompass large numbers of pre-existing local governments (cities, counties, townships, etc.).
   2. Functions Thirteen of the 16 agencies surveyed were essentially single-purpose organizations, although a number of these had developed related and auxiliary functions to a considerable extent. Three of the 16 agencies can justifiably be classified as multiple-purpose, although none has made full use of its authority. The activities carried on by districts and authorities range from bridge building to air pollution control, from port development to water supply, and from park management to public transportation.
   3. Selection of Governing Bodies. The most popular method of selection calls for appointment of directors by the participating local governments included within the district. The governing boards of interstate districts and authorities are normally appointed by the governors of the states concerned. In several

agencies some of the directors are appointed by local units and the remainder by the governor. Other district governing boards are directly elected.

4. Financing districts and authorities: Ten of the 16 agencies surveyed may levy property taxes and, in addition, depend on service charges. Five others are limited to service charges only. One district is limited, for all practical purposes, to the property tax.

COMPREHENSIVE GOVERNMENTAL REORGANIZATION—SELECTED EXAMPLES

I. Municipal annexation and partial city-county consolidation—the reorganization of Baton Rouge and East Baton Rouge Parish (1949).
   1. Almost all the urban territory in the parish was annexed to the City of Baton Rouge
   2. The parish was divided into three zones: (1) the enlarged urban area consisting of the City of Baton Rouge; (2) two industrial areas, and (3) the rural area.
   3. The city and the parish each retained its separate legal identity, but under councils with an interlocking membership, and under a single mayor-president who is elected at large.
   4. The administrative organizations of the city and parish were consolidated.
   5. Parish-wide services are supported by parish-wide taxes. Urban services are supported by taxes levied in the urban area only.

II. Municipal annexation and reallocation of functions—Atlanta and Fulton County (1952).
   1. There was a mass annexation of urban territory by the City of Atlanta
   2. All responsibility for municipal-type services was withdrawn from Fulton County and placed in the hands of the City of Atlanta.
   3. Fulton County retained the area-wide county functions, and certain others were consolidated under the county. Among the major area-wide functions administered by Fulton County are: welfare, public health, and property tax assessment and collection.

III. Federated metropolitan government—the Toronto reorganization (1954).
   1. The City of Toronto and 12 suburban municipalities were brought together under the Municipality of Metropolitan Toronto.
   2. Each of the 13 municipalities retained its identity and continues to be responsible for local functions of government, including local planning, law enforcement, fire protection, local streets, building regulation, and most public health services.

3. The Municipality of Metropolitan Toronto is given authority over regional planning, water supply, sewage disposal, arterial highways, housing and redevelopment, and metropolitan parks.
4. The Municipality of Metropolitan Toronto is governed by a board of either 24 or 25 members. The City of Toronto has 12 representatives and the suburban municipalities have one each. The 24 members meeting together choose a chairman either from among their number or from the outside.

IV. Governmental integration in the Los Angeles metropolitan area.
1. Los Angeles County encompasses practically all of the metropolitan area—this fact has enabled the county to play a central role in much of the governmental integration achieved.
2. Many functions have been transferred in whole or in part from municipalities to the county.
3 The county provides many municipal-type services in the unincorporated urban area, either directly or through special districts
4. A great many formal and informal agreements among the different local units have done much to smooth out administrative difficulties and facilitate day-to-day cooperation.
5. The county government and certain specially created metropolitan districts have assumed a number of area-wide functions—among them regional planning, air pollution control, flood control, sewage disposal, and regional water supply.
6. The growth of the City of Los Angeles has provided an important integrating influence With its population of 2,200,000 and area of 450 square miles, the city has helped to unify the area in a governmental sense.
7. Despite its outstanding achievements, the Los Angeles area appears to be far from a final solution to the problem of metropolitan government There is no single policy-making body for the area. Governmental authority is still split many ways despite the integration that has taken place

V. A metropolitan county—the proposal for reorganization of Dade County (Miami).
1. The proposal calls for a reorganization which would convert Dade County into a metropolitan government.
2. The individual municipalities would retain their identities and most of their present duties, including local planning, care of city streets, police patrol and traffic control, fire protection, and enforcement of building codes
3. The metropolitan government would be responsible for regional planning, arterial streets and highways, sewerage and sewage disposal, water supply, health and welfare services, regional parks, maintenance of certain centralized police services, and assessment and collection of all property taxes. Fire protection in the unincorporated area would be provided by the metropolitan government on a cost basis to specially created fire districts.

4. The board of metropolitan commissioners would consist initially of a president and 10 members. The president would be elected at large, and eight of the 10 members elected from districts. The remaining members would be chosen one each from the cities whose population exceeds 8 percent of the total area's population (at present, Miami and Miami Beach).

VI. Complete integration—a plan of metropolitan government for Nashville and Davidson County.

1. The key element of this plan is the proposed creation of a *single* government for the whole area of Davidson County. The metropolitan government would replace the county government and all the city governments.
2. The metropolitan government would act through two overlapping districts The "general services district" would include the whole area of the county, and the "urban services district" would include only the areas requiring municipal services. Tax levies by each district would be adjusted to the level of services provided.
3. Some members of the metropolitan council would be elected at large and others by wards. An elected chief executive officer would be given authority equivalent to that of a strong mayor.

INTRODUCTION

Every major metropolitan area in the United States has been confronted with one or more public problems whose scope is too large for adequate administration through the conventional local governments. Urban populations have increased rapidly and trading and commuting areas have expanded greatly, but local governmental boundary lines have been slow to change. Small towns and neighborhoods have coalesced into large metropolitan communities, but metropolitan governments have not been created, although the pre-existing local units are no longer adequate in area or in structure to deal with the regional problems arising.

Among the problems often requiring area-wide administration or coordination are the following: planning, air pollution control, water supply, arterial highways, sewage disposal, rapid transit, police protection, and fire protection. Many attempts have been made to develop remedies and solutions for these metropolitan problems, with varying degrees of success It is the aim of this report to look at a number of these efforts in the hope that past experience will provide some guidance for California legislators, who must assist the State's metropolitan areas in finding solutions to their problems.[1]

1. Because regional planning is one of the primary concerns of the legislative committee which requested this report, the first section deals with *metropolitan and regional planning commissions.* After discussing briefly some of the strong and weak points of regional planning commissions in general, seven representative planning agencies are surveyed in some detail.

2 Planning is, however, only one among many governmental functions which may require regional treatment, and any proposed solution to the problem of regional planning must be considered in relation to other metropolitan governmental needs. Consequently the second section takes up the *metropolitan districts and authorities* which are often established to administer area-wide problems The pros and cons of the special district approach to metropolitan problems are examined, and the concrete experience of a representative sampling of districts is illustrated by a survey of 16 such agencies.

3. Regional planning commissions and metropolitan districts and authorities have provided only partial and piecemeal answers to the needs of urban government. In an attempt to round out the picture, the third section of this report summarizes a number of *comprehensive attempts to solve metropolitan governmental problems,* including two recent proposals yet to be acted upon. The essential element of all these comprehensive efforts is their direct effect upon the *general-purpose* units of local government (the cities, counties, townships, etc).

[1] An important statement of the metropolitan governmental problem, including a suggested program for the 48 states, is presented in Council of State Governments, *The States and the Metropolitan Problem,* 153p Chicago, 1956 The suggested program called for: (1) enabling legislation authorizing the creation of broadly-based metropolitan units of government, (2) review of state law covering municipal annexation and intergovernmental agreements, (3) investigation and appraisal by the states of the adequacy of their local governments, with changes where needed and (4) creation of a permanent state agency charged with the task of studying and helping to improve local governments—both metropolitan and nonmetropolitan.

I. REGIONAL PLANNING COMMISSIONS

Regional planning agencies are in wide use as an attempted solution to the problems raised by the need for coordinated planning in metropolitan areas. A report published in 1953 by the American Society of Planning Officials listed 42 official regional planning agencies, 6 quasi-official agencies, and 31 unofficial groups.[1] Although a more recent comprehensive tabulation has not been made, it is estimated that 18 or 20 new regional planning agencies have been established since the 1953 survey.

MAJOR ADVANTAGE: PROVIDES AGENCY FOR AREA-WIDE PLANNING

Regional planning commissions have the unquestioned advantage of providing an advisory body for the drafting of area-wide plans, or of furnishing a clearinghouse to coordinate the planning activities of the various local units within a metropolitan area. Such agencies have often represented the first approach to regional planning problems in the metropolitan areas where they have been created.

The existence of a regional planning commission makes it possible to begin consideration of the future population growth and economic development of the region on a long-term basis, and to begin planning ahead on such matters of area-wide concern as the general land-use pattern, the arterial highway system, regional transit, water and sewage requirements, and many other problems which are beyond the scope of any individual local agency.

The work of regional planning agencies has been aptly described as follows:[2]

> The appearance of an agency devoted to metropolitan planning denotes a consciousness in the area of the need for metropolitan integration. It also provides a tool by which such integration can be furthered * * *. The metropolitan agency * * * has primarily a coordinative function. It will be concerned with projects of area-wide or intercommunity significance and with the actions of local units affecting those projects.
>
> The metropolitan planning agency undertakes several types of activities It collects, digests, and distributes information bearing on problems, needs, and interrelationships of the region as a whole It develops metropolitan master plans and coordinates the planning of local units toward a unified goal, thus providing channels for intergovernmental cooperation. Activities of this character tend to focus public and private attention on metropolitan problems. In addition to its other activities, the metropolitan planning agency may perform local planning functions for unincorporated areas or act as a service agency for the smaller governmental units.

[1] American Society of Planning Officials, *Metropolitan-Regional Planning Agencies* (1953)

[2] Michigan University, Institute of Public Administration, *Governmental Organization in Metropolitan Areas* (1951), pp 47-48

MAJOR WEAKNESS: ABSENCE OF AREA-WIDE LEGISLATIVE BODY

Despite their advantages, regional planning commissions as presently organized have certain drawbacks. Their primary weakness springs from the fact that they are trying to do planning in the absence of a legislative body to carry out the plans made. This problem can be seen clearly when a regional planning commission is compared with a city planning commission.

The city planning commission is normally attached as an advisory body to an equivalent legislative body—the city council—which has jurisdiction over the same area as the city planning commission The city council can make the necessary policy decisions and use its police power to give effect to any plans it approves The regional planning commission, in contrast, is not normally attached to any equivalent regional legislative body, because none exists.[3] Instead the regional planning commission must work through a large number of separate local planning commissions, each of which is in turn advisory to its local legislative body. The local units are not legally bound to follow regional proposals (see Figure 1). Figure 2 illustrates the way in which the regional planning function could be organized around a metropolitan or regional legislative body.

Thus the regional planning commission must rely entirely on persuasion and education to effect its aims. In many metropolitan areas, where there are rivalries between the central city and the suburbs, and competition among the various suburbs, it is often difficult to obtain agreement on important issues. This difficulty is particularly acute with respect to the development of a comprehensive general plan, which requires a regional point-of-view and can be fully effective only if carried out in all parts of the metropolitan area Thus the development and execution of a long-range general plan, which should be one of the first major objectives of a regional planning agency, is very difficult in the absence of a metropolitan legislative body This point has been made by Professor T. J. Kent, Jr., Chairman of the Department of City and Regional Planning, University of California [4]

> The formulation and the implementation of a general plan for physical development are both matters of primary concern to the legislative body. Metropolitan regional planning efforts will not be fully effective, therefore, until an appropriate legislative body at the metropolitan level is established.

[3] The Municipality of Metropolitan Toronto provides the only example in the United States and Canada of a regional planning agency which is attached to a legislative body of regional scope In Toronto the Metropolitan Planning Board is appointed by and acts for the Council of the Municipality of Metropolitan Toronto, an area-wide legislative body which has broad powers over regional planning Local planning remains in the hands of the individual communities within the Toronto federation, each of which has its own planning commission A similar arrangement has been proposed for the metropolitan area of Dade County (Miami), Florida. Under the suggested reorganization, the Dade County Board of Metropolitan Commissioners would serve as a general legislative body for the whole metropolitan area, and would have jurisdiction over a number of area-wide functions, including regional planning The metropolitan board would be aided by a regional planning office and an advisory regional planning commission The municipalities within the Dade County area would retain control over local planning matters Public Administration Service, *The Government of Metropolitan Miami* 194p Chicago, 1954

[4] Letter dated January 21, 1957.

FIGURE 1. ADVISORY REGIONAL PLANNING IN THE ABSENCE OF A REGIONAL LEGISLATIVE BODY

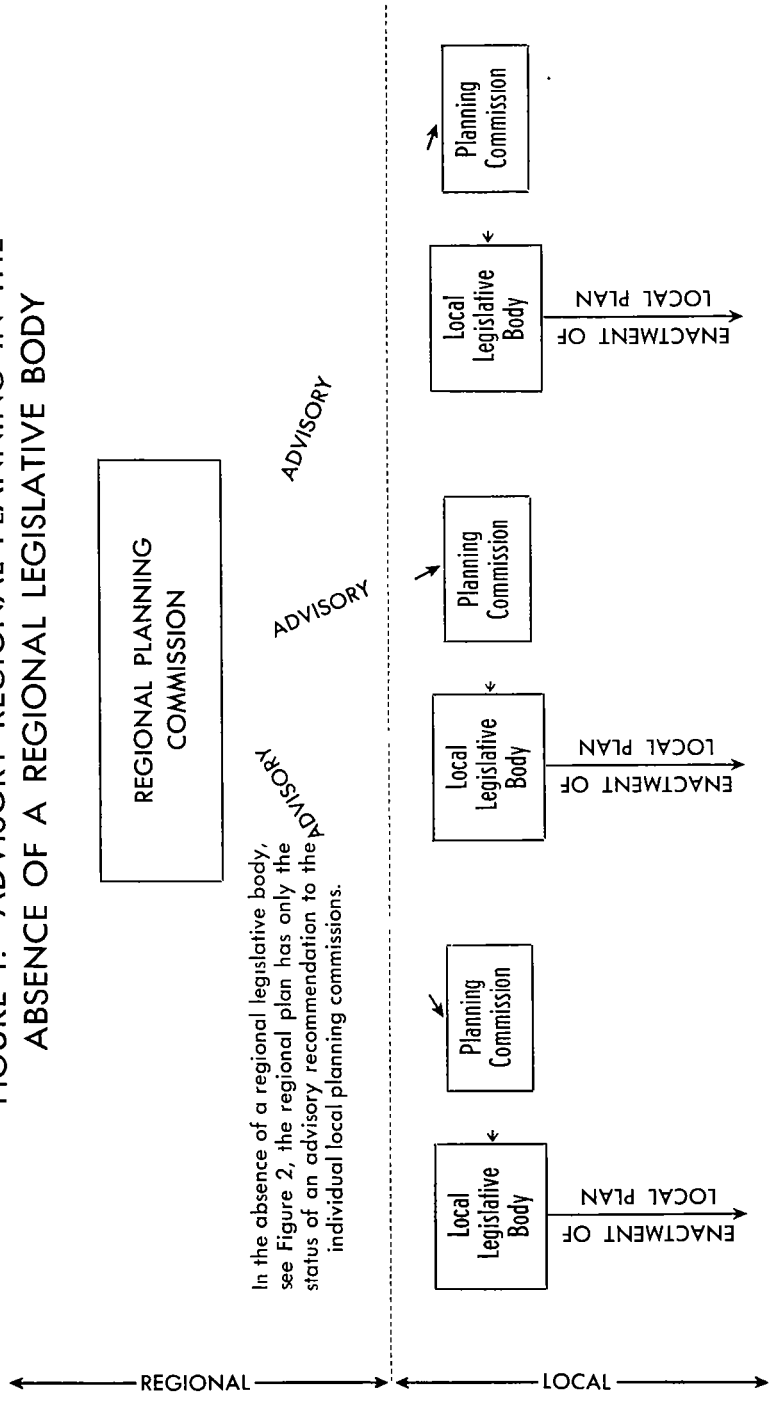
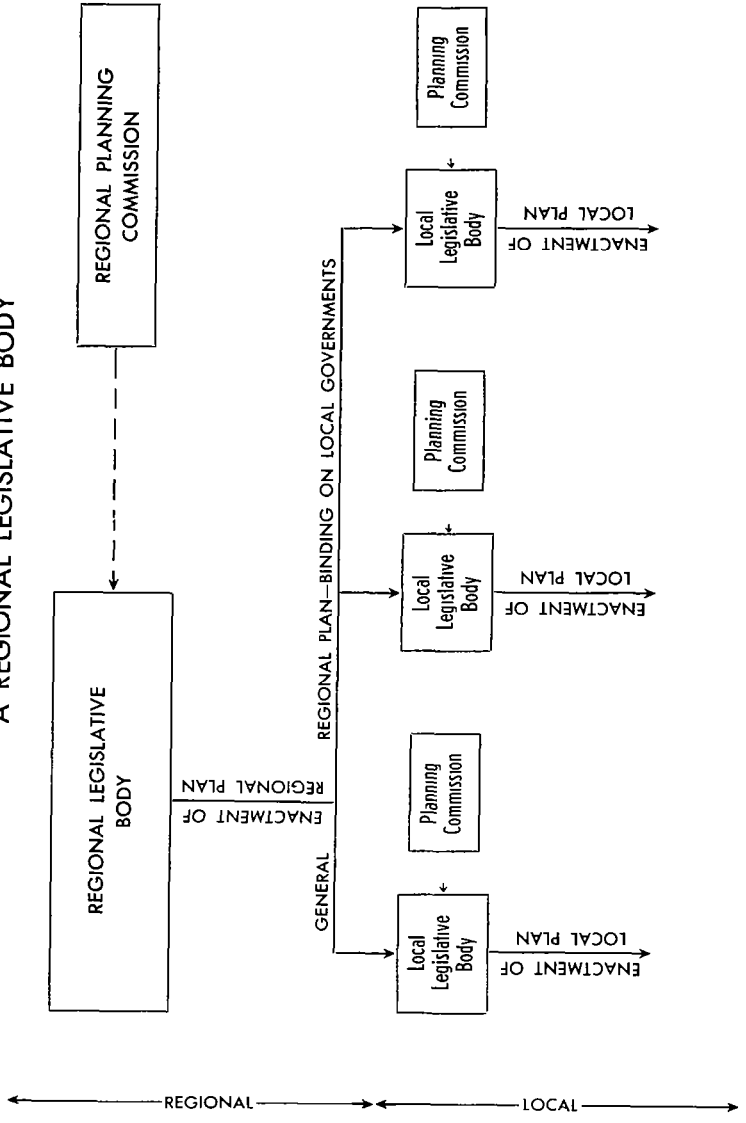


FIGURE 2. EFFECTIVE REGIONAL PLANNING THROUGH A REGIONAL LEGISLATIVE BODY



The need for something more than an advisory regional planning agency in a metropolitan area was noted in a recent communication from the Executive Director of the Detroit Metropolitan Area Regional Planning Commission:[5]

> In regard to your general question, "Do we think that regional planning alone is enough to solve major metropolitan problems?", let me say emphatically "NO." There is more to be done than would normally fall within the province or power of a regional planning agency.

In the absence of a regional legislative body, it has been suggested that the regional planning commission be given additional authority:

> * * * our agency's planning functions could be strengthened at some points. Perhaps something in the nature of a law requiring referral by local units of government to our agency of such items as zoning, master plans and subdivision controls, would provide the kind of power or enforced advisory service that would enable us to get our plan on the ground more rapidly.[6]

> [There is] need for language in the enabling legislation which gives more authority to the decisions of a regional planning commission. At the present time, our powers are only advisory, and we believe that the process of planning will be aided if * * * * Overruling the recommendations of the regional planning commissions required more than a simple majority vote by the municipality or agency concerned.[7]

In essence these are suggestions that the regional planning commission itself be given a limited grant of the authority which would otherwise be exercised by a regional legislative body, if such existed.

Three internationally known students of metropolitan government, while admitting the value of regional planning activities, agree that the absence of an area-wide policy-making agency or legislative body is a fundamental deficiency which advisory regional planning commissions alone cannot overcome:

Victor Jones:

> The claims 'regarding the value of advisory regional planning' are in part correct because a well prepared and forcefully presented plan, even if dissociated from a unit of government, may influence those in authority to whom it is communicated * * But disembodied planning is not a substitute for government. This has been demonstrated by experience in New York and other metropolitan communities where an effort has been made to develop it as a substitute. * * *[8]

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[5] Letter from Paul M. Reid, executive director, Detroit Metropolitan Area Regional Planning Commission, dated July 6, 1956.

[6] *Ibid.*

[7] Letter from Proctor Noyes, director, Cleveland-Cuyahoga County Regional Planning Commission, dated April 9, 1956.

[8] Jones, "Local Government in Metropolitan Areas: Its Relation to Urban Redevelopment," *in* Woodbury, ed., *The Future of Cities and Urban Redevelopment* (1953), p. 535.

Paul Studenski:

> To summarize, cooperation has helped, here and there, in some metropolitan areas to meet particular situations, or to promote comprehensive arrangements for solving metropolitan problems. But it has not succeeded in unifying the government of a metropolitan area sufficiently to make possible the comprehensive and effective solving of the metropolitan problems It does not afford an adequate answer to the problem of metropolitan integration.[9]

William A. Robson:

> Many of the most difficult problems which confront the great city can only be solved by far reaching and imaginative planning. * * * Authorities to carry out the plans must exist both at the regional and local levels, and they must have effective powers and adequate territorial jurisdiction.[10]

PUBLIC RELATIONS AND CITIZEN PARTICIPATION

In an effort to make progress despite their advisory and "detached" status, some of the most active regional planning agencies have emphasized persuasion, public relations and local contact work. The Detroit Metropolitan Area Regional Planning Commission, for example, has developed an elaborate network of committees and support groups. In the words of the former executive director:[11]

> Back in 1948, when the commission got started, we did not have much staff yet we knew that we had to keep in touch with the local governments of the region if we were to stay alive, if our planning was to be realistic and if the plan was to be used * * *. We grouped anywhere from seven to fifteen communities into what were called development areas * * * and then began organizing councils in the urbanized areas near Detroit.
>
> These development or planning councils are composed of two or three representatives from each community in the development area. Generally members of the planning commission and legislative body are appointed. They meet about once a month in the urban areas and once a quarter in the rural sections Usually someone from the [regional planning commission] staff attends.
>
> In addition to these local development councils the commission also has about two hundred officials, industrialists and businessmen working with it on advisory committees * * *. Every phase of our program has had an advisory committee * * *. Everybody on the committee is led and urged to participate.
>
> Participation is the key to acceptance of a plan.

[9] Studenski, *The Government of Metropolitan Areas* (1930), p 54
[10] Robson, *Great Cities of the World* (1955), pp 101-102.
[11] Blakeman, "Detroit's Regional Plan," *National Municipal Review* 44 466-8, 498, October, 1955

The Allegheny Conference, in Pittsburgh and Allegheny County, Pennsylvania, is another outstanding example of a regional planning effort relying for its success primarily on public relations and the development of community support groups.[12]

> Through planning and research, the conference stimulates and coordinates the development of a comprehensive unified plan and program for the region as a whole and provides civic leadership to carry it forward. One of its major objectives is to secure and obtain broad public support and community action for the plans and recommendations it proposes.

The governing body of the conference is a citizen's sponsoring committee of approximately 100 persons from industry, commerce, finance, labor, education, public administration and civic affairs. The sponsoring committee elects an 18-man executive committee which has primary responsibility for the policies and activities of the conference, under the general guidance of the sponsoring committee

It appears that informal and voluntary methods of regional planning, employing the tools of public relations and civic participation, have been effective in some degree, although they do not take the place of an official regional policy-making body. The executive director of the Detroit Metropolitan Area Regional Planning Commission sums up his appraisal as follows: "We feel that our present method of operation is succeeding enough to warrant its continuance and to continue our hope that it may be effective in achieving a major part of our plan." [13]

A good public relations program will be essential to effective regional planning whether or not a regional policy-making body exists. For that reason the experience of agencies which have had to rely exclusively on public relations and civic participation for their success will provide valuable guidance for any new planning agencies that may be established, regardless of their organization and authority.

SUMMARY OF REGIONAL PLANNING COMMISSION SURVEY

Background information relating to seven representative regional planning commissions is summarized here under the following headings: (1) area covered; (2) functions; (3) organizations; and (4) financial support.[14]

Area Covered

The primary reason for establishing a regional planning agency is the need to develop large scale plans covering all portions of a metropolitan

[12] Allegheny Conference on Community Development, *Pittsburgh and Allegheny County* (n d), p 2

[13] Letter from Paul M Reid, executive director, Detroit Metropolitan Area Regional Planning Commission, dated July 6, 1956

[14] The seven regional planning commissions included are Los Angeles County Regional Planning Commission, Metropolitan Planning Commission (Atlanta, Ga), Regional Planning Commission (Cleveland, Ohio), Detroit Metropolitan Area Regional Planning Commission, Maryland-National Capital Park and Planning Commission, Tri-County Planning Commission (Sacramento, El Dorado, and Placer Counties), and Fresno-Clovis Area Planning Commission. It should be noted that at least two of the metropolitan districts and authorities surveyed in the second section of this report, pages 28-35, may also be considered to be regional planning agencies—the Bi-State Development Agency (St Louis area), and the Metropolitan District Commission, Hartford County, Connecticut In addition, many of the other districts and authorities engage in significant planning activities related to the specific function or functions with which they are concerned.

area, and the related need to coordinate the planning and zoning activities of many separate local jurisdictions. Thus one of the essential characteristics of an effective regional planning agency is an adequate area of coverage.

All the regional planning commissions included here represent a marked improvement over the pre-existing local authorities in terms of area of coverage, although few of the commissions actually include all the area that could be served. The Metropolitan Planning Commission of Atlanta, Georgia, for example, encompasses major portions of two large counties, including 19 cities, but the area's metropolitan development is already beginning to concern two additional counties.

The Los Angeles County Regional Planning Commission is countywide, and serves a metropolitan population of 5,000,000, but the adjoining counties of Orange, Riverside, San Bernardino, and Ventura also contain portions of the metropolitan region. The Maryland-National Capital Park and Planning Commission covers a large area in two counties, but has no authority over the District of Columbia or the Virginia portions of the metropolitan area.

The Detroit Metropolitan Area Regional Planning Commission, on the other hand, with its four counties and 152 local units of government, appears to include practically all the metropolitan area, as does the Cleveland-Cuyahoga County Regional Planning Commission.

In the case of the newly created Fresno-Clovis Metropolitan Area Planning Commission, the problem of establishing a suitable area was ingeniously approached by permitting the commission itself to decide the boundaries within which it could most effectively operate As the joint resolution creating the commission stated:

> The planning area may include populated areas, unpopulated areas or unimproved areas within or outside said cities or any combination of such areas, but such planning area shall consist of contiguous territory. The Area Planning Commission shall delineate and define such planning area and may modify the same from time to time.

On the other hand, the Tri-County Regional Planning Commission, of El Dorado, Placer, and Sacramento Counties, presently has a very limited jurisdiction, being responsible only for the lands surrounding Folsom Lake and Lake Natoma No urban territory is included.

Functions

Regional planning commissions in the United States show considerable variation in the functions being performed Enabling legislation is generally very broad and permissive in defining the scope of functions, with California being one of the few states which specifically requires a regional or area planning commission to prepare a single comprehensive master or general plan.[15] The flexibility in enabling legislation has tended to make each regional planning agency develop a work program which seems best suited to the needs of its own situation, but it might be said in general that the idea of a single long-range regional plan is coming to occupy a larger portion of the attention of regional planning commissions now than in former times

[15] Cal Gov Code, secs 65460-65462

The agency which has probably gone the furthest in preparing, publishing, and adopting a master plan for an entire metropolitan area is the Atlanta Metropolitan Planning Commission,[16] but the Detroit Metropolitan Area Regional Planning Commission is not far behind. While the Atlanta agency has concentrated on a thorough program of research and the publication of excellent general plan documents, the Detroit commission has attempted to build more slowly, through the use of numerous advisory committees involving about 200 leaders in the metropolitan area, and a system of 15 area development councils representing all parts of the metropolitan area. In both cases, a firm base of local community participation, representation, and support has been developed, although the techniques used in Atlanta and Detroit have varied in detail.

The Regional Planning Commission (Cleveland area) appears to have originally felt that it could be of most service by coordinating the planning of the 45 communities (including 95 percent of the county's population), which have signed a "Resolution of Cooperation" with the regional agency. This policy has been quite successful in ironing out many local disputes in an amicable fashion. In the past few years, however, the commission has apparently devoted more attention to the preparation of a general regional plan. Two studies have already been published,[17] and others are in process. The complete single general plan is expected to be ready by 1957, and to be adopted in 1959, after full discussion by all participating communities.

The Los Angeles County Regional Planning Commission has been confronted by one of the greatest development booms in American history, and has concentrated on coordination of local planning.[18] In addition, master plans for major activities in the county have been prepared, and studies leading to a single, integrated general plan have been undertaken. In Los Angeles County, however, as in Cleveland-Cuyahoga County, the pressures of immediate needs for "stop-gap" coordination have hindered efforts toward the development of a comprehensive master plan.

The Maryland-National Capital Park and Planning Commission, because it has important operational responsibilities with respect to parks and parkways, in addition to subdivision approvals and building code enforcement, has done most of its planning work in the fields of parks, highways, and zoning, attempting in all cases to work closely with the local communities affected. Its work in subdivision design has received national recognition.[19] Like other regional agencies which have in recent years devoted greater efforts to the development of a single general plan, the Maryland-National Capital Park and Planning

[16] *Metropolitan Atlanta: A Factual Inventory* (1951), *A Regional Land Use Plan for Metropolitan Atlanta* (1952), and *Now For Tomorrow: A Master Planning Program for the DeKalb-Fulton Metropolitan Area* (1954). These three closely related studies probably constitute the most forward-looking project of master plan research and planning completed since the regional plan for New York in 1929.

[17] Cuyahoga County (Ohio) Regional Planning Commission, *Our Citified County* 29p (1st report on land use in Cuyahoga County) Cleveland, 1954, and Cuyahoga County (Ohio) Regional Planning Commission, *Land for Industry—A Survey of Land Either Used or Suitable for Industrial Activity* 44p (2d report on land use in Cuyahoga County) Cleveland, 1955.

[18] Cottrell and Jones, *The Metropolis Is Integration Possible* (1955), pp. 47-54.

[19] Tuemmler, "Zoning for the Planned Community," *Urban Land* 13: 3-7, April, 1954.

Commission may also move in this direction. Its general park plan (1949) and master highways plan (1951) are important steps in this process.

The Fresno-Clovis Metropolitan Area Planning Commission, although still in the early stages of development, has been given clear responsibility to work with Fresno County and the Cities of Fresno and Clovis to produce a general plan.[20]

> The major function of the commission, as an organization, is advance planning. Based on an adequate program of research and data collection, its major objective is the development and effectuation of a general plan for the metropolitan area.

In addition, specific responsibilities with respect to the coordination of all capital improvements with the general plan are assigned to the Fresno-Clovis commission.

Although the Tri-County Planning Commission includes virtually no built-up areas, in 1952 it hired a consultant to prepare a master plan for the Folsom Lake district. The master plan and its related zoning and subdivision ordinance were intended to help coordinate land development in the region, and to provide for a shoreline parkway and seven potential recreation areas.

Organization of the Commissions

The tendency among the regional planning commissions is to give representation to the participating local governments concerned, although there are exceptions to this rule.[21] Three of the seven commissions studied here are appointed directly by the participating cities and counties (plus certain ex officio city and county officials).[22] Two of the commissions are appointed by the Governor of the State, but in one case the choices are carefully limited by a set of regulations which insure representation of the member municipalities and other local agencies, as well as local citizens' organizations.[23] In the other instance of gubernatorial appointment there are certain special residence requirements, but the members do not have to represent the local governments in the area concerned.[24]

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[20] [Fresno County Planning Commission], *Suggested Organization for Fresno-Clovis Metropolitan Area Planning Commission.* (n d), p 1

[21] Two provisions of California law make it possible to establish regional and area planning commissions. *Regional planning commissions* under this legislation are to consist of representatives of the county planning commission(s) (Cal Gov Code secs. 65060-65072). If only one county is concerned, the county planning commission also serves as the regional planning commission If two or more counties are included, the regional planning commission is made up of representatives of the individual county planning commissions, chosen, for the most part, by the respective boards of supervisors Arrangements for the operation and financing of regional planning commissions are to be worked out by mutual agreement among the counties Only one regional planning commission has been established under this legislation—the Los Angeles County Regional Planning Commission, created in 1939 The law is inoperative at present, in the absence of a state planning agency to designate additional regional planning areas

Area planning commissions may be established by mutual agreement among the city or cities and county or counties in the area concerned (Cal Gov Code, secs. 65090-1). The organization, operation and financing of an area planning commission are to be spelled out by the agreement A number of area planning agencies have been established in California, among them the Fresno-Clovis Metropolitan Area Planning Commission.

[23] Metropolitan Planning Commission (Atlanta area), Regional Planning Commission (Cleveland-Cuyahoga County area), and Fresno-Clovis Metropolitan Area Planning Commission.

[22] Detroit Metropolitan Area Regional Planning Commission

[24] Maryland-National Capital Park and Planning Commission.

The Los Angeles County Regional Planning Commission is simply the county planning commission acting ex officio. The Tri-County Planning Commission, which has a very limited scope and does not presently concern itself with urban problems, is composed of officials of the three participating counties.[25]

Most of the commissions are of moderate size, ranging from the five-man Fresno-Clovis Metropolitan Area Planning Commission to the 18-man Tri-County Regional Planning Commission. Two of the commissions are quite large, however, the Detroit Metropolitan Area Regional Planning Commission numbering 50 members, and the Regional Planning Commission (Cleveland area) 56. It is noteworthy that these two large commissions have created special executive committees of 13 and 18 members, respectively, to which extensive authority has been delegated to carry on the work of the agency.

Financial Support

Only one of the seven commissions studied has any independent taxing authority of its own.[26] The other six are dependent on the participating local governments and on private contributions for financial support. The funds of the Detroit Metropolitan Area Regional Planning Commission have come primarily from contributions by the counties, the major cities, and the state. Under the terms of its "Resolutions of Cooperation" the Regional Planning Commission (Cleveland area) requires each participating municipality to contribute five cents per capita annually, but in no case more than $500 or less than $100. The county is required to pay at least $15,000 per year, but in fact gives much more. When the commission renders special services for a city it makes a charge for the work done.

The Metropolitan Planning Commission (Atlanta area) is supported by contributions from the City of Atlanta, and from the two counties. The Tri-County Planning Commission is financed through a special tax imposed by the participating counties. The Fresno-Clovis Metropolitan Area Planning Commission, in its first annual budget of funds from local sources, was supported by contributions from Fresno County (47.5 percent), City of Fresno (47.5 percent), and the City of Clovis (5 percent). An additional grant of federal funds was received which almost equaled the first year's locally financed budget.

[25] The Tri-County Planning Commission has 18 members, six each from El Dorado, Placer, and Sacramento Counties. All members are supervisors, members of the county planning commission, or other county employees; appointments are made by the respective boards of supervisors.

[26] The Maryland-National Capital Park and Planning Commission

II. METROPOLITAN SPECIAL DISTRICTS AND AUTHORITIES

The special district or authority is a unit of government established under a state enabling law, a constitutional provision, or an interstate compact, for the purpose of administering specific functions of local government. Such a unit normally has its own governing body, is usually separated in some degree from the other local governments of the area it covers, and possesses independent means of raising money to finance its own operations. Districts and authorities are created to fill the need arising when the conventional or established units of local government—cities, counties, townships, or other districts or authorities—are for some reason unable or unwilling to provide essential services.

ADVANTAGES AND DISADVANTAGES OF SPECIAL DISTRICTS AND AUTHORITIES

The recent rapid increase in the number of special districts and authorities is due to certain recognized advantages in the use of this organizational device, and especially to practical considerations which frequently make it expedient to set up a district when more comprehensive solutions to metropolitan problems appear to be out of the question. As the districts and authorities have come into widespread use throughout the Country, however, some warnings have been sounded regarding the dangers and shortcomings inherent in this approach to problems of metropolitan government.

Flexibility of Area

The primary advantage of a special district or authority, when employed as an instrumentality of metropolitan government, is the flexibility of its area. A district or authority can be created to encompass any area that it is desirable to include, since the district normally can ignore the boundaries of established governmental units. Thus a district can be tailored to fit the area needing its services.

Unfortunately, full use of the districts' area potential is not always made. Many districts and authorities, when created, do not encompass the entire metropolitan area, and often no adequate provisions are made for later expansion. Victor Jones has commented as follows on this phenomenon:[1]

> * * * the special district is not used extensively enough, in either the large or small metropolitan areas, to make an appreciable difference in the solution of problems that spread out over the areas of several units of local government. It is more frequently used within the area of a single municipality, township, or county.

[1] Jones, "Local Government Organization in Metropolitan Areas: Its Relation to Urban Redevelopment," in Woodbury, ed., *The Future of Cities and Urban Redevelopment* (1953), p. 576.

Political Acceptability

Because a district can be superimposed on existing local governments with a minimum of disturbance, it has the practical advantage of avoiding threats to established agencies and officials and does not incur the resistance to change which may be aroused by proposals for more fundamental reorganization:[2]

> [The district's] lack of comprehensiveness is therefore very attractive to many public officials, both elected officeholders and appointed administrators, who feel that the metropolitan district is not a potential threat to their positions, as other governmental innovation might be.

There is still another aspect of a district's political acceptability. Suburban opposition to the expansion of a central city by means of annexation has created a situation requiring some alternative agency to provide area-wide service. The suburbs have been willing to join with the central city in establishing a district, even when they have refused to accept direct annexation. The Massachusetts Metropolitan District provides an extreme example in which the suburbs have not only stayed out of the central city, but have also accepted *state* control of the district in order to avoid domination by Boston:[3]

> The smaller municipalities * * * have come to look upon state control as a safeguard against domination by Boston. Such control has given them needed services for which they would otherwise have had to turn to Boston, probably at the price of surrender of local independence.

Major Disadvantages: Multiplicity and Autonomy

In practice, most metropolitan districts have been created for only one function or a very few related functions. As new area-wide needs have arisen, additional overlapping units have been established, and there has been no significant consolidation of districts operating in the same territory.[4]

> Although there are a few metropolitan districts performing more than one function, the tendency is to create a special district for each new undertaking. And like other units of government, special districts are remarkably hesitant about consolidating.

Thus whole families of districts have grown up in nearly every large metropolitan area in the United States.

This multiplicity of districts, combined with their traditional independence, has created severe problems of governmental coordination. William A. Robson, an international authority on metropolitan government, comments as follows on special districts and authorities:[5]

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[2] Bollens, *Special District Governments in the United States* (1957), pp. 66-67.
[3] Studenski, *Government of Metropolitan Areas* (1930), p. 314.
[4] Michigan University Institute of Public Administration, *Governmental Organization in Metropolitan Areas* (1951), p. 74. For earlier criticisms of the single function approach of most district organizations, noting also the failure to consolidate, see also Studenski, *The Government of Metropolitan Areas* (1930), pp. 337-41, and Jones, *Metropolitan Government* (1942), pp. 91-99.
[5] Robson, *The Government and Misgovernment of London* (ed. 2, rev. 1948), p. 334.

> The most serious drawback of the *ad hoc* body is that there is no method of coordinating its work with related activities carried out by other bodies It has one, and only one, object in view; and it is in a sense failing to discharge its duty if it attempts to take a comprehensive view of things Yet the services of a great modern city are becoming more inter-related every day, and even their efficiency is determined to no small extent by the degree of coordination that is attained Housing, planning, transport, highways—how can one separate such a group as this? And housing in turn involves education, drainage, public health, gas and electricity and many other services. There are hundreds of other points of contact between the various public and social services where "the single eye" is needed to obtain the best result.

Not only are districts independent of one another, but also many of them are relatively independent of the other local governments, and often are removed from the normal channels of local political responsibility.[6] The extreme case of such remoteness is found in the bi-state authorities whose directors are appointed by the governors of the participating states, but there are other examples, as John Bollens points out:[7]

> One of the most striking features of metropolitan districts is the fact that metropolitan residents lack determination of and control over certain important aspects of the districts * * *. Establishing a district by state legislative or judicial action, permitting the district directors to issue bonds on their own decision, effectuating annexations through state laws, and having members of the governing body chosen by a governor or a judge whose constituency is wider than that of the metropolitan area are important examples of the remoteness of some districts from the voters of metropolitan areas.

When governmental functions are taken out of the usual channels of political responsibility they tend to become isolated from the effects of public opinion. Victor Jones comments as follows on the recurrent demand to establish a function outside the area of customary political control, i.e , to place it under an autonomous district or authority: "The old battle cry, 'Take our interest out of politics' * * * camouflages an attempt to substitute special politics for general politics * * *."[8]

Even when the district governing board is directly elected by the voters there is a risk of remoteness from popular opinion Ironically, experience shows that direct election does not secure effective popular control when the citizens are forced to vote on a long ballot of elected officials, including the directors of numerous special districts. The election record is all too often one of voter unawareness and low participation.

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[6] Fortunately many of California's metropolitan districts are somewhat less subject to this criticism than those of other states

[7] Bollens, *Special District Governments in the United States* (1957), p 88

[8] Jones, "Local Government Organization in Metropolitan Areas' Its Relation to Urban Redevlopment," *in* Woodbury, ed , *The Future of Cities and Urban Redevelopment* (1953), p 581 See also Pope, "New Agencies of City Government," *Public Management* 36 122-25, June, 1954, Adrian, *Governing Urban America* (1955), pp 246-47, Anderson and Weidner, *American City Government* (1950), p 187

When metropolitan districts and authorities are completely independent of the general-purpose local governments (cities, counties, and townships), a situation is created wherein policy conflicts are almost certain to arise. The danger of conflict is particularly great when related functions are distributed among one or more metropolitan districts and other local governments. If there is no policy-making body representing the entire area which can settle such controversies, they go by default either to the courts or to the State Legislature The threat to local control is obvious.

Limited Grant of Fiscal Powers

It has also been noted that special districts and authorities are usually given a more limited grant of revenue and bonding powers than are cities and counties. Some districts are forced to depend exclusively on service charges for current financing and on revenue bonds for long-term financing. Other districts must depend very heavily on the property tax. Few if any districts may tap the diversified tax sources to which a California city or county has access.

Luther Gulick has pointed out that many authorities tend to be tied to the fluid economic system through service charges, rather than to the political or tax system.[9] A recent report on public authorities in the State of New York noted a general trend toward narrowing the revenue base through increasing use of the "benefit received" principle:[10]

> More and more the users are being charged by government for certain services rendered or facilities provided which might be financed from general tax revenues This is true at local government levels where sewer rentals, service charges for refuse disposal, and the like have reappeared in municipal finance.

FACTORS TO BE CONSIDERED IN ESTABLISHING A METROPOLITAN DISTRICT OR AUTHORITY

Any move to establish a new metropolitan district or authority should attempt to capitalize on the major advantages of this form of organization while avoiding its defects. In such an endeavor a number of considerations are pertinent:

(1) *How much of the metropolitan area is to be included in the jurisdiction of the district or authority?* In particular, the following questions are crucial. What is the area needing the service (or services) proposed to be provided by the district? What is the area which may need such services in the foreseeable future? Is there any valid reason why the district should not include *all* portions of the metropolitan area concerned?

(2) *Can a multipurpose district or authority be employed?* Can a district be constructed which will be able to administer *all* the functions needing coordination on an area-wide basis? Is there an existing district which, with proper modification, can be given the task at hand?

[9] Gulick, "'Authorities' and How to Use Them," *The Tax Review* 8 48, November, 1947

[10] New York Temporary State Commission on Coordination of State Activities, *First Interim Staff Report on Public Authorities Under New York State* (1954), p 32

(3) *How can the district's activities be coordinated most effectively with those of the other local governments?* Should the existing local governments be given a direct voice on the district's governing board? What provisions can be made to avoid conflicts with the other local governments, or to settle such conflicts when they do occur?

(4) *How can the district best be made responsive to public opinion and public needs?* What method of constituting the governing body will best serve this purpose: (a) having officials of the other local governments sit on the board (i.e. city councilmen and county supervisors); (b) appointment of district directors by the participating cities and counties; (c) gubernatorial appointment; (d) direct election; or (e) any one of several other techniques

(5) *How can the district's revenue structure be made strong enough to support the services required?* What will the district's fiscal needs be? Is it likely that the district will need more funds than the sale of services alone will provide? What arrangements should be made for long-term financing? In connection with proposed enabling legislation under study, are there any limitations on the taxing or bonding powers which would prevent the district from doing an effective job? Are there adequate guarantees of sound fiscal practices, including regular auditing and public reporting of all funds?

SUMMARY OF SPECIAL DISTRICT SURVEY

The experience of 16 selected metropolitan districts and authorities is summarized here in the hope that it will provide some practical guideposts for citizens, local officials and legislators concerned with problems of metropolitan government.[11] The experience of the districts and authorities is analyzed under the following headings: (1) area served; (2) district functions; (3) the composition of district governing bodies; and (4) finances

Area Served

All except one of the 16 districts and authorities which were surveyed encompass a considerable number of pre-existing local governments. The single exception is the Chicago Park District, which covers only the City of Chicago

Twelve of the districts include all or major portions of the metropolitan areas within which they operate, and several are so large in terms of both area and population as to justify classification as "regional" governments. The Metropolitan Water District of Southern California serves a population of 6.5 million in a 2,800-square-mile area, to which it transports Colorado River water across the width of the State of California. The Port of New York Authority includes an

[11] Bay Area Air Pollution Control District (San Francisco Bay area), Bi-State Development Agency (St Louis area), Chicago Park District, Chicago Transit Authority, County Sanitation Districts of Los Angeles County, Delaware River Port Authority (area in Pennsylvania and New Jersey), East Bay Municipal Utility District (eastern shore of San Francisco Bay), Golden Gate Bridge and Highway District (San Francisco and northern counties), Huron-Clinton Metropolitan Authority (Detroit area), Los Angeles County Flood Control District, Metropolitan District Commission (Hartford County, Connecticut), Metropolitan Sanitary District of Greater Chicago, Metropolitan Water District of Southern California, Omaha Public Power District, Port of New York Authority, Sacramento-Yolo Port District (Sacramento and Yolo Counties, California).

even larger population of over 13 million, although in a somewhat smaller area of 1,500 square miles in New York and New Jersey. The Delaware River Port Authority of Pennsylvania and New Jersey includes 10 counties with a population of approximately 4 million and a total area of 4,600 square miles. The Bi-State Development Agency in the St. Louis area has authority to conduct operations in a 3,000-square-mile area in two states, with a population of more than 1,700,000.

The Los Angeles County Flood Control District embraces an area of 2,760 square miles and nearly 5 million people, including all of the county except the Mojave Desert areas and the offshore islands. The Huron-Clinton Metropolitan Authority encompasses five counties, including Wayne County (Detroit), and serves a 3,252-square-mile area with a population of well over 3,200,000 The Bay Area Air Pollution Control District covers the nine counties and 75 cities of the San Francisco Bay area, and is presently activated in the six largest of the nine counties, with an aggregate population of approximately 2,800,000 The Chicago Transit Authority operates in the "metropolitan area of Cook County," which includes about three-fourths of the county's area —725 square miles—with a population of about 5 million living in 85 cities and in unincorporated territory. The Metropolitan Sanitary District of Greater Chicago includes a slightly smaller area than the Chicago Transit Authority, serving 4,600,000 people in a 500-square-mile area

The Metropolitan District Commission, Hartford County, Connecticut, serves the City of Hartford and a number of nearby towns in a 134-square-mile area with a population of 350,000 The Omaha Public Power District takes in 38 municipalities in a 2,500-square-mile area with a population of approximately 420,000. The district covers the entire Omaha metropolitan area, but does not cross the Missouri River and the state line into the Council Bluffs metropolitan area The Sacramento-Yolo Port District includes all of Sacramento County and a portion of Yolo County, with a total area of 1,200 square miles and a population of 400,000.

At least three of the districts leave out major portions of the metropolitan areas within which they operate, sharing their authority in each case with one or more other major submetropolitan agencies. The East Bay Municipal Utility District with its dozen cities in two counties and its 1,000,000 people in a 215-square-mile area covers only about one-third of the urban population in the San Francisco Bay area. One other major water supply system—San Francisco's Hetch Hetchy—and a number of smaller agencies provide water for the remaining population. In a similar manner, the County Sanitation Districts of Los Angeles County operate one of the two major sewage disposal systems which divide the Los Angeles metropolitan area almost equally between them—the other system being maintained by the City of Los Angeles. The districts include a 589-square-mile area with a population of 2,500,000.

The Golden Gate Bridge and Highway District includes the City of San Francisco and major portions of a 350-mile-strip of land running north to the Oregon border. This is the area presumed to receive primary benefit from a bridge across the Golden Gate connecting San Francisco directly with the north coast area along U. S. Highway 101.

The district includes less than one-third of the San Francisco Bay area's metropolitan population, and it shares the bridge building function with the State Department of Public Works, which is responsible for all the other major crossings of San Francisco Bay.

Functions of Districts and Authorities

Of the 16 special districts and authorities represented in this study, 13 are limited in practice to a single major function, which is sometimes supplemented by certain other closely related functions. Of these 13 units, eight either concentrate exclusively on their single major function, or have developed subsidiary and related functions to a very limited extent Five have developed subsidiary and related functions to a considerably greater extent in carrying out their single major purpose. Only three districts among the 16 appear to be classifiable as agencies with two or more major functions.

Agencies With a Single Major Function and With Little or No Development of Related or Subsidiary Functions. Eight single-purpose districts or authorities have little or no development of related and subsidiary functions.[12] Functions incidental to the district's single major purpose are occasionally exercised by the agencies in this group. The Golden Gate Bridge and Highway District, for example, is concerned with bridge approaches, as well as with the bridge itself, and has the power to develop a number of other minor functions which are "necessary or proper for the successful prosecution of the project for which the district was organized." The Metropolitan Water District of Southern California is primarily interested in water supply, but also holds a contract for hydroelectric power from Hoover Dam. Such energy is used in connection with the district's pumping operations, and is not purchased for resale or distribution. The County Sanitation Districts of Los Angeles County may sell or dispose of any by-products of the sewage treatment process They are also authorized to maintain and operate refuse collection systems, but to date little has been done in the development of this function, partly, it appears, because of defects in the enabling legislation.

The Huron-Clinton Metropolitan Authority is concerned with the accessibility of its recreation areas, and has completed 20 miles of a connecting parkway in the Huron and Clinton River valleys. The Omaha Public Power District is authorized to perform such other activities "as are necessary for carrying on a fully integrated electric power business" The Metropolitan Sanitary District of Greater Chicago has in practice concentrated its main efforts on its sewage disposal function, although it has also been authorized to undertake activities connected with stream pollution and channel navigation.

[12] The County Sanitation Districts of Los Angeles County, the Metropolitan Sanitary District of Greater Chicago, the Metropolitan Water District of Southern California, the Chicago Transit Authority, the Golden Gate Bridge and Highway District, the Huron-Clinton Metropolitan Authority, the Bay Area Air Pollution Control District, and the Omaha Public Power District

Agencies With a Single Major Function and With Extensive Development of Related or Subsidiary Functions. Five agencies have developed a wide range of functions related to a single major purpose [13] The Port of New York Authority has had a long and successful career in constructing and operating bridges, tunnels and major highway connections, constructing terminal facilities, promoting port interests, developing and operating major airports, and carrying out an extensive harbor facilities improvement program (wharves, piers, streets and industrial buildings, etc.). The Delaware River Port Authority and the Sacramento-Yolo Port District are relatively new agencies, but have already undertaken several projects in serving their central purpose of developing port facilities and commerce

The Chicago Park District, in addition to providing for the operation, maintenance and improvement of city parks, also maintains its own police force, and provides for lighting, traffic control, maintenance and improvement of the boulevards under its jurisdiction (a total of 205 miles in 1954). The district has also been authorized since 1955 to construct and operate revenue facilities in connection with motor vehicle parking, and has recently completed a large off-street parking facility

The Los Angeles County Flood Control District is empowered to carry out water conservation activities as an inter-related part of its flood control program. At the end of 1955, the district had constructed over 2,300 acres of spreading grounds which have been developed for conservation purposes in conjunction with the controlled discharge of water from district flood control dams.

Agencies With Two or More Major Functions It is difficult to draw a precise line of distinction between districts which have developed several subsidiary functions related to a single major purpose, and districts which are truly multifunctional. Three agencies, however, appear to be subject to separate classification because they have been granted broad powers over two or more major functions—the East Bay Municipal Utility District, the Metropolitan District Commission, Hartford County, Connecticut, and the Bi-State Development Agency of the St. Louis area. None of these agencies appears to have made full use of its legal powers.

The East Bay Municipal Utility District, now handling the functions of water supply and sewage disposal, was empowered by its enabling legislation to "acquire, construct, own, operate, control or use * * * works or parts of works for supplying * * * light, water, power, heat, transportation, telephone service, or other means of communication, or means for the disposition of garbage, sewage, or refuse matter." Special District No. 1 was organized in 1944 as an integral part of the East Bay Municipal Utility District to provide for sewage disposal in a portion of the area served by the parent organization. None of the other functions authorized by law have been developed.

The Metropolitan District Commission, Hartford County, Connecticut, which successfully provides for water supply and sewage disposal, also includes regional planning as one of its legal functions. The district

[13] The Port of New York Authority, the Delaware River Port Authority, the Sacramento-Yolo Port District, the Chicago Park District, and the Los Angeles County Flood Control District

keeps in close touch with plans being made by local planning and zoning bodies, primarily for the purpose of providing a reciprocal exchange of information. Occasionally the commission makes recommendations on intertown or area-wide problems. With respect to functions not developed, however, the district commission was originally empowered to plan, construct and maintain streets and highways and to provide garbage removal services. The highway function has since been delegated to the state highway department, and the garbage collection function has never been assumed.

The Bi-State Development Agency of the St. Louis area is empowered not only to plan, construct, and operate bridges, tunnels, airports, and terminal facilities within its jurisdiction, but also to submit plans to the communities involved on matters in which their joint or coordinated action would be beneficial. These matters include streets, highways, parking areas, terminals, water supply, sewage and drainage, recreation, and land-use planning. The agency has completed an extensive sewer and sanitation survey, a highway survey, and a harbor and wharf survey. It is also working on a preliminary comprehensive plan for the district.

The Selection of District Governing Bodies

There are several ways of choosing the governing boards of metropolitan districts and authorities Appointment by the governors of the participating states is the normal method for interstate districts and authorities. The most popular technique of selection calls for appointment of the directors by the participating local governments included within and served by the district. There are also districts some of whose directors are appointed by one or more local governments, and the remainder by the governor of the state. Finally, some district governing bodies are directly elected

Appointment by the Governor The governing boards of four districts and authorities are chosen by gubernatorial appointment [14] Three of the agencies in this group are interstate in scope. In the case of the Port of New York Authority, the Bi-State Development Agency (St Louis), and the Delaware River Port Authority, the two participating states have an equal number of representatives appointed by the governors (there are two ex officio Pennsylvania state officials on the Delaware body). The Delaware River Port Authority compact requires state legislative approval of virtually all projects and plans undertaken by the authority. Similarly, nearly every major project undertaken by the Port of New York Authority has necessitated additional state legislation. In addition, the governor of either New York or New Jersey may veto any individual action of a commissioner appointed from his state

The Metropolitan District Commission, Hartford County, Connecticut, is also subject to state control, although it is not interstate in area. The 22-member board of commissioners is appointed by the Governor of Connecticut. However, provision is made for the voters of the district to petition for the direct election of commissioners

[14] In addition, the governor appoints a minority of the board members of the Chicago Transit Authority and the Huron-Clinton Metropolitan Authority (see below).

County Appointment or Ex Officio Control. The Los Angeles County Flood Control District is governed by the county board of supervisors, and various county officers also serve as officers of the district. The boards of supervisors of the six counties included in whole or in part within the Golden Gate Bridge and Highway District appoint the district directors, the number from each county depending on its population.

Mixed City-County Appointment. The governing boards of the County Sanitation Districts of Los Angeles County represent a combination of appointments by the county board of supervisors and the mayors of cities within the district. The number of members selected by the mayor(s) and the supervisors depends on the population balance between the unincorporated and incorporated areas within the district

The governing board of the Bay Area Air Pollution Control District also embodies joint city-county control Each board of supervisors of the six counties within the "activated" portion of the district chooses one of its members to act as a district director for a four-year term [15] Six directors are chosen by six "city selection committees," one committee being established in each county, and consisting of the mayors of all the cities within the county. Each committee chooses a director for a two-year term from among the mayors and councilmen of the cities within the county

Two of the five Sacramento-Yolo Port District commissioners are appointed by the board of supervisors of the county in which is located the largest proportion in assessed value of the lands within the district (Sacramento County), and two are appointed by the council of the city having the largest proportion in value of lands within the district (the City of Sacramento) The remaining member is appointed by the board of supervisors of the other county in the district (Yolo County).

Mixed County-Gubernatorial Appointment. In the case of the Huron-Clinton Metropolitan Authority, the boards of supervisors of the five counties included in the district select one commissioner each (for six-year terms), and the state governor appoints two commissioners (for four-year terms).

Mixed City-Gubernatorial Appointment In the case of the Chicago Transit Authority, four members are appointed by the mayor of Chicago and three by the governor of Illinois, each being required to secure the approval of the other for his nominees

City Appointment. The mayor of Chicago appoints the five commissioners of the Chicago Park District, which is coterminous with the city

Appointment by Member Cities and Districts. The 37 directors of the Metropolitan Water District of Southern California are appointed by the participating municipalities and local water districts. Each member agency is entitled to at least one representative on the board, and may also have an additional representative for each $500,000,000 of assessed valuation Every participating unit has one vote for each

[15] The Bay Area Air Pollution Control District includes the nine counties of the San Francisco Bay area At present, however, the district has been activated in only six of the nine counties (San Francisco, Alameda, Contra Costa, San Mateo, Marin, and Santa Clara)

$10,000,000 of assessed valuation, and no one member agency is permitted to have more than one-half the total number of votes. The representatives of each unit vote as a block after a majority decision of the delegation is reached.

Direct Election. Three agencies have directly elected governing boards. Directors of the Metropolitan Sanitary District of Greater Chicago are elected at large In the East Bay Municipal Utility District the directors are nominated from wards within the district but are voted upon at large The Omaha Public Power District elects its directors from subdivisions within the district.

The Financing of Districts and Authorities

Districts and authorities may be classified into three groups, according to the scope of their fiscal authority First are the agencies which may obtain revenues from both property taxation and services charges. Second come those which must rely on service charges, not being empowered to employ the property tax Third are the districts which must depend primarily on property taxation Districts and authorities in all three categories normally may accept aids and subventions from other governments when offered.

Agencies Authorized to Employ Both Property Taxation and Service Charges Ten districts included in this survey are authorized to utilize both property taxation and services charges as sources for operating revenue [16] Actual practice, however, varies greatly. The Golden Gate Bridge and Highway District derives practically all its revenue from bridge tolls. The Metropolitan District Commission, Hartford County, Connecticut, and the East Bay Municipal Utility District derive a major portion of their operating revenues from service charges, but also rely on the property tax to a degree. The seven remaining agencies, on the other hand, appear to rely primarily on property taxation, and utilize service charges only to a limited extent The Los Angeles County Flood Control District also receives a substantial proportion of its revenues in the form of subventions from other governments.

Among these 10 districts authorized to use both service charges and property taxation to raise operating revenues, two are restricted to revenue bonds for financing purposes—the Huron-Clinton Metropolitan Authority and the Golden Gate Bridge and Highway District.

Six of the 10 districts are restricted to general obligation bonds in their financing powers. These include the Metropolitan Water District of Southern California, the Sacramento-Yolo Port District, the Los Angeles County Flood Control District, the East Bay Municipal Utility District, the Metropolitan District Commission of Hartford County, and the Chicago Park District.

[16] Chicago Park District, County Sanitation Districts of Los Angeles County, East Bay Municipal Utility District, Golden Gate Bridge and Highway District, Huron-Clinton Metropolitan Authority, Los Angeles County Flood Control District Metropolitan District Commission, Hartford County, Connecticut, Metropolitan Sanitary District of Greater Chicago, Metropolitan Water District of Southern California, and Sacramento-Yolo Port District

Only two of the agencies have been authorized to issue both revenue and general obligation bonds—the County Sanitation Districts of Los Angeles County, and the Metropolitan Sanitary District of Greater Chicago. The latter may issue revenue bonds to finance improvements in specific localities within the district, payable from the area so serviced. The Chicago district has also been authorized to obtain construction funds by levying a property tax for construction purposes amounting to 10 million dollars annually for the years 1955-1959, inclusive.

Agencies Which Must Rely Primarily on Service Charges. Five of the 16 districts and authorities surveyed have no power to levy a property tax. Of these, four now rely primarily on service charges (fees, rentals, tolls, fares, etc.) for their operating revenue [17] The fifth, the Bi-State Development Agency of the St. Louis area, has depended largely on state subventions during its formative period, but will apparently rely primarily on service charges when in full operation.

All five of these units are limited to revenue bonds for long-term financing.

Agencies Limited to Property Taxation. One district is, for all practical purposes, limited to property taxation for its revenue—the Bay Area Air Pollution Control District. The district's budget is allocated among the six counties presently participating, each county thus contributing to the district through property taxation. The district may also receive income from fees charged for violations of its regulations, but this additional source is of doubtful significance. The district's enabling legislation does not provide for bond issues other than for short-term (current year) indebtedness in anticipation of tax revenues.

Special Assessments. Six districts have some kind of authority to levy special assessments in areas benefited by particular improvements. Included are, the Chicago Park District, the County Sanitation Districts of Los Angeles County, the East Bay Municipal Utility District (through its subsidiary, Special District No. 1), the Los Angeles County Flood Control District, the Metropolitan District Commission of Hartford County, Connecticut, and the Metropolitan Sanitary District of Greater Chicago.

The 10 remaining districts and authorities included in this survey appear to make no provision for special assessments.

[17] Chicago Transit Authority, Delaware River Port Authority, Omaha Public Power District, and Port of New York Authority

III. COMPREHENSIVE GOVERNMENTAL REORGANIZATION: SELECTED EXAMPLES

Regional planning commissions and metropolitan districts and authorities represent only partial solutions to the problem of metropolitan government. This is not to deny that real progress can be made under such arrangements, because it can and has been. These devices are not the final answer, however, and their excessive use may render more difficult the eventual achievement of a satisfactory solution. For this reason such techniques can be employed safely only if careful consideration is given to the consequences.

The alternative to a commission, district or authority is a more comprehensive governmental reform affecting the *general purpose* units—the municipalities and counties. In order to illustrate the range of possibilities this section of the report will summarize: (1) the results of three recent comprehensive reorganizations (Baton Rouge-East Baton Rouge Parish, Atlanta-Fulton County, and Toronto); (2) one complex system of government developed gradually over a period of many years (Los Angeles County); and (3) two proposals for reorganization now under active consideration in the Miami and Nashville metropolitan areas

MUNICIPAL ANNEXATION AND PARTIAL CITY-COUNTY CONSOLIDATION—THE REORGANIZATION OF BATON ROUGE AND EAST BATON ROUGE PARISH (1949)

The reorganization of the City of Baton Rouge and East Baton Rouge Parish, Louisiana, became effective on Jaunary 1, 1949 [1] Prior to reorganization the city contained approximately 35,000 people in an area of 4½ square miles. To this was added 14½ square miles of the urbanized area of the parish and about 65,000 population The total area of the parish is approximately 500 square miles.

The governmental reorganization took place as follows The parish was divided into three zones: (1) an enlarged urban area, consisting of the City of Baton Rouge; (2) two industrial areas, containing no residences; and (3) the rural area, containing the remainder of the parish. The city and the parish each retained its separate legal identity, but under councils with an interlocking membership designed to promote greater unity in policy. Seven members elected from the city area form the city council. The seven city council members, plus two additional members elected from the noncity portions of the parish, make up the parish council In addition, the office of mayor-president was established. The mayor-president, who is elected parish-wide, presides over meetings of both the city and parish councils, but has no vote. The mayor-president acts as the chief administrative officer for both

[1] This summary is based primarily on Reed, "Progress in Metropolitan Integration," *Public Administration Review* 9 1-10, Winter, 1949, and Baton Rouge Junior Chamber of Commerce, *Our City-Parish Government A Thumbnail Sketch* 32p Baton Rouge, 1954

governments and has significant appointing power. Five departments are under the direction of the mayor-president: finance, purchasing, public works, personnel, and fire and police.

Some service activities are carried out on a parish-wide basis, whereas others are limited to the city area. Highways and bridges, engineering, public building maintenance, and airports are parish-wide functions. Police and fire protection, street lighting, refuse collection and disposal, and sewerage, on the other hand, are provided only in the city area.

Uniform taxes are levied throughout the parish for the support of area-wide functions. In addition, the city area is subject to municipal taxes which support the municipal services. Municipal services can be supplied in noncity areas if special taxing districts are set up to provide financing. The two industrial areas must make their own arrangements for services, at their own expense.

Planning is a parish-wide function under the planning and zoning commission.[2] The nine-member commission is empowered to make master plans for the development of highways, streets, parks, public buildings, drainage and other public facilities. No construction, improvement, or location of any one of these facilities may be made unless it is included in one of the master plans or is approved by the commission. The parish or the city council may overrule the planning commission's decision on a master plan by a two-thirds vote. The commission, however, is subject to a limitation of Louisiana law which prohibits parishes from exercising zoning powers. Zoning authority is thus effective in the city area only, not throughout the parish.

MUNICIPAL ANNEXATION AND REALLOCATION OF FUNCTIONS—THE ATLANTA-FULTON COUNTY REORGANIZATION (1952)

In January, 1952, the Plan of Improvement went into effect for Atlanta and Fulton County, Georgia. The reorganization embodied three main features: (1) a mass annexation of urban territory by the City of Atlanta; (2) the withdrawal from Fulton County of all responsibility for "municipal-type" services—all such services being placed in the hands of the City of Atlanta; and (3) the retention by or consolidation under Fulton County of certain area-wide functions. The primary result of the reorganization was thus to enlarge greatly the city's area and to reduce to a minimum the duplication of functions between the city and county.

The annexation added 82 square miles of urban and suburban territory to the City of Atlanta's existing 36 miles, bringing the city's new total to 118 square miles.[3] The city's population was increased from 330,000 to 425,000. Further annexations may be ordered by the superior court, on the request of the city or of resident voters and property owners in the area concerned, if the area has 40 or more dwellings per land lot[4] and an assessed valuation of $200,000 or more per land lot.

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[2] Kean, "Parish of East Baton Rouge and City of Baton Rouge," *American Planning and Civic Annual* (1953), pp. 31-36.

[3] Hughes, "Annexation and Reallocation of Functions," *Public Management* 34: 26-30, February, 1952.

[4] A "land lot" is the smallest political subdivision, containing approximately 202½ acres.

The City of Atlanta took over all fire and police protection, parks and recreation facilities, sewerage, and refuse collection and disposal. Fulton County's power to provide these services was withdrawn by law. Areas outside the city limits needing such services must obtain them from the City of Atlanta through special districts and contractual arrangements.[5] Fulton County retained all welfare functions and assumed responsibility for all health services. Tax assessment and collection were unified under the county. The county also continued the following offices: courts, coroner, surveyor, almshouse, agricultural aids, and sheriff.

The Fulton County and City of Atlanta planning commissions were merged into the joint Atlanta-Fulton County Planning Board, which is composed of seven members, two representing the county and five the city. The board is responsible for preparing a master zoning plan for the city and county.

At least two major functions shared by the city and county were untouched by the reorganization Public schools and the street and highway system continue to be the county 's responsibility in the unincorporated area, and the city's task in the city area

FEDERATED METROPOLITAN GOVERNMENT— TORONTO, CANADA (1954)

The plan for federated metropolitan government, which became fully operative in Toronto on January 1, 1954, was proposed after extensive hearings by the Ontario Municipal Board, a quasi-judicial provincial body with wide jurisdiction over municipal affairs.[6] The plan as enacted established a federation of 13 local units called the Municipality of Metropolitan Toronto.[7] The new metropolitan government covered an area six times the size of Toronto proper, or approximately 245 square miles, with a 1951 population of approximately 1,100,000. Each of the 13 local units continued its existence under the federation.

The County of York, which includes the entire Toronto metropolitan area, also contains 14 other municipalities, in addition to those involved in the reorganization. These municipalities are located for the most part north of the City of Toronto and its suburban areas. The Ontario Municipal Board acted with directness in dealing with problems of reorganization presented by the existing two-tier (municipality-county) governmental structure.[8]

> In its consideration of the problem of the distribution of authority, the board was soon faced with the problem whether the 12 suburbs could conceivably remain in the existing county organization and thus become, in effect, members of two distinct federations of

[5] For a detailed description of the distribution of functions, see Goody, "Atlanta Citizens Unscramble Governments, Revitalize City," *Governmental News* 3 10-12, June, 1951, and 3 22-24, October, 1951

[6] Ontario Municipal Board, *Decisions and Recommendations of the Board, in the Matter of Section 20 and 22 of "The Municipal Act,"* (R S O, 1950, Chapter 243) 91p Toronto, 1953 (A summary of background information and of the hearings and findings of the Ontario Municipal Board on the various proposals for governmental reorganization in the Toronto metropolitan area)

[7] The local units and their 1951 populations are as follows the townships of North York (85,897), Scarborough (56,292), East York (64,616), York (101,582) and Etobicoke (53,779); the towns of Leaside (16,233), New Toronto (11,194), Weston (8,677), and Mimico (11,342); the villages of Long Branch (8,727), Forest Hill (15,305), and Swansea (8,072), and the City of Toronto (675,754).

[8] Ontario Municipal Board, *op cit.*, pp 46-47.

> municipalities at the same time. The administrative difficulties inherent in such an arrangement would be extremely serious. Moreover, the rapid urbanization of the 12 southern county municipalities and their close economic and social integration with the life of the central city has intensified a long standing division of interest between the suburbs and the northern municipalities in the county. The board has therefore decided that the establishment of the proposed metropolitan government would require the separation from the county of the 12 suburbs for all municipal purposes. As a necessary consequence it is proposed to transfer to the central [metropolitan] authority certain powers and functions now performed by the county on behalf of the suburbs.

The board took care to point out that the remainder of the county would still have enough population and assessed valuation to be on a par with other counties in Ontario, and that revenue losses due to the separation of the 12 suburbs would be compensated for by the fact that the county would no longer have to provide special services in those areas. The basic legislation also made some provision regarding the problem of the satellite communities outside the new federation. The planning area was extended beyond the limits of the Municipality of Metropolitan Toronto, and the metropolitan government was given authority to enter into agreements with adjacent municipalities for the extension of water supply and public transportation services.[9]

The governing body of the Municipality of Metropolitan Toronto may consist of either 24 or 25 members. The City of Toronto has 12 representatives, and the 12 suburban municipalities have one each. The representatives of Toronto are the mayor, the two of the four controllers who have received the highest popular vote, and the nine aldermen who received the largest vote in their respective districts in the most recent municipal elections. The 12 suburban municipalities are represented by their mayors. The 24 members meeting together choose a chairman either from among their number or from the outside.

In the distribution of functions between the metropolitan government and its member units the former is charged with certain area-wide responsibilities. The authority of the Municipality of Metropolitan Toronto relates to water supply, sewage disposal, arterial highways, housing and redevelopment, metropolitan parks, area-wide planning, and certain health and welfare services. The member municipalities are responsibile for law enforcement, fire protection, local streets, libraries, building regulations, direct public relief, and most public health services.

No provision was made for any future redistribution of functions. Apparently any changes will require amendments of the basic law by the provincial legislature. A 1955 amendment, for example, added civil defense to the functions of the metropolitan government. Bills have also been presented to the provincial legislature which would consolidate the local police into a metropolitan police force, create a metropolitan licensing commission, transfer to the metropolitan govern-

[9] See Crouch, "Metropolitan Government in Toronto," *Public Administration Review* 14: 85-95, Spring, 1954; and Hardy, "Metropolitan Area Merges," *National Municipal Review* 42: 326-30, July, 1953.

ment the responsibility now shared by the City of Toronto and York County for registry services, and permit the metropolitan government to provide central facilities for garbage and refuse disposal.

The handling of the planning function is of special significance, since planning is clearly recognized as a responsibility of all three levels of government—provincial, metropolitan, and local. The planning area established by the provincial minister of planning and development includes the Municipality of Metropolitan Toronto, and in addition, 5 townships, 7 villages, and 1 town in the outlying areas. A master plan is in the course of preparation for the entire planning area. The plan will cover such matters as land use, sanitation, green belts and parks, and public transportation. The Metropolitan Toronto Planning Board can recommend a general plan, which after adoption by the Municipality of Metropolitan Toronto and approval by the provincial minister becomes binding on the individual local units. Local plans must conform to the general plan.

GOVERNMENTAL INTEGRATION IN THE LOS ANGELES METROPOLITAN AREA

Los Angeles County has the good fortune to encompass practically all of a major metropolitan area. It is this fact which has enabled the county to play a key role in much of the governmental integration achieved in that area. There are now over 5,000,000 people in Los Angeles County, approximately 77 percent of whom live in one of the 51 municipalities. Thus over 1,000,000 people are living in unincorporated territory, most of them in urbanized communities.

Governmental integration in the Los Angeles area is the result of several developments which have taken place gradually over a period of forty years or more:[10]

(1) Many functions of government have been transferred in whole or in part from cities to the county. One of the earliest functional transfers occurred in 1907 when Los Angeles County took over property tax assessment and collection from the City of La Verne. By 1952, 42 of the 45 cities in the county had made similar arrangements, including the City of Los Angeles. Other functions which various municipalities have transferred to the county include public health administration, library administration, building inspection, personnel administration, operation of animal pounds, police services, and street construction and maintenance.

(2) The county provides many municipal-type services in the unincorporated urban area, either directly or through special districts. Among the services so provided are fire protection and sewers (through districts), police protection, building inspection, streets and highways, planning and zoning, recreation facilities, and others.

[10] This summary is based primarily on the two final volumes of the 16-volume series of reports published by the Haynes Foundation of Los Angeles under the general title, "Metropolitan Los Angeles—A Study in Integration." The two reports relied upon here are: Winston W. Crouch, *Intergovernmental Relations* 160p Los Angeles, 1954; and Edwin A Cottrell and Helen L Jones, *The Metropolis: Is Integration Possible* 116p Los Angeles, 1955.

(3) A multitude of formal and informal agreements among the many different units have done much to smooth out administrative difficulties and facilitate day-to-day cooperation among the many governments operating in close quarters. Examples of these arrangements are the agreements for mutual aid in fighting fires and for cooperation in meeting law enforcement problems.

(4) The county itself and certain specially created metropolitan districts have assumed a number of area-wide functions. The Los Angeles County Air Pollution Control District, the Los Angeles County Flood Control District, and the Los Angeles County Regional Planning Commission are all area-wide agencies controlled by the county government in an ex officio capacity. The County Sanitation Districts of Los Angeles County form a distinct entity, although the county participates in their administration. The Metropolitan Water District of Southern California is a truly regional government, extending far beyond the boundaries of Los Angeles County.

(5) A final and extremely important integrating development has been the growth of the City of Los Angeles itself. With a population of 2,200,000 and an area of 450 square miles, Los Angeles has, by the very fact of its existence, helped to unify the metropolitan area in a governmental sense. Certainly the governmental structure of the area would be vastly different if Los Angeles were 20 cities of 100,000 each instead of one city of over 2 million.

This brief account of government in the Los Angeles area cannot begin to indicate the magnitude of its problems or the measure of its accomplishment. The Los Angeles metropolitan area is probably one of the best governed of the major metropolitan regions in the United States. Nevertheless, the problem of metropolitan government in Los Angeles County is far from being solved There is no single policy-making body for the metropolitan area Instead, governmental authority is split many ways. The county has a large share, the City of Los Angeles also has a very important share, and each of the other 50 cities has is own portion of independent authority. Nowhere is there a real metropolitan legislative body which could insure coordination among the many different governments, and which could make decisions on policy matters affecting the whole area.

A METROPOLITAN COUNTY—THE PROPOSAL FOR REORGANIZATION OF DADE COUNTY (MIAMI)

In 1953 the City of Miami, Florida, and the Dade County League of Municipalities acted to establish the Metropolitan Miami Municipal Board, which was given the task of formulating a plan for metropolitan government in the area. The board commissioned the Public Administration Service to assist with the necessary study and investigation, along with a University of Miami Committee on Municipal Research. The product of these joint efforts, a report embodying a proposed reorganization of local government in the Dade County area, was published in 1954.[11]

[11] Public Administration Service, *The Government of Metropolitan Miami.* 194p Chicago, 1954

The existing system of local government was found to consist of the county government and 26 municipal governments. The municipalities ranged in size from Miami, with an estimated 1954 population of 275,000, to Indian Creek, with 50 residents. In addition a large urban population was found to be living in unincorporated settlements. The total population of the county was approximately 650,000.

The proposal calls essentially for a reorganization of Dade County into a metropolitan government. The legislative body would be a board of metropolitan commissioners, consisting initially of a president and 10 members. The president would be elected at large. Eight of the 10 members would be elected from eight districts. The remaining members would be chosen one each from the cities whose population exceeds eight percent of the whole metropolitan area's population (at present, Miami and Miami Beach).

The president would be the presiding officer of the board, but would vote only in case of a tie. The primary responsibility for administration would be placed in the hands of a chief administrative officer, appointed by the board of metropolitan commissioners. All departments of the metropolitan government (except for the school system) would be responsible to the chief administrative officer.

The individual municipalities would retain their identities and most of their present duties. The distribution of functions between the metropolitan and municipal governments would be made on the basis of their regional versus their local character. The metropolitan government, for example, would develop and maintain a system of arterial streets and highways throughout the area. The individual municipalities would be responsible for local city streets. Minimum building codes would be established by the metropolitan government. These codes would be enforced by the cities within their corporate limits, and the cities would have full discretion to provide for more rigid standards.

Regional planning for the entire area would be carried on by the metropolitan government. The municipalities would continue their own planning activities in the city areas, but such local plans would be expected to fit into the framework of the broader metropolitan plan. All responsibilities for sewerage and sewage disposal, and for water supply would be placed in the hands of the metropolitan government. The individual municipalities would retain their authority for refuse collection within city areas, but the metropolitan government would be empowered to provide for regional refuse disposal facilities.

Health and welfare services would continue to be provided on an area-wide basis under the metropolitan government, but the cities would be able to provide supplemental services. The metropolitan government would be responsible for developing a regional system of major parks, and the cities would maintain municipal park and recreation facilities.

The municipalities would retain authority to provide police patrol and traffic control services, but the metropolitan government would be charged with insuring a minimum level of police protection throughout the area. The metropolitan government would also be responsible for certain centralized police services, such as a central radio and communication system, central jail system, and police training facilities. Fire protection within city limits would be the responsibility of

the city governments. In the unincorporated area fire protection would be provided by the metropolitan government on a cost basis to specially created fire service districts. The metropolitan government would also develop an area-wide minimum fire code.

The property assessment and tax collection functions would be centralized in the metropolitan government, which would pay into the cities' treasuries the amounts due them.

COMPLETE INTEGRATION—A PLAN OF METROPOLITAN GOVERNMENT FOR NASHVILLE AND DAVIDSON COUNTY

Probably the most comprehensive recent plan for governmental reorganization in a metropolitan area is the recent proposal made by the Nashville Planning Commission and the Davidson County Planning Commission, acting jointly. [12]

The key element of this proposal is the creation of a single metropolitan government for the whole area of Davidson County. The metropolitan government would be the only unit operating within the boundaries of Davidson County, and would replace the county government as well as all the city governments.

A representative metropolitan council would serve as the single legislative body for the entire area. Some members of the council would be elected by wards and others at large. A chief executive officer, elected at large, would be given authority equivalent to that of the mayor in a strong mayor city.

The single metropolitan government would have jurisdiction throughout Davidson County, and would exercise its powers in two service districts. The "general services district" would consist of the whole area of the county, both urban and rural. Residents of the general services district would receive all those services required on an area-wide basis. The general services district would have its tax levy set in proportion to the cost of area-wide services.

The second district would be called the "urban services district," and would include those areas requiring both urban services and general services. The urban services district would have a tax levy adjusted to the costs of services received within the district. Residents of the urban services district would pay both the urban services district taxes and the general services district taxes, but the two levies would be kept separate and distinct, and used for different purposes.

[12] Nashville and Davidson County Planning Commissions, *Plan of Metropolitan Government for Nashville and Davidson County* 69p Nashville, 1956

IV. CONCLUSION

The fundamental problem of metropolitan government originates from a contradiction between the underlying unity of a metropolitan area and its normally fragmented governmental structure. All portions of a metropolitan area are interrelated with all other portions. People who live in one part of the area may work in another part and do their daily shopping at some point in between. Business firms in their trading largely ignore local political boundaries. A metropolitan newspaper may be read by residents of dozens or hundreds of communities. Urban populations in their movement flow unimpeded across local boundary lines. Almost anything of significance that happens in one part of a metropolitan area will have some effect on people living in the other parts. A web of interrelationships creates a community of interest encompassing the whole metropolitan area.

This established community of interest stands as a challenge to local government. The problem is one of knitting the local units together, or of reorganizing them, in order that government may serve the whole metropolitan community as effectively as a business firm, a bank, or a newspaper. Each area needs a metropolitan legislative body whose task it would be to make decisions and establish policy in matters of area-wide concern. The creation of an area-wide policy-making body would be an ideal solution to the problem of metropolitan government. Such a solution need not impair the recognized values embodied in the pre-existing local governments, but could aid in preserving those values by helping to improve local performance.

Each of the governmental experiments reviewed here represents a step toward the ideal solution. One or two of the comprehensive reorganizations may have come close to a practical realization of the ideal—only time will tell. At any rate, the varied experiences of these different areas and agencies should provide valuable guidance to California communities, legislators, and civic organizations who are seeking much-needed improvements in the government of our metropolitan communities.

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A STATE-WIDE PARK AND RECREATION PROGRAM

REPORT OF THE SUBCOMMITTEE ON BEACHES AND PARKS

A Subcommittee of the

ASSEMBLY INTERIM COMMITTEE ON CONSERVATION, PLANNING, AND PUBLIC WORKS

House Resolution No. 239, 1955

Report Prepared by

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March, 1957

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COMMITTEE LETTER OF TRANSMITTAL

ASSEMBLY INTERIM COMMITTEE ON
CONSERVATION, PLANNING, AND PUBLIC WORKS
SACRAMENTO, CALIFORNIA, March 1, 1957

HON. L. H. LINCOLN
Speaker of the Assembly
Members of the Assembly
Assembly Chamber, Sacramento, California

The full Committee on Conservation, Planning, and Public Works has followed the progress of our subcommittee's investigation of beach and park programs. As this report emphasizes, state policy regarding a balanced recreation and park program to meet the demands of our rapidly growing population is imperative.

It is my belief that the recommendations of this report, if followed by the Legislature, will result in important policy decisions and a better program to serve the needs of the people.

Respectfully submitted,

FRANCIS C. LINDSAY, Chairman
Assembly Interim Committee on
Conservation, Planning, and Public Works

SUBCOMMITTEE LETTER OF TRANSMITTAL

ASSEMBLY CHAMBER, STATE CAPITOL
SACRAMENTO, CALIFORNIA, March 1, 1957

HON. FRANCIS C. LINDSAY, *Chairman*
Conservation, Planning, and Public Works
California State Assembly, Sacramento, California

DEAR SIR: This report of the Assembly Subcommittee on Beaches and Parks is submitted pursuant to House Resolution No. 239, 1955, submitting the findings and recommendations and the substantiating materials on which these are based for the consideration of the Legislature.

The hearings of our subcommittee are replete with criticisms of the administration and policy of the State Commission of Parks and its administrative arm, the division. The subcommittee recognizes the emergency nature of some of these criticisms and appreciates the long years of service of the commission and its integrity and concern for the state welfare as controlling its decisions and determination of policy. It is our belief that precipitate action in view of these criticisms largely related to the acquision of beach and park areas authorized in the 1956 Budget would be dangerous and contrary to the state interest. Consequently we are submitting a report and recommendations that are moderate in temper and in the long run will protect the state interests and will permit adjustment of some of the conflicts that clearly exist.

It is our recommendation that the legislation submitted with this report be adopted and that the studies of this committee following the development of a detailed master plan for recreation and its administration be pursued with the purpose of additional policy and structural reforms.

Respectfully submitted,

FRANK P. BELOTTI, Chairman
JOHN L. E. COLLIER
PAULINE L. DAVIS
THOMAS M. ERWIN
FRANK LUCKEL
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Subcommittee on Beaches and Parks

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THE FINDINGS

A. California's expanding population is placing great strain on her existing parks and recreational resources. Conservative estimates expect that the population of this State will surpass 20 million by 1975 and at approximately 2050 her population will equal at least 45 million people. Under the assumptions of an expanding economy and greater proportional income, of more leisure time, early retirement under established retirement insurance or annuity, it can be expected that higher proportion of the time of the average family will be spent in seeking outdoor recreation and relaxation. It must be assumed that public policy will require the expansion of park and recreational facilities to meet this increasing demand. During the last session of the Legislature approximately $40,000,000 were made available to the Beach and Park Commission for the purpose of acquiring stipulated beach and park areas to satisfy this growing recreational demand. The acquisition of these designated areas must be achieved as soon as possible if the areas are to be reserved for recreational purposes. The continued accelerated population growth with the attendant private development around prime recreation areas is rapidly pricing these areas beyond the reach of the people of California.

B. With demands on recreational and park facilities expanding in almost geometric proportion to population growth, the Legislature has a responsibility to the administrative agencies for a clarification of existing beach and park authority and administration policy. The appropriate balance between recreational areas, scenic areas, and historical sites is a policy consideration that should not be determined by the Legislature through the review of budget submissions. The hearings of this subcommittee in Los Angeles and Sacramento and conferences with the Division of Beaches and Parks re-emphasize the importance of more legislative direction to the agency. Under present authorizations, the State Commission of Beaches and Parks stands astride both the policy and action programs of the State of California. Since the creation of the commission in 1927 it has served the State of California with devotion and integrity. One of the most magnificent beach and park systems in the world is evidence of this fact. Yet, under the accepted program instituted by budget provisions of the last session, both policy matters on specific site acquisition and on the use of areas for recreational purposes have affected the speed of acquisition and development programs. Continued conflict on policy matters between the commission and Legislature can be expected until the State of California develops a statewide recreation and park plan. Such a plan based on sound recreation standards for each field of recreation interest, after adoption by the Legislature, can be the vehicle for the expression of legislative policy for the guidance of the commission and the division. Budgetary augmentation of this plan with the review now provided will assure the continuity of policy now lacking at this level of government.

C. The above finding in regard to legislative frustration on park and recreation policy determinations is illustrated by administrative action now in process for the creation of a roadside rest program for California. This legislative committee, after full study during the last interim, recommended authorization and policy direction for such a program. These recommendations were adopted by both houses of the Legislature. This program is now being implemented through the budget submissions of the commission before the authorizations and policy questions have been determined by legislation.

D. The planning of recreation areas should be the responsibility of an agency with sympathy for this function. The agency must recognize the importance of balanced public-private recreational development in order to furnish local units of government a tax base for the support of local governmental services including that of recreation. The responsible agency must recognize the recreational requirements of metropolitan areas and these must be developed in balance with other areas in remote places with the prime objective of serving the needs of the people. It is doubtful that the philosophy and prime interest of the commission developed during many years of devoted state service will permit it to approach with sympathy and understanding this responsibility. The state interest in the development of areas for recreational purposes can be expected to increase with its population growth. This function is an area of specialization equal to that now found in the Commission of Beaches and Parks and its work load and responsibilities can be expected to increase. Each function merits division status and should be located in the same department.

E. The hearings of this subcommittee and the experience of state administrative agencies regarding recreational planning on proposed state water development programs emphasize the importance of designating a single agency responsible for this function. This finding does not indicate that the state agency should do the planning but that it should be responsible to see that the planning is done in order that the total development of the reservoir area can be projected at one time. The recreation, engineering and economic feasibility studies should proceed in phase. These studies would determine the recreational potentialities of the reservoir area and the land acquisition, design, and construction programs could take account of the recreation requirements. Concurrent with the recreation studies, administrative investigations should be conducted on each reservoir area in order to designate the appropriate federal, state, or local agency responsible for the administration. It is not a finding of the subcommittee that the State assume responsibility for the development and administration of all recreational areas projected for each reservoir site, but it is the belief of the subcommittee that these areas should be studied at the time the feasibility reports are prepared to assure that the coordination of the plans result in full multiple-purpose development.

F. This subcommittee recognizes that budgetary limitations have in the past been a factor in planning the development of state parks and recreation areas. One of the important guides for optimum use of such an area and for the developmental program on the area should be land use capacity surveys based on present knowledge regarding moisture,

soils, and cover. The subcommittee was impressed by the critical condition of the San Jacinto Park and Wilderness area even with its present limited use. It believes that any more intensive use of this area should be based on the capacity of the area determined by sound conservation principles. The scientific determination of the best use of an area related to the protection of the watershed and the preservation of the area itself appear appropriate criteria for deciding relative intensity of use and should be one of the tools available to the Division of Beaches and Parks in its planning process. The commission and the division have been under fire for restricted use of state park areas where the decisions on such control have not always been based upon sound conservation principles and best scientific methods to support these principles. Uses for grazing, hunting, timbering, should be justified or denied upon the basis of a plan of development wherein land, soil, and cover characteristics are determining factors. The same is true of decisions regarding additional access roads and trails that would permit or prevent intensified use

G This subcommittee and those of highways and planning are struck by the use of state, county, and city parks for highway and freeway location. In many cases, as in the case of Griffith Park in Los Angeles where approximately 146 acres of highly developed and irreplacable park land was taken, the ability of parks to serve their communities has been vitally affected. In very few instances were replacement in kind a feature of settlement. Shortages of open spaces in urbanized areas place the community value of existing parks at a premium beyond many other land uses. Public policy requires that great care be taken to protect the public interest in any proposed uses of these areas.

RECOMMENDATIONS

A. If necessary, additional or temporary staff must be added to the Division of Beaches and Parks planning sections and to the agencies involved in the land acquisition processes that will permit the speedy acquisition of designated park and recreation areas. It is recommended that the Park Commission utilize condemnation procedures following generalized site use surveys for the designation of the area desired. This program, if instituted immediately, will save the state millions of dollars.

B. This subcommittee is forced to reiterate recommendations in its 1956 *Progress Report* for the development of a sound park and recreational plan, and the adoption of this plan by the Legislature as a policy expression and guide in meeting the growing recreation demands of the people. The plan itself should be based on sound standards and developed in cooperation with the recreation interests of the State and with local agencies. The adopted plan would constitute a guide to the division for the acquisition and development of park and recreation areas and could be used by the Legislature as a yardstick in its review of budgetary submissions by the administrative branch. Members of this subcommittee have met jointly with the subcommittee on public lands of the interim committee on agriculture and the subcommittee recommends and endorses the principles and purposes of Assembly Bill No. 32, included with this report.

C. In hearings and conferences of this subcommittee the Division of Beaches and Parks has shown its willingness to support legislation outlining the policy matters necessary for the appropriate development and administration of a program for roadside rests. Legislation submitted with this report, Assembly Bill No. 494, creating such program for the State of California should be adopted.

D. The commission and the Division of Recreation and state responsibilities for small boat harbors should be transferred to the Department of Natural Resources under the provisions and policy statements contained in Assembly Bill No. 606 included with this report.

E. In view of the broad responsibility of the Department of Water Resources for the development of the California Water Plan, it is recommended that this department be responsible to coordinate recreational planning around these reservoir areas. Recreational planning on other public and private reservoirs should be the responsibility of the Division of Recreation under the direction of the Director of Natural Resources in accordance with legislation contained in this report.

F. It is recommended that the Department of Natural Resources assume responsibility for the development of land use capacity surveys in critical park and recreation areas, as provided in Assembly Bill 3048. This scientific information is necessary to justify restrictions or expansions of use in the state parks in order to preserve the parks themselves and to satisfy public demand.

G. A redefinition of public use in conjunction with highway and freeway infringement on park areas and a specific finding of public necessity before parks are invaded for these purposes as provided in the legislation presented with this report, Assembly Bill 2312 should be adopted.

CALIFORNIA LEGISLATURE—1957 REGULAR SESSION

ASSEMBLY BILL No. 32

Introduced by Messrs. Lowrey, Johnson, Sedgwick, Mrs. Davis, Messrs. Belotti, Grant, Hegland, and Lindsay

January 8, 1957

REFERRED TO COMMITTEE ON CONSERVATION, PLANNING, AND PUBLIC WORKS

An act to add Chapter 3 to Division 7 of the Public Resources Code, relating to recreation.

The people of the State of California do enact as follows:

SECTION 1. Chapter 3 is added to Division 7 of the Public Resources Code, to read:

CHAPTER 3. CALIFORNIA PUBLIC OUTDOOR RECREATION PLAN ACT

8750. This chapter shall be known as the "California Public Outdoor Recreation Recreation Plan Act."

8751. It is the policy of the State of California: To protect, conserve and develop the natural resources and wildlife of the State; to preserve the rights of the people to the coast and coastal waters for recreation purposes; to assure unhampered access by the public to all navigable waters, parks, playgrounds and squares; to maintain areas of peace, quiet and respectibility so that they may be enjoyed by all the people; to acquire, develop and maintain parks, beaches and campgrounds, in order to preserve areas of natural beauty and make them available for the enjoyment of the people; to propagate and protect fish and game; to maintain and improve wildlife habitat for the recreation of hunters and fishermen; and to expend funds for the acquisition and improvement of land and water areas for purposes of recreation.

At the present time there are not adequate outdoor recreation facilities in California to meet the demand of its growing population. The purpose of this act is to create a public outdoor recreation committee and to provide for the preparation of a public outdoor recreation plan.

8752. There is in the State Government a Committee for the Development of the California Public Outdoor Recreation Plan consisting of the following members: Director of Natural Resources, Director of Fish and Game, Director of Water Resources, Director of Recreation, Director of Finance, Chief of the Division of Beaches and Parks, and the Executive Officer of the State Lands Commission. The Governor shall appoint the chairman of the committee.

8753. The committee shall consider, develop and recommend to the Legislature a California Public Outdoor Recreation Plan. The plan shall be based on a survey of present and future needs of the people in this State for outdoor recreation opportunities and facilities.

8754. The committee may enter into contracts with such persons and agencies, public or private, and do any act necessary to carry out the purposes of this act. It shall adopt rules to govern its internal affairs.

8755. The committee shall appoint a technical consultant group consisting of the following members:

(a) Members of the Committee for Development of the Public Outdoor Recreation Plan, Director of Public Health, Director of Education, and the heads of the following state agencies: State Water Pollution Control Board, Wildlife Conservation Board, Division of Fairs and Exhibits, Division of Forestry, State Local Planning Office, and State Aeronautics Commission.

(b) The General Manager of the County Supervisors Association and the Executive Officer of the League of California Cities.

(c) When requested by the chairman of the committee, any representative of a federal department, agency, or board which controls land or water areas within California, and which may be used for outdoor recreational purposes, including but not limited to, the Bureau of Land Management, the Bureau of Reclamation, the National Park Service and Fish and the Wildlife Service in the Department of Interior, the Forest Service in the Department of Agriculture, and the Corps of Engineers in the Department of Army.

The chairman of the committee shall appoint a member of the committee to serve as chairman of the Technical Consultant Group.

The Technical Consultant Group shall assist the committee in developing the California Public Outdoor Recreation Plan and may do any act necessary to accomplish this purpose. It shall meet as a committee at least twice during each fiscal year beginning with the fiscal year of July 1, 1957.

State officers and employees may be reimbursed for expenses expended in connection with meetings of the technical consultant group.

8756. There shall be an advisory council to the committee which shall consist of the following members:

(a) One member from each of the following state boards and commissions appointed by the chairman from the respective board or commission: Fish and Game Commission, Park Commission, State Water Resources Board, Recreation Commission, Wildlife and Conservation Board, State Water Pollution Control Board, Board of Public Health, Board of Education, State Local Planning Committee, and State Aeronautics Commission.

(b) The committee shall appoint additional members from private and voluntary state-wide or regional organizations having interests, resources or services related to outdoor recreation, parks, wildlife national preserves, tourist industry, historical sites and land or water sports. In addition members shall be selected from universities and colleges having curricula related to outdoor recreation and from state-wide organizations having interests or services related to the recreation resources of any local government or the State or Federal Government.

Expenses of such members incurred in connection with meetings of the council shall not be charges against the State.

The committee shall designate a member of the council as chairman of the advisory council.

The advisory council shall advise the committee and its staff of the methods to be used in the preparation of the California Outdoor Recreation Plan, shall consult with the organizations represented on the advisory council on the proposals under consideration for inclusion in the planning, and shall review the plan before its adoption by the committee.

8757. The committee shall select an executive officer and staff, which shall devote its full time to coordinating the activities of the agencies created by this act and to the completion of the California Public Outdoor Recreation Plan within the period designated by this act.

8758 The California Public Outdoor Recreation Plan shall include but is not limited to the following matters:

(a) An intensive review of all factors affecting public outdoor recreation in the foreseeable future.

(b) An inventory of the existing facilities, areas, and opportunities available for outdoor recreation and an inventory and classification of areas, facilities and resources which potentially may provide outdoor recreation

(c) A determination of the nature and an estimate of the need of the people for outdoor recreation opportunities in the foreseeable future in relation to the matters considered in subdivision (b).

(d) An investigation and analysis of the authority of different segments and levels of government with respect to public outdoor recreational resources and facilities.

(e) The nature, location and size of land and water areas and facilities to be developed, including a preliminary program and procedure for the development, administration, and financing of these areas and facilities.

8759. The committee shall submit the final plan to the Governor and the Legislature on or before March 1, 1960. Preliminary reports on the California Public Outdoor Recreation Plan shall be submitted by the committee to the Governor and the Legislature on or before March 1, 1958, and on or before March 1, 1959.

SEC 2. There is hereby appropriated the sum of three hundred thousand dollars ($300,000) to the Committee on the California Public Outdoor Recreation Plan, for the Fiscal Years of 1957-58, 1958-59, and 1959-60, to be expended by the committee without respect to fiscal years, for salaries and wages, operating costs, equipment, and for contractual services as may be required for the development of the California Public Outdoor Recreation Plan and for the operation of the committee.

ASSEMBLY BILL No. 494

Introduced by Mrs. Davis, Messrs. Chapel, Holmes, Rees, Bruce F. Allen, Don A. Allen, Beaver, Bee, Belotti, Biddick, Bonelli, Britschgi, Brown, Burke, Burton, Busterud, Crawford, Crown, Cunningham, Miss Donahoe, Messrs. Donald D. Doyle, Elliott, Francis, Frew, Gaffney, Grant, Hansen, Hawkins, Hegland, Henderson, Johnson, Kilpatrick, Klocksiem, Lindsay, Luckel, MacBride, Masterson, McMillan, Meyers, Nielsen, Porter, Rumford, Thomas, and Wilson

January 10, 1957

REFERRED TO COMMITTEE ON CONSERVATION, PLANNING, AND PUBLIC WORKS

An act to add Article 7 (commencing at Section 5080) to Chapter 1 of Division 5 of the Public Resources Code, relating to roadside rests for incidental use by the traveling public upon state highways.

The people of the State of California do enact as follows:

SECTION 1. Article 7 is added to Chapter 1 of Division 5 of the Public Resources Code, to read:

Article 7. Roadside Rests

5080. Many persons traveling along the state highways make brief stops for the purpose of eating their meals and resting before resuming their travel. At the present time there are insufficient places where such stops can be made in safety and where free facilities are provided for eating lunches and disposing of the litter therefrom. Under the present law, such facilities could be provided, subject to the availability of funds, either by the Department of Public Works or the Division of Beaches and Parks of the Department of Natural Resources. In enacting this article it is not the intent of the Legislature to diminish any existing powers of either agency, but rather to provide specifically for the development of a system of roadside rest areas with appropriations made for the purpose of carrying out this article In carrying out this article, the Division of Beaches and Parks and any other state or public agency may exercise all powers given to them under any law other than this article, except as expressly prohibited by this article, and shall cooperate in the exchange of pertment information to the end that the program contemplated by this article can be coordinated with the locating, planning, and constructing of other public works.

It is the intent of the Legislature that the locating, constructing, equipping and maintaining of roadside rests be initiated on a state-wide

experimental basis with minimum equipment and facilities, other equipment and facilities to be added to existing rests and included in new construction when and to the extent it is justified by experience.

5081. As used in this article "roadside rest" means an area adjacent, or within reasonable proximity, to a state highway, suitable during daytime hours for the eating of lunches and for other brief stops taken by the traveling public along such highways.

5082. Roadside rests shall be located, constructed, equipped, and maintained as the State Park Commission finds the public interest requires in the light of the condition of the site and the extent of the traffic, except that no roadside rests shall be located within the median or dividing strip of a divided highway, or at any point within the right of way of a state freeway, or at any point adjacent to the right of way of any such freeway, except at locations where public road connections with such freeway have either been established or in the opinion of the Department of Public Works can be established without undue hazard to freeway traffic.

5083. The roadside rest program shall be designed and maintained to serve the daytime needs of the traveling public upon the State Highway System. Local and wider recreational needs should be met by the establishment of community, district, county, regional, or state parks, and are not intended to be provided for with funds appropriated for the purpose of carrying out this article.

5084. The provisions of this article shall be administered by the Division of Beaches and Parks under the supervision of the Director of Natural Resources in accordance with policies established by the State Park Commission.

5085. The State Park Commission may accept grants on behalf of the State and may accept financial assistance for, or in aid of, roadside rests.

5086. The Division of Beaches and Parks may use any state park or portion thereof for the purpose of providing roadside rests and may use property of any other state or public agency or private person or of the Federal Government leased, or the temporary use of which has been granted, for the purpose of providing roadside rests.

5087. The Division of Beaches and Parks may exercise all or any portion of the powers it has with respect to roadside rests pursuant to Chapter 5 (commencing at Section 6500) of Division 7 of Title 1 of the Government Code. For the purposes of this article, "public agency" as used in said Chapter 5 includes any person, firm, association, organization, partnership, business trust, corporation, or company.

5088. Except as to roadside rests located in state park areas, the division shall not proceed with the establishment of any roadside rest without first seeking the advice and recommendation of the planning commission of the county in which the roadside rest is to be established.

5089. Prior to the disposal by sale of excess fee-owned parcels acquired for state highway purposes, not needed for such purposes, the Department of Public Works shall notify the Division of Beaches and Parks, and the department and the division, pursuant to law, shall endeavor to arrange for the conveyance to or use by the division for roadside rest purposes of any property deemed suitable therefor by the State Park Commission; provided, that this requirement of notice

shall not apply to the disposal of such excess parcels by exchange for other property, pursuant to the terms of right of way contracts making provision for such exchange, or to any other method of disposal not constituting a sale, nor shall such requirement apply to the disposal by sale or exchange of excess parcels located in urban areas or in other areas which the department and the division, by mutual agreement, consider unsuitable for development of roadside rests.

5090. The Division of Beaches and Parks shall contract with the Division of Highways of the Department of Public Works for the maintenance of all roadside rests constructed and equipped by the Division of Beaches and Parks and for the erection and maintenance of signs indicating where roadside rests may be found, except that maintenance of roadside rests may be carried on by the Division of Beaches and Parks or other public agencies if the Director of Finance finds that such maintenance would be more economical. All signs designating roadside rests shall be of such shape and color as to be clearly distinguishable from highway directional or warning signs.

5091. State laws and rules and regulations of the State Park Commission shall be administered and enforced within roadside rests by all employees of the State authorized by the State Park Commission to do so and by all peace officers.

5092. It shall be unlawful for any person to throw or deposit any substance in a roadside rest other than in a receptacle provided for that purpose. It shall be unlawful for any person to deposit in the receptacles provided for refuse in a roadside rest any refuse or waste from homes, farms, or commercial establishments, or other material which does not arise out of the use of the roadside rest by a member of the traveling public. The violation of this section shall be a misdemeanor punishable as provided in Section 763 of the Vehicle Code, and all of the provisions of Chapter 2 (commencing at Section 735) of Division 12 of the Vehicle Code shall apply to an offense committed under this section the same as if such offense were made an offense by the Vehicle Code.

AMENDED IN ASSEMBLY MARCH 28, 1957

CALIFORNIA LEGISLATURE—1957 REGULAR SESSION

ASSEMBLY BILL No. 606

Introduced by Messrs. Lindsay, Bruce F. Allen, Masterson, Hansen, Belotti, Chapel, Mrs. Davis, Messrs. Samuel R. Geddes, Lowrey, Pattee, Sedgwick, and Thomas

January 14, 1957

REFERRED TO COMMITTEE ON CONSERVATION, PLANNING, AND PUBLIC WORKS

An act to amend Sections 504, ~~504.5, 5002, 5019, 5025.11, 5025.12, 5025.2, 5041, 5050, 5073, 5151, 5152, 5153, and 6816 of, to amend and renumber Sections 509 and 510 of, to repeal Sections 506.7, 5014, 5014.3, and 5015 and Chapter 8 (commencing with Section 6475), Part 1, Division 6 and Division 7 (commencing with Section 8600) of, and to add Sections 506.8, 509, 509.1, and 509.2 and Chapter 1.5 (commencing with Section 5091.01) to Division 5 of, the Public~~ 509, 510, AND 5015 OF, TO REPEAL CHAPTER 8 (COMMENCING AT SECTION 6475) OF PART 1 OF DIVISION 6, DIVISION 7 (COMMENCING AT SECTION 8600) OF, AND TO ADD SECTIONS 17.5, 506.9, 508.3, 508.4, 516, AND DIVISIONS 7 (COMMENCING AT SECTION 8600) AND 7.5 (COMMENCING AT SECTION 8700) TO, THE PUBLIC *Resources Code, relating to the administration of state beaches, parks,* RECREATION AREAS, *and small craft harbors, and making an appropriation.*

The people of the State of California do enact as follows:

~~SECTION 1. Section 504 of the Public Resources Code is~~

SECTION 1. Section 17.5 is added to the Public Resources Code, to read:

17.5. "Director" means the Director of Natural Resources, unless otherwise specified.

SEC. 2. Section 504 of said code is amended to read:

504. The work of the department shall be divided into at least ~~five~~ *seven* divisions, known as the Division of Forestry, the Division of *Beaches and* Parks, the Division of Mines, the Division of Oil and Gas, ~~and~~ the Division of Recreation, *the Division of Small Craft Harbors, and the Division of Soil Conservation.*

SEC. 2.5. Section 506.9 is added to said code, to read:

506.9. It is hereby found and declared that there is a public interest in the acquisition, use, and development of beaches, parks, recreation areas, boat harbors, waterways, reservoirs, and other facilities, of state interest, which can be used for recreational purposes.

It is the policy of the Legislature that greater emphasis be given to the recreational needs of the people of the State and to facilitate the planning, development, and administration of a comprehensive program and procedure to meet those needs.

Such a program should have as its objective the development of the recreational potential in state beaches, parks, recreation areas, boat harbors, waterways, reservoirs, and other facilities, of state interest, now or hereafter acquired and developed by the State. This program should be balanced and integrated with the uses of other public and private property.

SEC. 3. Section 508.3 is added to said code, to read:

508.3. The Division of Recreation shall be administered through a chief who is technically trained with adequate administrative experience in the field of public recreation, and who shall be appointed by the director in consultation with the Recreation Commission.

SEC. 4. Section 508.4 is added to said code, to read:

508.4. The Division of Small Craft Harbors shall be administered through a chief who shall be appointed by the director.

SEC. 5. Section 509 of said code is amended to read:

509. ~~The salaries of the chiefs of the Divisions of Forestry and Parks shall fixed by the director with the approval of the Governor.~~ The director and the chief of each division, before entering upon his duties, shall execute and deliver to the State an official bond in the sum of twenty-five thousand dollars ($25,000) conditioned upon the faithful performance of his duties.

SEC. 6. Section 510 of said code is amended to read:

510. The members of the Board of Forestry ~~and of~~, the State Park Commission, *and the Recreation Commission* shall serve without compensation, but shall be entitled to their actual necessary expenses incurred in the performance of their duties.

SEC. 7. Section 516 is added to said code, to read:

516. The Department of Natural Resources may cooperate with the Department of Water Resources with respect to the control and correction of beach or cliff erosion.

SEC. 8. Section 5015 of said code is amended to read:

5015. The State Park Commission is the agency of the State designated to supervise and charged with, the acquisition, development, maintenance and protection of ocean beaches for public recreational purposes ~~and control and correction of beach and cliff erosions~~, and when the State shall provide for the expenditure of any money for the development and protection of public beaches owned by counties or municipalities, the State Park Commission is the agency of the State designated to supervise such expenditure.

In the performance of its powers and duties under this section the State Park Commission may cooperate with the United States, ~~the Beach Erosion Board of the United States~~ or with any ~~other federal~~ agency *thereof*, or with any county or municipality, or with the State Lands Commission, or with any other state office, or with any or all such agencies and upon such terms and conditions and in such manner as will be for the best interests of the State. Insofar as matching funds required by this section are to be supplied by the United States or any agency thereof, such funds need not be deposited in the State Treasury

or otherwise made available for expenditure by the State but may be retained by the federal agency for expenditure by it in carrying out the purpose of the appropriation as may be provided for by agreement therewith.

No acquisition, development or protection of any beaches for public use ~~or control and correction of beach or cliff erosion~~ shall be accomplished in any county which has not adopted a master plan of beaches for that county, which plan shall provide for the acquisition, development, and control of ocean beaches in such county and which plan has been submitted to and approved by the State Park Commission nor shall any portion of an appropriation made by this State be expended for acquisition, development, improvement or protection of any ocean beaches or bays and inlets thereof for recreation purposes only, owned by a county or municipality, ~~or control and correction of beach or cliff erosion or beaches or cliffs owned by any person, corporation or other ownership or by a county or municipality~~ unless moneys equal to or in excess of the amount to be expended from the appropriation for that purpose shall have been made available (by any person, corporation, political subdivision, public district or public subdivision other than the State, or by the Federal Government or its agencies) for expenditure by the State for that purpose, to the end that any sums expended for such acquisition, development, improvement or protection and control shall be matched by like or greater amounts from sources other than the State Within the discretion of the State Park Commission, in lieu of any matching contribution in the form of money for the acquisition of any ocean beach within any city or any county, or city and county such city or county or city and county may contribute any ocean beach within its limits heretofore or hereafter acquired by it, subject to the approval of the State Park Commission, upon such terms as are mutually agreeable.

It is not intended that the provisions of this act shall prevent or restrict any county, city, county and city or political subdivision from appropriating and spending its own funds to acquire, develop or protect any beach ~~or cliff erosion~~ within its jurisdiction even though said county has not yet adopted a master plan of beaches for that county; provided, that this shall not relieve any such county, city, county and city or political subdivision from compliance with Section 6301.

SEC. 9. Chapter 8 (commencing at Section 6475) of Part 1 of Division 6 of said code is repealed

SEC. 10. Division 7 (commencing at Section 8600) of said code is repealed.

SEC. 11. Division 7 (commencing at Section 8600) is added to said code, to read:

DIVISION 7. PUBLIC RECREATION

CHAPTER 1. DIVISION OF RECREATION

8600 "Division," as used in this chapter, means the Division of Recreation.

8601. In accordance with the policies established by the Recreation Commission, with the written approval of the director, the division shall execute the powers and duties set forth in Chapter 2, and shall:

(a) Investigate and report to the commission and to the director upon the facilities and services which are needed or which exist in the public recreational areas within the State and by consultation with the authorities in charge, assist in the coordination and development of recreational programs; provided, that surveys of the recreational facilities and programs of local agencies shall be made only upon their request.

(b) Advise and cooperate with and encourage community recreation agencies interested in the use of or the development of recreational facilities and programs for public benefit.

(c) Advise the administrative officers of all state agencies, authorized by law to perform recreational services, of regular meetings of the commission and of such special meetings as may consider matters relating to their specific responsibilities, and invite such officers to attend and participate in deliberations of the commission without the authority to vote.

8602. The division may encourage and render assistance in the promotion of training programs for volunteer and professional recreation leaders in cooperation with other agencies, organizations and institutions, and may encourage the establishment of standards for recreation personnel.

8603. The division may assist every department, commission, board, agency, and officer of the State in rendering recreational services in conformity with their respective authorized powers and duties and encourage and assist in the coordination of federal, state and local recreational activities.

8604. The division succeeds to and is vested with all of the powers, duties, purposes, responsibilities, and jurisdiction vested in the Director of Recreation. The Office of Director of Recreation is abolished.

CHAPTER 2. RECREATION COMMISSION

8650. "Commission," as used in this chapter, means the Recreation Commission.

8651. The Recreation Commission, which is continued in existence, consists of seven members appointed by the Governor, one of whom designated by the Governor shall serve as chairman, for terms of four years, and until the qualification of their successors.

The Governor shall first appoint one member whose term shall expire on January 15, 1948, and two members whose terms shall expire on each of the following dates: January 15, 1949, 1950, and 1951, respectively. Vacancies for causes other than expiration of terms of office shall be filled for the remainder of the unexpired term.

8652. The commission shall advise and make recommendations to the Chief of the Division of Recreation with respect to any matters and subject under the jurisdiction of the division.

8653. The commission shall cause to be studied and shall consider the whole problem of recreation of the people of the State of California as it affects and may affect the welfare of the people and especially the children and youth;

Shall formulate, in cooperation with other state agencies, interested organizations and citizens, a comprehensive recreational policy for the State of California

And shall, with the written approval of the director, establish policies for the guidance of the division in the performance and exercise of his powers and duties as set forth in this division.

8651. The commission shall aid and encourage, but not conduct, public recreation activities.

8655. The commission shall report annually to the Governor on the needs of the State and the local subdivisions thereof for recreational facilities, programs, and activities.

8656. The Department of Natural Resources, acting through the division pursuant to policies established by the commission, may receive donations and disburse subventions in order to carry out the purposes of this division.

SEC. 12. Division 7.5 (commencing at Section 8700) is added to said code, to read:

DIVISION 7.5. SMALL CRAFT HARBORS

8700 "Division," as used in this division, means the Division of Small Craft Harbors.

8701. The division succeeds to and is vested with all of the powers, duties, purposes, responsibilities, and jurisdiction vested in the State Lands Commission pertaining to small craft harbors and waterway routes for navigation of small craft.

8702. The division is the agency of the State designated to, and shall have power to, acquire, construct, develop, improve, and maintain and operate small craft harbors, and facilities in connection therewith, along the coast of this State or on or adjacent to bays, inlets, or estuaries thereof, or on or adjacent to navigable bodies of water, after it has prepared and the Legislature has approved any of the master plans specified in Section 8703.

8703. The division shall prepare master plans by counties for the development and improvement of small craft harbors. In preparing such master plans the division shall take into consideration, correlate, and coordinate, as nearly as feasible, such master plans of shore line development and improvement as have been or will be drawn up by the various counties of the State. The division may alter, change, or amend master plans for development and improvement of small craft harbors but such alterations, changes or amendments shall be made in collaboration and cooperation with the appropriate authorities of the affected counties and cities. When completed the division shall submit the master plan for any county to the Legislature for its consideration.

8704. For the purposes of this chapter, the division may acquire by purchase or by condemnation proceedings brought in the name of the people, title to or any interest in real and personal property which the division deems necessary or proper for the development or improvement of small craft harbors.

8705. The division may develop and maintain waterway routes along the tidal and inland navigable waters of the State, for the purpose of navigation by small craft.

8706. In the performance of its functions under this chapter, the division may cooperate or contract with the State Park Commission or any other state agency, the Corps of Engineers of the Department of the Army of the United States, or with any other federal agency, or with any county or city, upon such terms and conditions, and in such manner as will be for the best interests of the State and further the purposes of this chapter.

8707. The division, in constructing, developing, or improving a small craft harbor and facilities in connection therewith, pursuant to this division, may contract with the Department of Water Resources for the performance of the work of construction, development, or improvement pursuant to the State Contract Act (commencing at Section 14250, Government Code).

8708. The division may establish rules and regulations relating to the operation and maintenance of small craft harbors under its jurisdiction, in accordance with the provisions of Chapter 4 (commencing at Section 11370), Part 1, Division 3, Title 2 of the Government Code. It may enter into contracts with county or city agencies, persons, firms, or corporations to maintain and operate small craft harbor facilities and concessions in connection with such small craft harbors.

8709. For the purposes of this chapter, the division may receive and accept for the State any gift, devise, grant, or other conveyance of title to or any interest in real property. It may receive and accept gifts, donations, contributions, or bequests of money to be used in acquiring title to or any interest in real property, or in improving it in connection with the development and operation of small craft harbors. It may also receive and accept personal property for such purposes.

8710. The division, wherever in its judgment it is practicable to do so, may determine and collect fees, rentals, and other return for the use of any small craft harbor under its jurisdiction, to be paid into the Small Craft Harbor Revolving Fund.

8711. Any ungranted tidelands and submerged lands owned by the State and under the jurisdiction of the State Lands Commission may be used by the division, by agreement with the State Lands Commission, for the purposes of this division.

8712. The division may cooperate with, advise, and assist local agencies in developing and operating small craft harbors on tide and submerged lands which have been granted to such agencies.

8713. Whenever the Legislature has appropriated money to be expended by the Department of Finance for the acquisition of a site and the development of a small craft harbor and recreation area, the division, in lieu of the Department of Finance, may expend for such purpose the money thereby appropriated and may enter into leases or agreements with a county, city, city and county or other political subdivision of the State for the development, operation and maintenance thereof by such county, city, city and county or other political subdivision. If the legislative appropriation contemplates that any such lease or agreement shall be entered into with a particular county, city, city and county or political subdivision, the lease or agreement shall be entered into with that local agency.

Such leases or agreements shall provide for a plan of development of the harbor and area, and may provide for the development, operation and maintenance thereof by the county, city, city and county or other political subdivision of the State for a term not to exceed 60 years. Such leases or agreements may provide for cooperative agreements between the State, the local agency and the Federal Government for federal participation in the development of the harbor and area. Such leases or agreements may also authorize the local agency to grant concessions or subleases consistent with and in furtherance of the plan of development and the public use of the harbor and recreation area. The division may reserve the right to approve any such concessions or subleases.

If the appropriation requires payments to the State, then the lease or agreement shall provide for such payments plus any additional amount which may be required by the appropriation either by agreed upon rental payments or by payments from the revenues to be derived from the harbor and area The intervals, amounts and method of payment shall be as mutually agreed upon by the division and the local contracting agency

8714. The Legislature hereby finds and declares that the acquisition, development, maintenance and operation of small craft harbor and recreation areas is of state-wide interest and concern and the appropriation of state funds for the acquisition of a particular site for that purpose constitutes a determination of state-wide interest therein.

8715 Any acquisition of real property and any lease or agreement entered into by the division pursuant to this division is subject to the approval of the Director of Finance.

8716. The Small Craft Harbors Revolving Fund is continued in existence. All money in the revolving fund is appropriated without regard to fiscal years to the division for its support in carrying out the provisions of this division.

SEC. 13. All persons, other than temporary employees, serving in the state civil service and engaged in the performance of a function transferred to the Department of Natural Resources or to the Division of Recreation or to the Division of Small Craft Harbors within the Department of Natural Resources by this act shall remain in the state civil service and are hereby transferred to the Department of Natural Resources or to the Division of Recreation or to the Division of Small Craft Harbors within the Department of Natural Resources, as the case may be, on the effective date of this act. The status, positions, and rights of such persons shall not be affected by their transfer and shall continue to be retained by them pursuant to the State Civil Service Act, except as to positions the duties of which are vested in a position that is exempt from civil service.

All public property, real or personal, of any state agency or officer used principally or primarily in carrying out of any function transferred to the Department of Natural Resources or to the Division of Recreation or the Division of Small Craft Harbors within the Department of Natural Resources is transferred to the department or division, as the case may be.

SEC. 2. Section 501.5 of said code is amended to read:

501.5. Wherever "Division of Beaches and Parks" is used in this code or any provision of law, the phrase shall mean the Division of Parks.

SEC. 3. Section 506.8 is added to said code, to read:

506.8. The Governor shall have the power to transfer the administration and control of any park from the State Park Commission to the Division of Recreation if he determines that the park is primarily recreational in character. The Governor shall report the transfer of any park to the Legislature at the next legislative session following the date of transfer.

SEC. 4. Section 509 of said code is amended and renumbered to read:

510. The salaries of the chiefs of the Divisions of Forestry, Parks, and Recreation shall be fixed by the director with the approval of the Governor. The director and the chief of each division, before entering upon his duties, shall execute and deliver to the State an official bond in the sum of twenty-five thousand dollars ($25,000) conditioned upon the faithful performance of his duties.

SEC. 5. Section 509 is added to said code, to read:

509. The Division of Recreation shall be administered through a chief who shall have had at least five years of executive experience in recreational or related types of activity, and who shall be appointed by the director upon nomination by the Recreation Commission.

SEC. 6. Section 509.1 is added to said code, to read:

509.1. The Recreation Commission, which is continued in existence, consists of seven members appointed by the Governor, one of whom designated by the Governor shall serve as chairman, for terms of four years, and until the qualification of their successors.

The Governor shall first appoint one member whose term shall expire on January 15, 1948, and two members whose terms shall expire on each of the following dates: January 15, 1949, 1950, and 1951, respectively. Vacancies for causes other than expiration of terms of office shall be filled for the remainder of the unexpired term.

The commission shall cause to be studied and shall consider the whole problem of recreation of the people of the State of California as it affects and may affect the welfare of the people and especially the children and youth.

Shall formulate, in cooperation with other state agencies, interested organizations and citizens, a comprehensive recreational policy for the State of California.

And shall, with the written approval of the Governor, establish policies for the guidance of the Chief of the Division of Recreation in the performance and exercise of his powers and duties.

The commission shall aid and encourage, but not conduct, public recreation activities.

The commission shall report annually to the Governor on the needs of the State and the local subdivisions thereof for recreational facilities, programs, and activities.

SEC. 7. Section 509.2 is added to said code, to read:

509.2. No money appropriated to the Division of Recreation for the acquisition of property for state beaches, recreational parks, or

small craft harbors shall be expended by the division without the approval of the Recreation Commission.

SEC. 8. Section 510 of said code is amended and renumbered to read:

510.5. The members of the Board of Forestry, State Park Commission, and the Recreation Commission shall serve without compensation, but shall be entitled to their actual necessary expenses incurred in the performance of their duties.

SEC. 9. Section 5002 of said code is amended to read:

5002. All park, public camp grounds, monument sites, landmark sites, and sites of historical interest established or acquired by the State, or which are under its control, constitute the State Park System except recreational parks, the sites and grounds known as the State Fairgrounds in the City of Sacramento, and Balboa Park in the City of San Diego.

SEC. 10. Section 5019 of said code is amended to read:

5019. When property is deeded to the State for park purposes, oil and mineral rights in such property may be reserved in such deeds by the grantor; provided, that any prospecting or extracting of oil and minerals shall in no manner disturb the surface of such property or any improvements placed in or upon the property in pursuit of its use for recreation.

SEC. 11. Section 5025.11 of said code is amended to read:

5025.11. The State Park Commission shall, with the advice of the Historical Landmarks Advisory Committee, certify to the Director of Natural Resources and the Division of Parks, the route followed by Colonel John Charles Fremont and party from the Nevada state line through Mono, Inyo, Alpine, Amador, and El Dorado Counties to Sutter's Fort in Sacramento County in the winter of 1843.

SEC. 12. Section 5025.12 of said code is amended to read:

5025.12. The Division of Parks is authorized to place suitable markers along this certified route at intervals and at each intersection with a state highway or county road.

SEC. 13. Section 5025.2 of said code is amended to read:

5025.2. It shall be the duty of the Division of Parks to keep in repair, or cause to be kept in repair, all markers of such historical routes.

SEC. 11. Section 5011 of said code is amended to read:

5011. To assure the accomplishment of this policy it is directed that:

(a) The Division of Parks under the direction of the Director of Natural Resources and in accordance with the policies established by the State Park Commission shall make a survey based on historical research to determine the type and materials of construction, location, and uses of the structures which existed on the acquired area of the Town of Columbia during those "early days"; and based on the data so obtained shall prepare a master plan of restorational development to which when approved by the commission all work of preservation and restoration shall substantially conform. Thereafter such master plan shall be modified only with the specific approval of the commission acting upon additional authentic information. Pending completion and approval of such master plan work of preservation and repair of existing structures

which have existed since "early days" and the restoration and erection of such structures the authenticity of whose plans and construction may be satisfactorily determined may be accomplished by the division under supervision of the director when approved by the commission, to the extent of availability of appropriated funds or of other funds donated to the commission for such purposes.

(b) Leases of buildings within the area may be made with the approval of the director on such terms and conditions as determined by the commission for occupancy, including such lawful use which is found to be the same or similar use which held in the "early days" or which as determined by the commission is not inconsistent with the objective of this act.

(c) A building or buildings shall be used for the establishment of a museum to shelter and display exhibits of appliances used in mining or other activities of the vicinity, articles formerly possessed or used by "early day" inhabitants of the town, and items of historic interest or suitable for inclusion as approved by the commission, whether loaned, donated or otherwise acquired.

(d) Any structures whose preservation or restoration is assured by suitable contribution, when approved by the commission, may be named in honor of or as a memorial to the donor or as designated by the donor.

SEC. 15. Section 5050 of said code is amended to read:

5050. All the powers, responsibilities, and jurisdiction of the State Department of Finance, concerning and appertaining to Sutter's Fort property is hereby transferred to and vested in the Division of Parks, Department of Natural Resources, and said division shall provide for the preservation, protection and improvement of the Sutter's Fort property, in such way and manner as in its judgment may seem best and proper.

SEC. 16. Section 5073 of said code is amended to read:

5073. The provisions of this article shall be administered by the Division of Parks under the supervision of the Director of Natural Resources in accordance with policies established by the State Park Commission. The State Park Commission may appoint an advisory committee to be known as the California Riding and Hiking Trails Advisory Committee to consist of seven members, two from the northern, two from the southern, two from the central portion of the State, and one at large, selected from lists submitted upon invitation by the Park Commission by appropriate civilian organization interested in the establishment and use of a State Trails System.

SEC. 17. Chapter 1.5 (commencing with Section 5091.01) is added to division 5 of said code, to read:

CHAPTER 1.5. BEACHES, RECREATIONAL PARKS, AND SMALL CRAFT HARBORS

Article 1. Beaches and Recreational Parks

5091.01. The Department of Public Resources, through the Division of Recreation, has control of all state beaches and recreational parks.

5091.02. The Division of Recreation shall administer, protect, and develop state beaches and recreational parks for the use and enjoyment of the public. The division may establish rules and regulations not inconsistent with law for the government and administration of state beaches and recreational parks. It may enter into contracts with cities, counties, or other subdivisions of the State, for the care and maintenance of beach and recreational park areas, and may expend all moneys of the Division of Recreation, from whatever source derived, for the care, protection, supervision, extension and improvement or development of state beaches and recreational parks.

5091.03. The Division of Recreation may enter into contracts with persons, firms or corporations to maintain and operate concessions within state beach and recreational park areas for the safety and convenience of the general public in the use and enjoyment of such areas. It shall obtain the approval of the Department of Finance before entering into any such contract if the contract would authorize occupancy for a period of more than one year of property owned by the State.

5091.04. The Division of Recreation may provide means of ingress to and egress from all state beaches and recreation parks in order to provide ready access thereto by the public and to provide means of ingress and egress to highways and roads across state beaches and recreational parks from lands separated from such highways and roads by state beaches and recreational parks, and for that purpose may enter into contract or agreements with cities, counties, and other political subdivisions of the State and with other state agencies or with persons, firms or corporations for the acquisition, construction, and maintenance of suitable roads, trails, and pathways.

When application is received by the Division of Recreation, other than under Section 5091.12, from any person, firm or corporation for right of way across a state beach or recreational park for ingress and egress to a highway or road from their lands separated from such highway or road by the state beach or recreational park, the division shall determine whether any reasonable access exists outside the boundaries of the beach or recreational park, or could be economically constructed. Where reasonable access does not exist or cannot be economically constructed outside the boundaries of the beach or recreational park, the commission shall grant a permit for right of way across the beach or recreational park over such route and subject to such conditions and construction and maintenance specifications as the division may determine which will cause minimum alteration to the physical features of the beach or recreational park and minimum interference with the use of the beach and recreational park by the public. The permittee shall at his own expense construct and maintain the means of ingress and egress in accordance with the terms and conditions set forth in the permit, noncompliance with which in any part shall be due cause for revocation of such permit. The division may require a permittee or permittees to allow the use of such means of ingress and egress by any other applicant whose lands are similarly situated. The division shall grant a permit for such use under terms and conditions imposed upon existing users, upon payment of a reasonable compensation for construction and maintenance of the road, by the applicant to the existing permittee, or permittees.

5091.05. The Division of Recreation may receive and accept in the name of the people of the State any gift, devise, grant, or other conveyance of title to or any interest in real property, including water rights, roads, trails, and rights of way, to be added to or used in connection with state beaches or recreational parks. It may receive and accept gifts, donations, contributions, or bequests of money to be used in acquiring title to or any interest in real property, or in improving it as a part of or in connection with state beaches or recreational parks, or to be used for any of the purposes for which the division is created. It may also receive and accept personal property for any purpose connected with state beaches or recreational parks.

5091.06. The Beach and Recreational Park Contingent Fund is hereby established in the State Treasury. All moneys collected or received from gifts or bequests, or from municipal or county appropriations or donations for improvements or additions to state beaches or recreational parks shall be deposited in the State Treasury to the credit of the contingent fund. All moneys so deposited shall be used for the improvement and administration of state beaches and recreational parks, or the acquisition of additional lands and properties for state beaches and recreational parks, in accordance with the terms of the gift, bequest, or municipal or county appropriation or donation from which the moneys are derived.

5091.07. The Division of Recreation, with the consent of the Department of Finance, may acquire by purchase or by condemnation proceedings brought in the name of the people of the State of California, title to or any interest in real and personal property which the division deems necessary or proper for the extension, improvement, or development of the state beaches or recreational parks.

Proceedings for the condemnation of any real or personal property or any interest therein shall be taken under the provisions of the Code of Civil Procedure relating to eminent domain.

5091.08. The Division of Recreation, with the consent of the Department of Finance, may lease any interest in real property which the division deems necessary or proper for the extension, improvement, or development of state beaches or recreational parks. No payment from state money in excess of one thousand dollars ($1,000) a year shall be made pursuant to any such lease unless and until money equal to or exceeding one-half of the excess over one thousand dollars ($1,000) shall have been made available for expenditure by the State for the purpose by some person, corporation, public district, municipality or political subdivision other than the State, or by the United States or an agency thereof.

5091.09. Contracts may be entered into between the Division of Recreation, cities, counties and other political subdivisions of the State for the care, maintenance, and control, for the purposes of state beaches and recreational parks, by either party to the contract, of lands under the jurisdiction of the other party to the contract. The expenses of the care, maintenance, and control may be paid from the general fund of the city, county, or other political subdivision of the State or from the funds of the Division of Recreation, as the case may be.

5091.10. The Division of Recreation shall protect the state beaches and recreational parks from damage and preserve the peace therein.

~~The chief of the division, and other employees which he may designate, have the full authority and powers of peace officers for state beaches and recreational parks.~~

~~Any person who violates the rules and regulations established by the Division of Recreation is guilty of a misdemeanor and upon conviction shall be punished by imprisonment in the county jail not exceeding 90 days, or by a fine not exceeding five hundred dollars ($500), or by both such fine and imprisonment.~~

~~5091.11. The Division of Recreation, whenever in its judgment it is practicable to do so, shall collect fees, rentals, and other return for the use of any state beach or recreational park area, the amounts to be determined by the division and paid into the State Treasury to the credit of the Beach and Recreational Park Fund.~~

~~5091.12. The Director of National Resources, upon application by the proper authorities and on such terms and conditions as the Division of Recreation may prescribe, may grant easements for public highways over and across state beach and recreational park lands under the jurisdiction of the department and the Division of Recreation.~~

~~5091.13. The Division of Recreation, upon application by any public utility, either publicly or privately owned, shall specify the location, manner of construction, and maintenance of light, power, gas, water, telephone and telegraph lines across state beach or recreational park lands under the jurisdiction of the Division of Recreation unless the division finds that the construction and maintenance of such utility structures unduly and measurably interfere with the development, use and enjoyment of state beaches or recreational parks, provided that if at any time the location of such structures interferes with the development, use and enjoyment of the state beach or recreational park on which they are located they will, on demand of the division, be moved to another location, designated by the division, at the expense of the owner thereof.~~

~~The division may, upon application therefor, grant easements upon terms and conditions prescribed by the division, for such public utility structures across state beach or recreational park lands when in its judgment the public necessity requires that the structure be permanent and the nature of the structure may reasonably be permanently located or may be of a nature, such as underground construction, that would not interfere with the development of the state beach or recreational park.~~

~~5091.14. There is hereby established in the State Treasury the Beach and Recreational Park Fund, which is hereby appropriated for the improvement and maintenance of state beaches and recreational parks and, when specifically appropriated by the Legislature for construction and acquisition of state beaches and recreational parks and roads, trails, and pathways providing access to state beaches and recreational parks.~~

~~The State Controller shall transfer to the State Beach and Recreational Park Fund the following sums:~~

~~(a) The sums appropriated to the fund pursuant to Section 6816;~~

~~(b) Two-thirds of the balance of all appropriations which are available for the acquisition, improvement, and maintenance of state beaches or recreational parks.~~

~~(c) All money in the State Beach Fund, which fund is hereby abolished.~~

~~Any appropriations heretofore or hereafter made out of the moneys deposited in the State Beach Fund or the State Park Fund for the acquisition, improvement or maintenance of state beaches or recreational parks shall be payable from the Beach and Recreational Park Fund.~~

~~5091.15. The Division of Recreation is the agency of the State designated to supervise and charged with, the acquisition, development, maintenance and protection of ocean beaches for public recreational purposes and control and correction of beach and cliff erosion, and when the State shall provide for the expenditure of any money for the development and protection of public beaches owned by counties or municipalities, the Division of Recreation is the agency of the State designated to supervise such expenditure.~~

~~In the performance of its powers and duties under this section the Division of Recreation may cooperate with the United States, the Beach Erosion Board of the United States or with any other Federal agency or with any county or municipality, or with the State Lands Commission, or with any other state office, or with any or all such agencies and upon which terms and conditions and in such manner as will be for the best interests of the State. Insofar as matching funds required by this section are to be supplied by the United States or any agency thereof, such funds need not be deposited in the State Treasury or otherwise made available for expenditure by the State but may be retained by the federal agency for expenditure by it in carrying out the purpose of the appropriation as may be provided for by agreement therewith.~~

~~No acquisition, development or protection of any beaches for public use or control and correction of beach or cliff erosion shall be accomplished in any county which has not adopted a master plan of beaches for that county, which plan shall provide for the acquisition, development, and control of ocean beaches in such county and which plan has been submitted to and approved by the Division of Recreation nor shall any portion of an appropriation made by this State be expended for acquisition, development, improvement or protection of any ocean beaches or bays and inlets thereof for recreation purposes only, owned by a county or municipality or control and correction of beach or cliff erosion on beaches or cliffs owned by any person, corporation or other ownership or by a county or municipality unless moneys equal to or in excess of the amount to be expended from the appropriation for that purpose shall have been made available (by any person, corporation, political subdivision, public district or public subdivision other than the State, or by the Federal Government or its agencies) for expenditure by the State for that purpose, to the end that any sums expended for such acquisition, development, improvement or protection and control shall be matched by like or greater amounts from sources other than the State. Within the discretion of the Division of Recreation, in lieu of any matching contribution in the form of money for the acquisition of any ocean beach within any city or any county, or city and county such city or county or city and county may contribute any ocean beach within its limits heretofore or hereafter acquired by it, subject~~

to the approval of the Division of Recreation, upon such terms as are mutually agreeable.

It is not intended that the provisions of this section shall prevent or restrict any county, city, county and city or political subdivision from appropriating and spending its own funds to acquire, develop or protect any beach or cliff erosion within its jurisdiction even though said county has not yet adopted a master plan of beaches for that county; provided, that this shall not relieve any such county, city, county and city or political subdivision from compliance with Section 6301.

5091.16. The Division of Recreation may adopt, alter, change, or amend any state master plan of shore line development.

5091.17. When property is deeded to the State for beach or recreational park purposes, oil and mineral rights in such property may be reserved in such deeds by the grantor; provided, that any prospecting or extracting of oil and minerals shall in no manner disturb the surface of such property or any improvements placed in or upon the property in pursuit of its use for recreation.

Article 2. Small Craft Harbors

5091.21. The Division of Recreation is the agency of the State designated to, and shall have power to, acquire, construct, develop, improve, and maintain and operate small craft harbors, and facilities in connection therewith, along the coast of this State or on or adjacent to bays, inlets, or estuaries thereof, or on or adjacent to navigable bodies of water, after it has prepared and the Legislature has approved any of the master plans specified in Section 5091.22.

5091.22. The division shall prepare master plans by counties for the development and improvement of small craft harbors. In preparing such master plans the division shall take into consideration, correlate, and coordinate, as nearly as feasible, such master plans of shore line development and improvement as have been or will be drawn up by the various counties of the State. The division may alter, change, or amend master plans for development and improvement of small craft harbors but such alterations, changes or amendments shall be made in collaboration and cooperation with the appropriate authorities of the affected counties and cities. When completed the division shall submit the master plan for any county to the Legislature for its consideration.

5091.23. For the purposes of this article, the division may acquire by purchase or by condemnation proceedings brought in the name of the people, title to or any interest in real and personal property which the division deems necessary or proper for the development or improvement of small craft harbors.

5091.24. The division may develop and maintain waterway routes along the tidal and inland navigable waters of the State, for the purpose of navigation by small craft.

5091.25. In the performance of its functions under this article, the division may cooperate or contract with the State Park Commission or any other state agency, the Corps of Engineers of the Department of the Army of the United States, or with any other federal agency, or with any county or city, upon such terms and conditions, and in such manner as will be for the best interests of the State and further the purposes of this article.

~~5091.26. The division may establish rules and regulations relating to the operation and maintenance of small craft harbors under its jurisdiction. It may enter into contracts with county or city agencies, persons, firms, or corporations to maintain and operate small craft harbor facilities and concessions in connection with such small craft harbors.~~

~~5091.27. For the purposes of this article, the division may receive and accept for the State any gift, devise, grant, or other conveyance of title to or any interest in real property. It may receive and accept gifts, donations, contributions, or bequests of money to be used in acquiring title to or any interest in real property, or in improving it in connection with the development and operation of small craft harbors. It may also receive and accept personal property for such purposes.~~

~~5091.28. This division, wherever in its judgment it is practicable to do so, may collect fees, rentals, and other return for the use of any small craft harbor under its jurisdiction, the amounts to be determined by the division, and to be paid into the Small Craft Harbor Revolving Fund.~~

~~5091.29. Any ungranted tidelands and submerged lands owned by the State and under the jurisdiction of the State Lands Commission may be used by the division for the purposes of this article.~~

~~5091.30. The division may cooperate with, advise, and assist local agencies in developing and operating small craft harbors on tide and submerged lands which have been granted to such agencies.~~

~~5091.31. Whenever the Legislature has appropriated money to be expended by the Department of Finance for the acquisition of a site and the development of a small craft harbor and recreation area, the Division of Recreation, in lieu of the Department of Finance, may expend for such purpose the money thereby appropriated and may enter into leases or agreements with a county, city, city and county or other political subdivision of the State for the development, operation and maintenance thereof by such county, city, city and county or other political subdivisions. If the legislative appropriation contemplates that any such lease or agreement shall be entered into with a particular county, city, city and county or political subdivision, the lease or agreement shall be entered into with that local agency.~~

~~Such leases or agreements shall provide for a plan of development of the harbor and area, and may provide for the development, operation and maintenance thereof by the county, city, city and county or other political subdivision of the State for a term not to exceed 60 years. Such leases or agreements may provide for cooperative agreements between the State, the local agency and the Federal Government for federal participation in the development of the harbor and area. Such leases or agreements may also authorize the local agency to grant concessions or subleases consistent with and in furtherance of the plan of development and the public use of the harbor and recreation area. The Division of Recreation may reserve the right to approve any such concessions or subleases.~~

~~If the appropriation requires payments to the State, then the lease or agreement shall provide for such payments plus any additional amount which may be required by the appropriation either by agreed~~

upon rental payments or by payments from the revenues to be derived from the harbor and area. The intervals. amounts and method of payment shall be as mutually agreed upon by the Division of Recreation and the local contracting agency.

5091.32. The Legislature hereby finds and declares that the acquisition. development, maintenance and operation of small craft harbor and recreation areas is of state-wide interest and concern and the appropriation of state funds for the acquisition of a particular site for that purpose constitutes a determination of state-wide interest therein.

5091.33. Any acquisition of real property and any lease or agreement entered into by the Division of Recreation pursuant to this article is subject to the approval of the Director of Finance.

5091.31. The Small Craft Harbors Revolving Fund is continued in existence. All money in the revolving fund is appropriated without regard to fiscal years to the Division of Recreation for its support in carrying out the provisions of this article.

SEC. 18. Section 5151 of said code is amended to read:

5151. Any county or city may donate, convey, and grant to the State any real property owned by it, or which it may acquire, for a park. playground. recreational center, or beach used for recreational purposes. It may use any part of its funds, including funds received by bequest. gift. donation, and those received in trust for the acquisition of such properties. as may be necessary to assist the State in acquiring any park. playground. recreational center, or beach for recreational purposes, to be cared for, maintained, and controlled under any agreement or arrangement authorized by Article 1 (commencing with Section 5001) of Chapter 1 or Article 1 (commencing with Section 5091.01) of Chapter 1.5 of this division.

SEC. 19. Section 5152 of said code is amended to read:

5152. The board of supervisors or governing body of any county or city within which any state beach. recreational park. small craft harbor, or park forming a part of the State Park System is established. may relinquish any road. highway, or trail. or portion thereof, or right of way therefor, existing within the area. to the authority charged by law with the management and control of the area. Jurisdiction over any such road. highway, or trail shall rest in such authority, upon the acceptance by it of the road. highway. trail, or right of way.

SEC. 20. Section 5153 of said code is amended to read:

5153. Relinquishment to the authority of any road. highway. trail, or right of way shall be by resolution of the board or governing body having jurisdiction. spread upon its minutes, after notice and hearing. A certified copy of the resolution, with the acceptance of the authority endorsed thereon, may be recorded in the office of the county recorder of the county in which the road. highway. or trail is located. and a certified copy shall be filed with the authority.

SEC. 21. Section 6816 of said code is amended to read:

6816. All moneys and remittances received by the State pursuant to this chapter. except rents, bonuses, royalties and profits accruing from the use of state school land. shall, with the exception of the amount which is appropriated by Section 898 of the Military and Veterans Code to the Veterans' Dependents' Education Fund, be deposited in the State Treasury to the credit of the State Lands Act Fund, which

fund is continued in existence. In addition thereto, such other moneys shall be deposited in such fund as may be provided by law. The moneys in the fund are hereby appropriated as follows:

(a) For the payment of refunds, as authorized by the commission and approved by the State Board of Control.

(b) The remainder of the moneys shall be used by the commission, with the approval of the Director of Finance and the consent of the Governor, to carry out the provisions of this chapter, including the acquisition of real property or interests therein, the purchase of materials and supplies, and the conducting of operations by the State as provided herein, the payment by the State of such sums as may be provided pursuant to agreements or contracts authorized herein, and the payments of the necessary expenses of the commission.

(c) Upon order of the Controller, the remaining balance shall be transferred as follows:

1. Sixty-six and two-thirds percent of the Beach and Recreational Park Fund thirty-three and one-third percent to the State Park Fund; provided, that the total aggregate amount transferred to both of said funds in any one fiscal year beginning after June 30, 1956, shall not exceed seven million dollars ($7,000,000).

2. The remainder to the General Fund; provided, that any amounts transferred to the General Fund in excess of three million dollars ($3,000,000) during any fiscal year beginning after June 30, 1956, shall be set aside and transferred to the Investment Fund and shall be available for expenditure only when appropriated by the Legislature.

SEC. 22. Sections 506.7, 5011, 5011.2, and 5015, Chapter 8 (commencing with Section 6175) of Part 1 of Division 6, and Division 7 (commencing with Section 8600) of the Public Resources Code are repealed.

SEC. 23. All persons, other than temporary employees, serving in the state civil service and engaged in the performance of a function transferred to the Division of Recreation or engaged in the administration of a law, the administration of which is transferred to the division, shall remain in the state civil service and are hereby transferred to the Division of Recreation on the effective date of this act. The status, positions, and rights of such persons shall not be affected by their transfer and shall continue to be retained by them pursuant to the State Civil Service Act, except as to positions the duties of which are vested in a position which is exempt from civil service.

All public property, real or personal, of any state agency or officer used principally or primarily in carrying out any of the functions, or acquired in connection with the exercise of any function, which function is transferred to the Division of Recreation is transferred to the division.

CALIFORNIA LEGISLATURE—1957 REGULAR SESSION

ASSEMBLY BILL No. 3048

Introduced by Messrs. Beaver, Lindsay, Mrs. Davis, Messrs. Frew, Samuel R. Geddes, and Sedgwick

January 23, 1957

REFERRED TO COMMITTEE ON CONSERVATION, PLANNING, AND PUBLIC WORKS

An act to add Section 5019.5 to the Public Resources Code, relating to park and recreational area development plans.

The people of the State of California do enact as follows:

SECTION 1. Section 5019.5 is added to the Public Resources Code, to read:

5019 5. Before any park or recreational area developmental plan is made, the Director of Natural Resources shall cause to be made a land carrying capacity survey of the proposed park or recreational area, including in such survey such factors as soil, moisture, and natural cover.

ASSEMBLY BILL No. 2312

Introduced by Mr. Lindsay

January 21, 1957

REFERRED TO COMMITTEE ON TRANSPORTATION AND COMMERCE

An act to amend Section 103.5 of the Streets and Highways Code, relating to state highways.

The people of the State of California do enact as follows:

SECTION 1. Section 103.5 of the Streets and Highways Code is amended to read:

103.5. The real property which the department may acquire by eminent domain, or otherwise, includes any property dedicated to park purposes, however it may have been dedicated, when the commission has determined by such resolution that such property is necessary for state highway purposes.

However, property dedicated to park purposes may not be so acquired until after the commission has held a public hearing with respect to such park acquisition in the general locality where the park is located and the commission has found by resolution entered in its records all of the following:

(a) Alternative routes not requiring acquisition of the park property are unavailable or too costly.

(b) Contiguous land is available for park purposes in replacement of the land to be taken and will be made available by the State for that purpose or contiguous land is not so available for replacement of the land to be taken.

FULL REPORT

INTRODUCTION

The acquisition and development of California's park and recreation facilities are not keeping pace with her population growth. California has an estimated population of 14,000,000. In approximately 100 years the State's population is expected to reach about 45 million. By 1970 projections indicate that growth will equal about one-half this figure Higher incomes, more leisure and improved transportation will increase the mobility of the population and its ability to enjoy recreational activities

Already the combination of increased leisure and expanding population are placing strain on existing resources. Indicative of this strain is the fact that visitor-day use of California's national forests have more than doubled since 1941 when reliable records were started. Use at that time was estimated at 14,475,511 visitor-days, equivalent to two days per state resident per year Estimates for 1956 place visitor-days use at 31,073,622, or 2.4 days per state resident per year. Forecasts indicate that use in national forest service land will increase to at least 10 visitor-days per person when the population of the State reaches 45,000,000. It must be assumed that public policy will require the expansion of park and recreation facilities to meet these increasing demands. In spite of the fact that many potential areas have been lost under the pressures of unplanned physical development, the opportunity is here for the acquisition and development of parks and recreation areas appropriate to meet population growth.

The total long-term needs of the State, however, cannot be met without integration of park and recreation programs with present and projected plans for other state public works and with the projected growth patterns of local jurisdictions. This is particularly true in the field of water development, which will not only assure a sound economic base for water-short Southern California but can at the same time provide additional recreational resources for the entire State. If the concept of full-basin, multiple-purpose development is endorsed by the Legislature, all reservoirs can contribute to this need. Upstream reservoirs can provide balanced public-private developmental opportunities, which will not only make the area more attractive to recreationists but furnish a new tax source and strengthen the economies of our mountain counties. Well-planned public-private development will offset the tax loss that will result as more privately owned lands leave the local tax roll for reservoir development. Full-basin development should provide water for fish and wildlife enhancement, and reservoirs developed for single-purpose recreation. For low-level dams and those constructed for reregulation or holdover storage, balanced planning will permit exclusive residential and resort motels and hotels in addition to the recreational uses of camping, picnicking, swimming, boating, water sports, and fishing. Here, again, local economies will be strengthened and local governments will be furnished the tax base necessary to provide the governmental services required by its growing population.

Well-planned recreation areas developed in conjunction with the California Water Plan will make this State more attractive to the tourist trade. Both in Northern and Southern California expenditure by tourists is ranked third in the source of basic income.[1] In 1953, 4.3 million tourists visited California and expended 772 million dollars. This "new money" earned in other states turns over rapidly through business, individual, and government channels. Intense competition among the states for this trade is developing. If California expects to hold and strengthen this important element of her economy, her existing recreational resources must become known to the tourist and strengthened with balanced recreational development. Kenneth Decker, in his analysis of the tourist trade in California, emphasizes its importance to California's future economic development.

> The 48 counties of northern and central California are attracting only one-fourth of the tourist expenditures, while three-fourths are spent in 10 counties of southern California. The wealth of outdoor recreational resources in the northern counties includes four national parks (the largest number in any state), mountains, forests, wildlife, and streams. In view of the success in several states in attracting tourists by advertising natural resources, California may not be realizing her potential.[2]

The tourist industry alone is ample justification for state expenditure for the development of recreational facilities in conjunction with water projects. While the cost of developing these resources is minor in terms of total project costs, part of this expense should be included in construction costs, and the desired recreational facilities must be planned and developed as an integral part of the total project.

POLICY CONFLICTS

Hearings of the subcommittee in Los Angeles and Sacramento indicate basic conflicts between the Commission of Beaches and Parks and the division and what the subcommittee felt were clear legislative mandates. The misunderstandings were based largely on legislative misconceptions of the powers of the commission, as related to the provisions of the Budget Act of 1956. Additional conflicts appeared to stem from the long established policy of the commission regarding the criteria for the selection and the development of park and recreational areas. A third area of difficulty seemed to be the progress of the commission and the staff of the division in the acquisition of prime park and recreational areas for which money was granted in the budget session. The concern of the subcommittee is related to the fact that the acquisition program needs to be expedited both to serve the growing population of the State and to prevent the areas on which the budget money had been granted from being priced beyond the reach of the people.

[1] Kenneth Decker, *The Tourist Trade in California*, Bureau of Public Administration, University of California, 1955, for a review of the economic value of the tourist industry

[2] Decker, *op cit*, p. iii.

LEGISLATIVE INTENT AND THE POWERS OF THE COMMISSION

During the 1956 Session of the Legislature the State Commission of Beaches and Parks submitted a five-year program for legislative consideration. No hearings were held on the implications of the full plan, nor was it, as a plan, even considered for legislative adoption. The plan, nonetheless, was augmented by specific budget items recommended by the commission for beach and park acquisition and development. The budget on the Assembly side was amended during hearings by the incorporation of a lump sum of approximately four million dollars for additional acquisition and developments in Los Angeles County. It should be noted that this augmentation was not supported by the staff of the Division of Beaches and Parks nor by the commission itself. It was included with the understanding that during hearings on the Senate side specific items would be listed that had been investigated and were receiving the support of the county officials of Los Angeles and the legislators from that area. These items were continued in the budget that was signed by the Governor. The following extract from the Governor's message at the time he signed the 1956-57 Budget Bill pinpoints one of the conflicts under consideration:

> I do not fully approve of the park and beach program as contained in the Budget Bill because of the inclusion of certain items which have not been adequately studied by the State Park Commission. However, the appropriation covers a five-year park and beach program and only items of high priority can be included in the program for the coming fiscal year in any case. I will ask the Park Commission to study the added items with respect to their desirability and to determine the place they should be assigned in the over-all list of projects.

In spite of the Governor's directive to the commission and the division for additional study of some of the beach and park items in the bill, it was the feeling of the Los Angeles delegates that their insistence on the incorporation of these items, not recommended by the commission and the division, made legislative intent clear. They felt that the fact of conflict, where the Legislature itself overrode the recommendations of the division, should have been controlling on the commission and the division in their acquisition of these itemized purchases. Legal administrative control is further demonstrated in Section 14, paragraph 4, of the Budget Act, wherein it is stated that the schedule itself

> * * * is a restriction or limitation on the expenditure of the legislative appropriation made * * * (and) does not itself appropriate any money and is not itself an item of appropriation.[3]

The simple fact is that these budget items merely made money available for the acquisition of property for the State Park System, subject to authority to acquire such property that is vested in the State Park Commission. The items did not either grant authority to acquire or require acquisition. Authority to acquire property for the purposes of

[3] Appendix 1, p. 64.

the State Park System is now vested primarily in the State Park Commission, as provided in the *Public Resources Code:*

> 5006. The State Park Commission, with the consent of the Department of Finance, may acquire by purchase or by condemnation proceedings brought in the name of the people of the State of California, title to or any interest in real and personal property which the commission deems necessary or proper for the extension, improvement, or development of the State Park System.
>
> Proceedings for the condemnation of any real or personal property or any interest therein shall be taken under the provisions of the Code of Civil Procedure relating to eminent domain. The commission shall not commence any such proceedings unless it first adopts a resolution declaring that public interest and necessity require acquisition by the State of the property or interest therein, described in the resolution, and that such acquisition is necessary and proper for the extension, improvement, or development of the State Park System.

In spite of these clear authorizations to the commission, it was the belief of the subcommittee that the intent of the Legislature had been shown clearly and that the commission and the division should have followed this intent. This conflict is discernible in much testimony and comments by legislators, both in the Los Angeles and Sacramento hearings. Typical of this testimony is the following:

> Assemblyman Munnell: Well, Mr. Carrillo, Mr. Unruh's point is who determines whether it is of the state-wide interest, the State Legislature or the State Park Commission?
>
> Mr. Carrillo (State Park Commissioner): I think the State Park Commission is more conversant with that situation.
>
> Assemblyman Munnell: That isn't the question; who sets the policy? When the Legislature says "We hereby appropriate *x* number of dollars for a park site," do you feel, then, that the Legislature having spoken and having in effect said "This is a park site of state-wide interest or which will serve all the people of California," do you have the authority, then, to refuse to spend that money?
>
> Mr. Carrillo: I think the Legislature has prerogative, of course, and the right to suggest expenditure of that money, but I think it is up to the State Park Commission to determine whether these projects are worthy of state-wide interest.
>
> Assemblyman Munnell: That is the issue that we are going to determine today * * *
>
> Mr. Carrillo: Well, that is our policy, gentlemen.
>
> Chairman Unruh: Well, the background on this is that the Legislature did express last year this desire. Now, I agree with you, sir, that originally it certainly is the function of the commission to determine what projects should be acquired, but there then comes a point which came in the last budget session as to whether the Legislature has the power to overrule this, and I would think that the Legislature certainly does have this power. This is specifically what we did with about 3½ million dollars of additional appropriation. We overruled the express intent of the State Park

Commission and put this extra money into the budget item by item, specific item by item. We have reached the point now of impasse as to whether in doing this we actually accomplished anything or whether we are still back in the same position we were before this passage of the budget.

Mr. Carrillo: I think that the Legislature, of course, has the right to appropriate the money, but I think that perhaps we have a certain policy that we have to follow and that is as to whether these projects are worthy of state-wide interest. That is the basic thought that we had on our commission.

The conflicts obvious in the above quotation between an agency authorized by law to exercise discretion in the purchase and development of state park areas and the attempts of the Legislature specifically to itemize similar areas and to direct the agency are clearly drawn. The decision is not necessarily one of reverting to a method of legislative log-rolling or the continuance of the administrative agency with its powers of protecting the over-all interest of the State. This decision is rather one of attempting to guarantee legislative direction in terms of an established pattern of recreation development related to the demands of an expanding population.

What is needed to forestall such inevitable conflict is a state-wide park and recreation plan accepted by the Legislature and based upon adequate standards that will meet the requirements of this State. The budget submissions, then, of the agency can be reviewed against the backdrop of this plan. Where the Legislature wants to determine specific policy on acquisition and development this policy can be assured legally through legislation or through careful language in budget items determining the place, amount of land to be purchased, and time of purchase. **It is the conclusion of this subcommittee that the Legislature should not substitute its determination for that of the commission in all cases as to what constitutes the State's beach and park program. The continuing concern of the Park Commission for the protection of the State of California must be assured.**

CONFLICTS REGARDING THE CONTROLS OF COMMISSION POLICY ON ACQUISITION

Following the passage of the 1956-57 Budget Act, heavy pressures were placed on the Division of Beaches and Parks and on the legislative representatives from the various parts of the State affected by the budget items to proceed with rapidity on the purchase program for which funds had been furnished. **In some cases long established policy of the commission controlling the recommendations of the division on the sites resulted either in inaction or in negative reports.** The latest policy statement of the commission, adopted October 19, 1956, listed criteria not before given by the commission in such detail. In announcing the action of the commission, Chairman Joseph R. Knowland said:

* * * these are well established principles that have been followed by successive commissions over the years and have resulted in building a State Park System second to none in the Nation. The essential part is that these parks are of state-wide and not local significance.

The criteria on selection of state parks follows:

1. Areas in the State Park System should be of state-wide and not local significance.
2. They should possess outstanding qualities of landscape or features of special significance that make their preservation and public recreational use a matter of state-wide concern.
3. They should be on a scale worthy of inclusion in the state system.
4. They should be unified and complete areas with logical boundaries.
5. State parks are primarily natural areas. Developments are for the purpose of making the areas available for public enjoyment in a manner consistent with the preservation of natural attractiveness and should be of the simpler sorts in a natural environment (i.e. camping, picnicking, sightseeing, nature study, hiking, riding, boating, swimming, fishing, etc.) involving no major modification of their lands, forests and waters, and without extensive introduction of artificial features such as athletic fields, playgrounds, golf courses, and other forms of recreational developments that primarily are for local benefit.
6. Funds for the State Park System are not intended to be used as a subsidy to local recreational developments. Important as these are, they have traditionally been considered as the responsibility of local communities, and are not a part of or related to the State Park System, which supplements on a state-wide basis the local recreational provisions.
7. The state park areas should be equitably distributed so as to assure proper balance in their use by the citizens of all parts of the State, but not necessarily located in specific communities on the basis of population or area. The state-wide value of the present State Park System is shown by the fact that a majority of the visitors to many remote parks come from the populous centers of the State. One of the primary purposes of the state parks is to afford city dwellers the benefits of life in the open country; therefore, county lines cannot be taken as the basis of distribution of parks, but rather the determining factor should be the availability of the types of lands that can most satisfactorily afford the sorts of outdoor recreation that are characteristic of state parks.
8. In determining the value to the different parts of the State of areas proposed for state park purposes, not only should reasonable accessibility to the entire population be taken into account, but also the relative cost to the State in terms of the types of recreation characteristic of state parks.

The following excerpt from the October 15th hearing of the subcommittee in Los Angeles illustrates the manner in which the commission's policy has affected the acquisition and development program in that area:[4]

> Mr. Carrillo, (State Park Commissioner): I don't think that the State Park Commission has any objection to the expenditure of

[4] Transcript, Hearing, Los Angeles, Subcommittee on Beaches and Parks, October 15, 1956, pp. 16-17, Committee File.

these funds. The only question that arises is whether they are pinpointed locally or for state-wide benefit. * * * Puddingstone, I believe we are well on the way with that, with the exception of the golf course and that seems to be a question; but as to Royal Palms and the other projects, it is a question in our minds as to whether they are of state-wide interest.

Chairman Unruh: Now, Mr Carrillo, this points up exactly the question I am trying to determine here. The Legislature put these items in the budget last year; therefore, indicating that the Legislature thought that they were of state-wide interest. Now, is it your contention here that what you are trying to say is that despite the fact of this directive by the Legislature, the Park Commission still has the right to come back and say "no, this is not of state-wide interest and therefore should not be acquired"? Now, is that the position of the State Park Commission?

Mr. Carrillo. Well, it has been our policy that anything that we do acquire has to be of state-wide interest. I can see where interior recreation, like Puddingstone, would be worthy of the maintenance, but then we find smaller places that are not. I don't know whether you gentlemen know the situation down at Royal Palms, it's limited and the area is small, it isn't worthy of a maintenance staff to take care of a small area of that kind; the inadequate parking is another factor. There is danger of contamination at the moment and there is also beach erosion that has to be taken into consideration. Did the Legislature pinpoint each one of these projects?

Chairman Unruh: We certainly did; we put exactly how much money was to be appropriated for each one of these projects, specifically. Then, this is the question to me, and is, I think, the basic part of this hearing, whether after this expression of legislative will—there is still a discretionary authority vested in your commission.

The position of Los Angeles in this conflict is well presented by the statement of the County Administrative Officer at the Los Angeles hearing of the subcommittee:[5]

> Our present immediate concern is expediting the budgeted program approved by the Legislature and by the Governor County representatives apeared before a recent meeting of the Park Commission in San Francisco to urge favorable consideration of and immediate action on Los Angeles County projects. The commission members were most courteous. We received the impression, however, of reluctance on their part to wholeheartedly support acquisition of inland parks to be used primarily for recreational purposes.
>
> With reference specifically to the budgeted item of $2,000,000 for the acquisition of the Puddingstone Dam Park, the commission objected to the purchase of any acreage which would later be developed at county expense into a golf course. The county proposes the acquisition of some 1,000 acres of rolling hills, grass, covered with some native oak, surrounding the county-operated Puddingstone Dam Reservoir of some 600 total acres. The idea

[5] Appendix 2, p. 66.

contemplates a complete recreational facility in the eastern part of the county—to attract not only local county residents, but people residing in San Bernardino, Riverside, and Orange Counties. A golf course was part of the multiple recreation facilities contemplated.

As a result of meeting with the commission we have arrived at two conclusions:

1—First, a reconsideration of the State Park System policy might well be in order. It is respectfully suggested that the State seriously consider a reorientation of acquisition policy from the traditional conservation concept of acquiring remote areas of scenic beauty to one of acquiring large regional recreation areas adjacent to metropolitan and urban users The State has acquired magnificent areas of scenic beauty—and we all are thankful for it. Perhaps now, in view of today's and tomorrow's recreation needs, the State Park System program can emphasize the latter. Times change; our needs change. The criterion of desirability cannot always be that of conserving beauty—but rather that of serving users.

As mentioned before, parks must be for people. We have heard of estimates of 11 to 15 million visitors *annually* to our state parks, exclusive of beaches. We have one million jam our beaches on a single day. The 6 million people in the Los Angeles area cannot, aside from an annual vacation period, "get away from it all" by traveling several hundred miles to remote mountain wildernesses and redwood groves The congested highways, the terrific strain, the limits of available time, demand recreation facilities in population centers. We must bring the facility to the people; otherwise, regardless of beauty and other characteristics, the remote facility is simply not available.

2—Second, we refer to the State's unwillingness to expend any funds for land which would support a golf course. Why discriminate against golf as a form of recreation? A golf course would be only a small part of the Puddingstone project, would be just one of multiple types of recreation to be made available. Boating, fishing, bathing, picnicking, hiking, overnight camping are approved—but not golfing. This reasoning is hard to explain to the 400,000 active golfers in this county, who now must literally fight to play on the limited number of courses available. The Southern California Golf Association tells us the number of active golfers would be tremendously larger if additional courses were available.

A similar situation where policy factors have affected the program of acquisition exists in regard to the Eureka Bowl:[6]

Assemblywoman Davis: Did you increase the boundary lines from the original bill that I introduced a few years ago on this property? Did you change the boundary lines?

Mr. Powell: (Division of Beaches and Parks) Well, we reduced the Forest Service taking and in a discussion with Forest Service representatives, they suggested that we were intruding upon a plan they had of forest control and we reduced that area a little

[6] Transcript, Hearing, Sacramento, January 19, 1957, pp. 56-57, Committee File.

to suit their needs. But not substantially, the project is materially the same now as it was.

Assemblywoman Davis: You know what I am referring to. How about Johnsville?

Mr. Powell: From the staff side we have always felt that the City of Johnsville—the little village of Johnsville should be included in that acquisition.

Assemblywoman Davis: Now my concern is this, that originally when I introduced this bill, I did not contemplate taking in the townsite of Johnsville and at that time was agreeable with you and with the commission, because as you recall I appeared before the commission at least two times in behalf of the Eureka Bowl. Now you tell me and perhaps I didn't hear you four years ago—properly—but you say that the staff people have always been of the opinion that the townsite shall be included. Now it is my understanding, although I was not able to be on the last trip to the area, that it was the feeling of the people there on that trip that Johnsville was not going to be included within a park boundary line and now I find that it is. Now, I would like to know when that concept was changed.

Mr. Drury: Well, I'll try to answer your question and I agree with Mr. Powell that the concept of our staff was that that entire area as delineated should be acquired * * *

Assemblywoman Davis: Well, the thing that confuses me is * * * that you were quite aware of my feelings when I originally introduced this bill and at that time the commission and your department was very agreeable to the contents of the bill and it certainly didn't include Johnsville * * *

* * * * *

Mr Drury: May I make this further point and then I think Mr. Powell will amplify on it. I believe you would agree that it would not be in the public interest to have any private property within a park developed adversely. The present residents and their houses are not in the least degree objectionable either as to appearance or as to their activities but as an area of that sort becomes popular, there is a certain amount of incidental business that would be conducted on private lands that might not be in key with a public park operation. Now that is based on long experience in park administrations.

* * * * *

Assemblywoman Davis: Now let me ask you a further question. If that area consisting of the homes itself would be excluded from the boundary line of the future park, would you still be in favor of going ahead with Eureka Bowl?

Mr. Drury: Well, let's face it. I think that it would be very questionable that it would be desirable, if you left yourself open to the kind of danger that I already mentioned, the adverse exploitation of private holdings over which the public has no control in the midst of an area that is intended for public recreation Now that —— if there is some way that you could be assured that the present conditions at Johnsville would obtain that there

wouldn't be any adverse development then I'd say, yes, we would continue to recommend it If it were determined that it was the danger of this thing then it would be very questionable.

Thus the long established policy of the commission has been controlling the acquisition program authorized by the Legislature during the Budget Session. The emphasis upon a state-wide interest, the refusal to develop recreational areas near heavy urban population concentrations because of the fear of local interest, the unwillingness to develop strictly recreational facilities such as golf courses, swimming pools, etc., connected with park areas, the demand that the areas be of an appropriate size both for administrative purposes and to assure beauty and unity of the development have all been factors in conflict with both local requirements and legislative policy. The subcommittee makes no recommendation on this area of conflict except to emphasize the importance of an over-all plan wherein the recreational element will be fully protected. Additional study is required in the area of local as against state-wide interest for the development of a formula that will permit state contribution for the state interest covered by the area's development

CONFLICTS ON SPEED OF ACQUISITION

During the preparation of the five-year program of beach and park acquisition for submission to the Legislature at the Budget Session, conferences between this subcommittee and representatives of the Division of Beaches and Parks and the Department of Natural Resources clearly identified this program as a five-year program of development.[7] In the consideration of the budget items, themselves, the five-year character of the program was likewise recognized. This was also the position of the Governor as indicated in his budget message.[8] **In spite of this general recognition, the pressures of land development on existing open spaces around the urban areas were a clear indication that if purchase were not expedited the program would be priced beyond the budget stipulation and out of reach of the people.**

The character of these pressures is indicated in the following quotations from the Sacramento hearing:[9]

> Assemblyman Allen · Now how far have you gotten on the status of the park at the Anderson Reservoir?
>
> Mr. Powell (Division of Beaches and Parks): We have spent about a week's time in the field studying the areas. We have determined upon the area that is most suitable and in general have come to a staff agreement as to the boundary delineation, but we will have to prepare maps of that, make another trip into the field and get our report out on it.
>
> Assemblyman Allen: Have you had any negotiations with the county over the transfer of the Coe Ranch?
>
> Mr. Powell: No, we have not opened negotiations on it yet. We understand that it is there any time that we want to accept the deed and process it, it is there ready for us. We felt that was

[7] See *Minutes of the Subcommittee Meeting*, November 30, 1955, Appendix 3, p. 70.
[8] See page 16, *supra*.
[9] *Op. cit.*, pp. 48-50.

just a minor problem of transferring jurisdiction and that the determination should first be made on the Anderson Reservoir as just how far we are going there.

Assemblyman Allen: The supervisors at one time indicated that they would be willing to transfer the Coe Ranch to the State, that doesn't mean they will do it next year. Why don't you take the deed now?

Mr Powell: But of course, Mr. Allen, we must understand that the appropriation last year of the Legislature was for a five-year program and we are only six months into it and we have activated about 50 of the projects and the question is this—if we knew just which one we should work on first, but every project is an urgent one in the community and we realize it We just haven't been able to spread ourselves that thin

Assemblyman Allen: Thousands of people make use of the area around the Anderson Reservoir and have been doing it for about four years now and we are back to the same conditions that exist at Folsom. I don't see why you should hold off on that project at all. The Coe Ranch, the supervisors may change their minds about transferring that property to the State.

Mr. Powell: We are not holding off on any of these projects. We are just physically unable to cover all of them at once. We just simply can't get that far.

Assemblyman Allen: What have you done about the Lexington Reservoir?

Mr. Powell: The Lexington Reservoir is something that we have made no study on to date.

Assemblyman Allen: Exactly the same problem.

Mr. Powell: That's right, it is, and it will have to be taken along with the other two. However, the Lexington Reservoir is a long distance away from the Coe Ranch and Anderson Reservoir.

Assemblyman Allen: Close to a lot of people.

Mr. Powell: That is right. That is right, sir, but the reason we tied the Anderson and the Coe Ranch together is because of their close relationship to each other They are there and can be operated as one project.

Assemblyman Allen: Well, for all that I can tell, we are going to pass another two years and still nobody will be down there to look at them.

The same situation of population pressure on open spaces and consequent pressure upon both the division and the Legislature to speed the purchase program was brought out in the Los Angeles hearing.[10]

Mr. Powell: You must understand that that is a very normal situation state-wide. There isn't a project that we have listed here that doesn't have its own immediate emergencies.

Chairman Unruh: Well, I think that is the crux of the matter here now. If these park and recreational areas are vital and necessary and we are going to get them at some time or other, then why can't we move with all dispatch to get them? Why do we

[10] *Op. cit*, pp. 65-67.

have to let such things as appraisers and these little technical details slow us down, because we know we are going to get these, we also know, the longer we wait, the more money we are going to pay for them. Do you need more staff in order to do this? If you do, why haven't you asked for it?

Mr. Powell: Mr. Chairman, I might explain that in this manner. I don't believe that the Department of Natural Resources, the Department of Finance and Attorney General's Office have staff to even meet this program. We could staff—if we could fill the positions and recruit—we are having difficulty doing that, but let's say we could and we put on enough staff, we could put on enough staff to accomplish all of this in one year, the other departments couldn't possibly handle and process them. There isn't a remote possibility that they could do that. We are way, way behind in our condemnations; we have condemnations carried from as far as 1950 today; that is not our fault, I am sorry to say.

Chairman Unruh: That is what we want in the record.

Assemblyman McGee: But isn't it true that the price you must pay is the value of the property at the time of filing the condemnation suit? The time of the taking?

Mr. Powell: We pay the values at the date of condemnation. Every day we wait, values are going up.

Assemblyman McGee: Right, so the issue is why don't you proceed with the filing of condemnation suits on these items that the Legislature has appropriated money to you to purchase these sites?

Assemblyman Munnell: In other words, you have La Mirada Park, and I can assure you that the market value of that land will continue to spiral upward until it will soon be out of your reach if you don't act.

Mr. Powell: Do I gather, Mr. Munnell, that you are suggesting that we file a condemnation on all projects, regardless, in order to hold the land value status?

Assemblyman Munnell: That might be something to consider because I do know with respect to several of these items if you don't move the price is only going to go one way, and that's up.

Mr. Powell: That is true, there is no question about it.

Assemblyman McGee: Why not go ahead and file a condemnation quick, especially where we gave you the money? You can always have a stipulated judgment.

Mr. Powell: Our record of condemnation, and we are quite proud of it, may be we have been wrong, I don't know, has been about 2 percent condemnation.

Chairman Unruh: Sir, we don't want to infer that you are wrong and we are right, or we don't want you to infer vice versa, but we do want to find out what we can do to expedite this. Every minute we sit here, and this La Mirada, particularly, I assure you the price is going up * * *

Mr. Powell: That's right. That is the situation all over the State, and we don't believe it's good public relations to condemn unless we give the property owner every opportunity to negotiate the sale.

Chairman Unruh: All right then. The policy of your department, of your staff, is to condemn only as you are able to process this to completion?

Mr. Powell: Let me explain it this way: it is the policy of the commission not to condemn wherever they can possibly avoid it. Now, as to the immediate problem, in expanding on this staff situation, we have a program—the funds for which are budgeted for a five-year period; we are only 3½ months into this period. We have obligated so far 3½ million dollars in 3½ months. Whether we can keep up that tempo or not I don't know, but it would be an utter impossibility even if we were to get the men, to staff and train and realize this program in let's say one year; we just can't process it that fast. The Department of Finance requires, and I know the Park Commission requires for their own protection, appraisals from these independent appraisers; it is no more than right that we should know, we should have a guide as to how to proceed and what the land values are in the community. It takes time, those boys are filled up.

The attitude of the commission on use of condemnation is further explained in the January hearing in Sacramento: [11]

Mr. Drury (Chief, Division of Beaches and Parks): Well, Mr. Lindsay, you speak of blanket condemnation. I know of no way under which the Park Commission could file blanket condemnation suit that would be approved either by the Attorney General or the Department of Finance. If there is such a way, it should be revealed to us. Do you know of any, Mr. Powell?

Mr. Powell: Mr. Lindsay, we do not have the authority of right of entry and we can file——

Assemblyman Lindsay: Then why didn't you ask it when you asked for all these lands and when you asked for this money to buy these lands, why didn't you ask for the power to use it?

Mr. Drury: We didn't ask for this money to be expended in one year. We presented a five-year master plan and the Legislature determined that this money should be appropriated and we were duly grateful for that fact.

Assemblyman Lindsay: What do you mean you don't have the right of entry when you are going ahead with certain condemnations now?

Mr. Drury: Well, it is under regular condemnation. We don't have any right to a declaration of taking as is the case with highways. We have to file a condemnation * * * Furthermore, I personally wonder whether the Park Commission should have that arbitrary power. I think that these projects should be worked out as we are working them out by negotiation with the owners of the property and not by arbitrary action.

During both hearings there was much discussion on the commission's policy in regard to condemnation. This policy is clearly stated in the above exchange. The question faced by the subcommittee is to determine whether a policy against condemnation is one that protects

[11] *Op cit*, p 58

the best interest of the State during this period of growth. **To expedite acquisition process, it is the recommendation of this subcommittee that additional or temporary staff be added to the Division of Beaches and Parks Planning Section and to the agencies involved in the land acquisition process that will permit the speedy acquisition of designated park and recreational areas. It is further recommended that the commission, following generalized site use surveys for the designation of the area desired to be purchased, pass a resolution authorizing purchase through negotiation or condemnation and that the staff of the commission dedicate itself to the immediate acquisition through these two processes of the areas designated in the budget. If negotiation is delaying purchase to the detriment of the State then condemnation should follow as normal procedure. This program if instituted immediately will save the State millions of dollars.**

A STATE PARK AND RECREATION PLAN

With demands on recreation and park facilities expanding in almost geometric proportion to population growth, general policy matters affecting park and recreational area acquisition, development and administration, must be determined by the Legislature. The appropriate balance between recreational areas, scenic areas, and historic sites is a policy consideration that cannot appropriately be determined by the Legislature through the review of administrative budget submissions. It can only be properly based on adequate studies of the recreational requirements of the people considered in relationship to standards for each recreational interest. The importance of a comprehensive master plan for park and recreational development was emphasized when the Governor vetoed Senate Bill No. 1729, the Omnibus Bill, during the 1955 Regular Session.

> There is no good reason why California should not have a system of state beaches and parks second to none in the world. Such a system is of utmost importance to the welfare and economy of our State. The development of our Beach and Park System must be in accordance with a sound, prudent, comprehensive master plan.
>
> Allocations of funds for the purpose should be through the regular budget process in accordance with a system of priorities as is done in other capital outlay budgeting and should not be on a basis of competition among Members of the Legislature through special bills.[12]

During the 1955 Regular Session and the 1956 Budget Session, the Division of Beaches and Parks released, through Park Commission, five-year programs for beach and park acquisition and development.[13] The 1956 master plan, an elaboration of that submitted in 1955, was prepared by the division in justification for budget submissions. The plan itself was never submitted for legislative consideration as a *plan,* nor was any effort made on the part of the division or the commission

[12] Press release, Governor Goodwin J Knight July 9, 1955.
[13] *Five-year Program,* July 1, 1955, to June 30, 1960, and *Five-year Master Plan,* July 1, 1956, to June 30, 1961.

to gain legislative adoption of the plan. It does not meet the requirements stipulated in the Governor's veto message of being "* * * in accordance with sound, prudent, comprehensive master planning."

NEED AND CONTENT OF THE PLAN

Bitter controversy, outlined in the preceding paragraphs, can be expected to continue between the Legislature and the commission as long as the only legislative review of the beach and park acquisition and developmental programs is controlled by the administrative branch through budget submissions. This controversy can be eased if the State of California develops a park and recreation master plan that is reviewed by the legislative branch and adopted by it as a pattern of development. Under this plan, budget submissions would be acceptable to the Legislature, since the plan itself had received legislative acceptance.

The concern of this subcommittee is that the park and recreation plan considers all elements of physical planning, both on a state-wide and local level, including the following factors—other uses of land, transportation, public utilities and natural resources. The field of recreational planning on a state-wide basis is an area of pioneering and requires the development of an acceptable methodology and space standards for each recreational interest. The methods and the standards should be developed prior to any attempt at state-wide planning. An inventory of existing park and recreational facilities state-wide, measured in conjunction with the space requirements for each recreational interest, will furnish the detailed recreational requirements of the State, again by interest. With these requirements as a base, the state-wide plan itself can be developed.

These are sound planning principles that should be followed in the development of a park and recreation plan for the State of California. **Such a plan was recommended by this subcommittee in its progress report of 1956, and has been proposed in Assembly Bill No. 32 by Assemblyman Lowrey, after extensive hearings before his Subcommittee on Public Lands. Members of this subcommittee met jointly with the Subcommittee on Public Lands, and the staff of this subcommittee participated in the development of the proposal.** The planning proposal of Assembly Bill No. 32 has been considered by the Park Commission and has its support:

> Mr. Drury: The Park Commission, of course, has tried to develop its program in accordance with what it considered to be the intent of the Legislature. It's a long standing program, something like $50,000,000 has been appropriated to buy lands in accordance with the formula that has been developed. But the Park Commission, like Director Nelson, would welcome a definition of the province and function of the different agencies and levels of government in the field of parks and recreation and they are supporting the idea of Assembly Bill No. 32 or some similar measure which would make provision for an intensive study and report of that subject. There never has been an adequate analysis of the total recreation problem of the State.[14]

[14] Sacramento Hearing, *op cit*, p. 11.

ADVANTAGES OF A STATE PLAN

It is the belief of the subcommittee that a state recreation and park plan prepared in accordance with the principles outlined above will accomplish the following:

1. Remove the cause of controversy now existing between the Legislature and the commission by establishing a framework against which budget submissions can be judged.
2. Furnish guidance and a clarification of policy for the commission and the division, a guidance that is now lacking and must be assumed by the legislative branch.
3. Provide a method for the development of a framework of principles and objectives important to recreation interests, all responsible agencies, and the Legislature.
4. Through the cooperation of state and federal agencies, local units of government, and recreation interest groups, establish a vehicle for coordination of the recreation function in the State.
5. Develop recreation standards in terms of specific interest requirements and related to population growth as basic both to the detailed planning and development of park and recreation areas and as a legislative gauge for the judgment of budget submissions.
6. Through the involvement of federal, state, and local agencies with recreation responsibilities and the detailed study of the interest of each agency and its responsibility as related to its administrative ability, determine the agency most capable of administering specific types of recreation and park areas.
7. As a result of the examination above and studies on state-wide and local use of park and recreation areas develop a formula useful in measuring the recreation interest of the State in areas near urban centers for the purpose of state contribution.

The need for this assessment and this level of planning for development and administration of required park and recreation areas is long past due. It is therefore the recommendation of this subcommittee that Assembly Bill No. 32 included with this report be adopted by the Legislature.

ROADSIDE REST PROGRAM FOR CALIFORNIA

Another example of legislative frustration on the determination of beach and park policy is illustrated by administrative action now in process for the creation of a roadside rest program for California. This legislative committee, after full study during the last interim, recommended authorization and policy direction for such a program. These recommendations were adopted by both houses of the Legislature, but vetoed by the Governor on the grounds that they were part of an unplanned beach and park program. The program, nevertheless, is now being implemented through budget submissions of the commission without specific legislative authorization and without basic policy questions being determined by the Legislature itself.

FINDINGS AND RECOMENDATIONS OF 1955

The following findings and recommendations of the subcommittee in the last general session are still pertinent and are again repeated:

Findings

1. A review of the experience of 43 states with roadside rest programs supports the following conclusions:
   a. The public breaks its travel by frequent stops for rest and a view of natural surroundings whether public facilities are provided or not. Once provided, however, these facilities make roadside stops more safe and enjoyable. The habits and desires of the traveler must therefore be considered in site selection.
   b. For maximum public acceptance and benefit the program should be state-wide, planned and developed as a highway system grows, and the rest areas should be well marked and adequately spaced to give the motorist an opportunity to plan his trip.
   c. Facilities made available at roadside rests should vary with the conditions of the site and traffic Necessary discretion should be vested in the responsible agency to permit the development of sites through experience with public demand.
   d. States with the most highly developed programs utilize existing public park and recreational facilities, public lands, and gifts of property by individual donors which reduce the cost of land acquisition.
2. While adequate authority for inauguration of a roadside rest program has existed in both the State Divisions of Beaches and Parks and Highways for a number of years, and despite administrative and legislative investigations recommending the creation of this service, California delayed the inauguration of a program for the following reasons:
   a. Agency and legislative disagreement on the type and extent of a program.
   b. Problems of financing with gas tax revenue in view of highway deficiencies.
   c. Doubt as to its public acceptability.
   d. Indecision on the appropriate responsible state agency for the development and administration of the program.
3. Investigations of this subcommittee, with the cooperation of the Divisions of Beaches and Parks and Highways, the county boards of supervisors, and civic groups, were directed to an exploration of the reasons for past delay. A roadside rest was defined as a moderate sized parcel of land, adjacent or accessible to a state highway, with facilities provided for temporary daytime use by travelers With this definition as a basis, a state-wide tentative plan of "possible roadside rest areas" was prepared which indicates the following:
   a There are approximately 224 existing facilities available for roadside rests which require only the posting of signs at an estimated cost of $120 per site.

b. There are at least 315 usable publicly owned sites that could be developed at an average estimated cost of about $1,000.
c. There are at least 25 sites, not on public land, but considered necessary, which would average about $5,860 each for development.

4. This subcommittee estimates that the total cost of a program approximating the one outlined above would be $488,380. An additional sum should be provided for operation and maintenance and more intense development of selected sites as justified by public demand. The savings of such a program in present costs of roadside fires and highway cleanup, and the advantages to public safety and convenience are great in terms of cost. Basic to the expenditure of tideland oil royalty funds in the development of our park system is the justification of recreation and convenience of the public. It is logical, therefore, that a roadside rest program be included in the California State Park System Five-year Program proposed by the Division of Beaches and Parks.
5. State-wide public support for a roadside rest program is evidenced by the assistance of 43 counties in the development of this proposal, resolutions and letters from the County Supervisors Association, County Planning Commissioners Association, garden clubs, recreational organizations, and organizations dedicated to conservation throughout the State, and in the assistance of the State Chamber of Commerce.
6. Roadside rests should be planned and constructed as integral parts of the highway system both to assure that the requirements of the motoring public are met and to reduce costs. To superimpose the program after highways are constructed means additional expense in land acquisition, construction of access roads, and disruptions of traffic.
7. The Division of Beaches and Parks is the agency that should logically assume responsibility for California's roadside rest program because of its long experience both in developing programs of this type and its customary pattern of federal, state, and local cooperation upon which the success of this program depends.

Recommendations

1. A state-wide program of roadside rests should be authorized by the Legislature on an experimental basis, involving a maximum number of sites with varying degrees of development rather than a few sites with intensive development.
2. The program should be elastic both in site location and in the use of portable facilities to permit adjustments to public demand or changes required by highway realignment and freeway construction.
3. Priority of site development should be in the following order:
   a. Existing parks and recreational areas.
   b. Public lands within and adjacent to highway rights of way.
   c. Lands either donated or purchased.

4. The State Park Commission and the Division of Beaches and Parks should be granted responsibility for the development of the program and the authorization should include:
   a. Sufficient discretion to assure program elasticity.
   b. Wide powers of cooperation with public and private agencies and individuals.
   c. Powers to contract with public and private individuals for site acquisition, construction, operation, and maintenance.
5. The program should be inaugurated at once to keep pace with accelerated highway construction to reduce costs through joint planning and construction, and to assure maximum public benefit.
6. The legislation proposed in this report should be passed and $1,000,000 should be appropriated from the Tideland Oil Royalty Fund for the development of the program.

It is the recommendation of this subcommittee that Assembly Bill No. 494, developed after full study of the problem, nationwide and as it exists in California, should be adopted.

RESPONSIBLE AGENCY FOR PLANNING AND ADMINISTRATION OF RECREATION AREAS

At the present time state responsibility for the planning and administration of recreation areas is divided among 13 state agencies and affected by at least six federal agencies with the myriad of city and county agencies who in turn have a vital interest in the appropriate administration of this function.[15] The pressure of population on existing park and recreational areas demands a clarification of state policy and a readjustment of the activities involved in the recreation function.

GENERAL RECREATION PLANNING

Planning, at the minimum, should be a staff function located within a department with related functions. The agency responsible for planning must recognize the importance of balanced public-private recreational development in order to furnish local units of government a tax base for the support of local services including that of recreation. The responsible agency must recognize the recreational requirements of metropolitan areas and these must be developed in balance with other areas in remote places with the objective of serving the needs of the people. Recreational areas thus developed with public and private facilities and with strictly recreational appurtenances such as golf courses, swimming pools and playgrounds furnish balanced recreation opportunities demanded by the public whose purpose the program should be gauged to satisfy.

It is doubtful that the philosophy and planning interest of the Commission of Beaches and Parks will permit the planning of this type of recreational resource with sympathy and understanding. The evidence submitted in the prior sections of this report in addition to more bitter comment and testimony not presented here is ample for this conclusion. No doubt strong legislation will be submitted during this session for a complete reorganization of the park and recreation function. Judging

[15] See State of California Recreation Commission, *Recreation Policy*, December, 1955. See also Appendix 4, p. 78.

from the testimony submitted by legislators before this subcommittee such reorganization programs will find widespread support. In fact, this committee had submitted a bill which in original form would have divided the planning and administrative function between a division of recreation and one of beaches and parks.

Statement of the Department of Finance

The following statement of the Department of Finance prepared on that legislation is quoted at length because it emphasizes the functional and structural contradictions now affecting the development of a sound state recreational program: [16]

"California State Government is constantly growing and changing. New functions are added and departments and agencies must adjust to meet new and changing work load, standards of service, and needs. Flexibility to make the necessary changes should be inherent in the basic statutes adopted by the Legislature. The administrative system of government is created by the Legislature. It is true that the Legislature provides different types of vehicles by which the administration may carry out the objectives of State Government.

In some areas of governmental activity general powers, with few limitations, have been granted to the administration. In other activities, statutes have restricted the over-all administrative responsibility by prescribing specific details of policy, organization, procedure, or staffing. Administration has also been complicated in some instances by the assigning of authority and responsibility for different aspects of one general subject to more than one organizational part of the government structure. Various types of policy-making or rule-making bodies and a variety of prescribed appeal procedures from administrative or quasi-judicial decisions have also been adopted.

The problems in the general area of state activity related to park and recreational planning, development, and program operation are reasonably well known. No attempt will be made here to enumerate or discuss these problems or alternative solutions.

Briefly, three basic principles of good administration are violated by the present situation These principles are:

1. Responsibility for the functions of State Government should be concentrated in a minimum number of broad-purpose agencies and closely related functions should be assigned to the same agency.
2. Each state agency should be under the direction of an individual appointed by the Governor and responsible to him, and with sufficient authority to organize and operate his department to achieve the program objectives desired by the Legislature and the Chief Executive.

[16] This statement is a technical staff study It does not represent departmental or administrative policy

3. Boards and commissions should be restricted to advisory, rule-making, quasi-judicial, or policy-making functions, with no direct administrative, executive, or management functions.

The need for change appears obvious. Assembly Bill No. 606, 1957 Regular Session, proposes changes which would provide basic improvements in the state structure."

Recommendations of the Department of Finance

"1. *It is recommended that both the present Recreation Commission and its staff be included in the Department of Natural Resources.*

Organizing the Department of Natural Resources to include the functions of the Recreation Commission and its staff will place related functions within a single agency. The responsibility for program results will be clear-cut, and the complications of interagency relationships will be reduced or eliminated.

2. *It is recommended that a single division to administer parks and recreation be organized and made responsible to the Director of Natural Resources.*

Organizing the recreational and park functions in one division rather than two as proposed by the bill will make possible a single direction of these related activities at an administrative point below the departmental director level. Such organization would create a division chief position which could turn full-time attention to the related activities; but only a smaller part of the director's time could be made available to the proposed two out of five divisions which would constitute the department as the bill was introduced. Separation of the functions can be achieved at section chief level within the unified division.

This recommendation is not intended to indicate that the two-division organization as provided in Assembly Bill No. 606 is undesirable or would not be operable. This alternative is suggested as an improvement which would avoid consuming too much of the director's time in the problems of the two proposed divisions.

3. *It is recommended that the authority and responsibility for the program be vested in the Director of Natural Resources.*

Complete departmental authority and responsibility for the administration, program, and operations of recreation and parks should be vested in the Director of Natural Resources. This should be done in clear language which will allow the Governor, the Legislature, and the people to look to a single position as responsible for results in accordance with general public policy expressed by the people through the Legislature.

Adoption of Recommendation No. 2 would give the director one person to whom he could delegate most of the administration. If two divisions are created, it would appear even more important for the director to have full authority and responsibility so that differences of opinion might be resolved without protracted discussion and negotiation, without impeding program progress, and without having to ask the Governor or the

Legislature to resolve problems that should be handled by administration.

4. *It is recommended that the State Park Commission and the Recreation Commission be granted only advisory powers and such specific policy-making, appellate, and rule-making authority as the Legislature deems proper.*

The Park Commission and the Recreation Commission should be given only advisory responsibility and authority to establish policy and general standards. No administrative or operational power should be granted to the commissions.

In connection with this point, consideration should be given to modifying Section 509.2 or Assembly Bill No. 606 so that expenditures of appropriations to the Recreation Division do not have to be approved by the commission as long as the expenditures are in accord with established policy. If the division believes a specific expenditure should be made but policy does not permit, then the division should recommend policy change rather than asking the commission for approval of the specific expenditure. No facts or intentions should be withheld from the commission, but administrative or executive decisions should be made by the line personnel.

This principle should also be applied to the Park Commission and the Board of Forestry as well as to any other commissions or boards which might be created or attached to the department.''

The need for policy and structural reform is also clear in the following testimony of the Director of Natural Resources at the Sacramento hearing: [17]

Mr. Nelson: Mr. Chairman and members of the committee. We are dealing with a problem which is very close to my area of jurisdiction. I should first like to pay tribute to the Park Commission. I think over the years they have done a magnificent job in developing one of the outstanding park systems in the Nation. Up until the last few years they have been able to go forward on a very orderly basis with a rather minimum amount of funds and they have done an excellent job. Today we are confronted with an entirely new situation.

There was a lot of money made available at one time. We have an exploding population and problems that are difficult for all of us to visualize and certainly difficult for us to keep abreast of. There has to be a lot of changing in thinking for lots of us to meet those problems. I think the Park Commission would probably be one of the first to recognize and admit that they have dealt by and large with what might be called the park concept throughout their development over the years. They have done a great job in preserving magnificent areas of forest and desert and mountain and some valley and beach areas. Now we are confronted with the problem of changing those basic philosophies and concepts and we have got to apparently go into a field that is primarily and

[17] *Op. cit.*, pp 84-85.

fundamentally that of recreation. The two go hand in hand or they go separately, I don't think it makes a great deal of difference. If you have the basic fundamental law that will prescribe the route that they shall take. I think in many of these recreation areas we must change what, again, I refer to as the park concept, to maybe more the playground type of concept—that of acquisition and development and administration of areas strictly for the mass use of people for recreational purposes. There is some difficulty in making that change, I think we will all admit and all recognize. I think the Legislature is giving the guidelines to that purpose. Now whether it is accomplished by dividing the element of administration into two separate units or changing the basic philosophies and retaining it under one, probably doesn't make a great deal of difference. However, I think Mr. Lindsay is correct when he says that both of them are going to be much larger in the not too distant future than the present Division of Beaches and Parks is by itself. I think our problem is one of growth more rapid than we have been able to assimilate at this time and we have got to gear accordingly and that is going to cost us money.

Measures have been submitted to this legislative session to fully reorganize the recreation and park function, to limit the Commission of Beaches and Parks to policy formation and advice, and to concentrate full administrative responsibility for functions in the Director of Natural Resources. Somewhat of this nature was Assembly Bill No. 606 submitted by Assemblyman Lindsay.

Following conferences with affected state agencies, however, the full structural reorganization contemplated in the original Assembly Bill No. 606 has been withdrawn. **The proposal submitted with the report now transfers the Recreation Commission and Division and the planning and administration of small boat harbors to the Department of Natural Resources with division status. It is the belief of the subcommittee that pending more investigation and the complete report for the planning and administration of recreation areas, this recommendation will permit a more rational administration of the function. The present staff function of the Recreation Commission and Division for the sponsorship, coordination and planning of recreation in the State of California will permit this agency to approach a full responsibility for this function without additional authorization at this time.**

The revised Assembly Bill No. 606 in its statement of legislative policy on the transfer of the two functions to the Department of Natural Resources clearly states the intent and the policy impelling the transfer. Emphasis is placed upon balanced public-private recreation development and upon the state interest in the planning and balanced development of this resource. It is the belief of the subcommittee that following this clear declaration of intent and under the coordinating staff and planning function of the Division of Recreation, the Commission of Beaches and Parks and the division will adjust policies now controlling recreation development in this State in line with this intent.

The subcommittee feels that this proposal is all that is justified under the investigations of this last interim. It recognizes, however,

that additional policy and structural reform may be necessary following the completion of the recreation and administrative plan proposed in this report. The subcommittee therefore recommends that the Commission and Division of Recreation and the planning and administration of small boat harbors be transferred to the Department of Natural Resources in accordance with the declarations of intent in Assembly Bill No. 606 submitted with this report.

PLANNING THE RECREATIONAL RESOURCE OF RESERVOIR AREAS

The committee is impelled to repeat its recommendation contained in the Progress Report of 1955 on the importance of planning recreation for the development of all reservoirs, public and private, in California. Staff studies have emphasized the importance of bodies of water both for the normal water-sports recreation and balanced public-private recreational facilities. These studies indicate that in addition to creating a recreational resource, a reservoir area creates an attractiveness for permanent and summer homes. The strengthening of the tax base that will result from such balanced land use around reservoir areas will help offset the removal of private lands from the tax rolls in public development of the State's water resources. With the transfer of the Recreation Division to the Department of Natural Resources is is assumed that under the staff planning function of that division recreational planning on federal and private reservoir areas will occur. It is not believed that the State must assume the responsibility for actually planning each developed body but rather it is believed that the State should encourage other agencies to coordinate the recreation planning with water resources development. Where local resources or interest is lacking then the responsibility must be assumed by the State of California.

It is the belief of the subcommittee that the broad responsibilities of the Department of Water Resources and its current assumption of the responsibility as related to the recreational resource demonstrates its ability and sympathy for this function. The subcommittee recommends, therefore, that the responsibility for coordinating recreation development with state projects be retained in the Department of Water Resources.

The rationality for this recommendation is found in the following testimony of the department at the Sacramento hearing:[18]

> 1. Investigation and planning for water development works and the several project purposes thereof, including provisions for public recreation, are now and should remain a prime responsibility of the Department of Water Resources. The department would coordinate and consult with other state, federal, and local agencies concerned with recreation in the preparation of reports and master plans for recreational uses.
>
> 2. Lands required for public recreation in connection with reservoirs and other facilities of water development projects, additional to those lands needed for primary project purposes, should be acquired by the Department of Water Resources in connection with the land acquisition program for the project: provided that, such land acquisition for public recreation shall have been reported to

[18] See Appendix 6, p 83

and authorized by the Legislature and funds for such acquisition shall have been appropriated by the Legislature. Costs for such acquisition should be nonreimbursable.

3. Construction, operation, and management of facilities for public recreation at sites acquired for the purpose in connection with reservoirs and other water development facilities constructed by the Department of Water Resources as a part of The California Water Plan, not being a regular organized function of the department, should be turned over by means of grant, lease, license, or other agreement to other state agencies or local agencies prepared to undertake that responsibility.

Existing legal authority for including public recreation as a project purpose as part of the investigations and reports of the department stems from the Water Code in the following sections:

"12581. In studying water development projects full consideration shall be given to all beneficial uses of the State's water resources, including irrigation, generation of electric energy, municipal and industrial consumption of water and power, repulsion of salt water, preservation and development of fish and wildlife resources, and recreational facilities, but not excluding other beneficial uses of water in order that recommendations may be made as to the feasibility of such projects and for the method of financing feasible projects.

"12582. Fish and wildlife values, both economic and recreational, shall be given consideration in any flood control or water conservation program If the design, construction, and operation of projects for engineering and economic features of the project make it practicable, adequate provision shall be made for the protection of migratory fishes and the designs for structures and facilities required for such protection shall be prepared in cooperation with the United States Fish and Wildlife Service and the California Department of Fish and Game."

With the passage of Assembly Bill No. 606 and under existing code provisions it is believed that the planning of recreational resources connected with water development in the State can be appropriately maintained without additional legislation

LAND CAPACITY SURVEYS FOR PARK AND RECREATIONAL AREAS

The Park Commission and the division have been under fire from special interest groups for restricted use of state park areas where the decisions on such control have not always been based upon sound conservation principles and best scientific methods to support these principles. Budgetary limitations in the past have, perhaps, been a factor preventing necessary surveys as basic to planning the development of state parks and recreation areas. One of the important guides for optimum use of such an area and consequently for development planning should be land use capacity surveys based on present knowledge regarding moisture, soils and cover. This subcommittee visited the San Jacinto Park and Wilderness Area as part of its interim

studies. Its members traveled over the trails of this area on horseback during a full day trip and were impressed by the critical conditions of the trails and the cover even with the area's present limited use. These members are convinced that any more intensified use of the area should be based on its capacity determined by sound conservation principles. **The scientific determination of the best use of an area related to the conditions of the watershed and the preservation of the area itself appear appropriate criteria for deciding relative intensity of use and should be one of the tools available to the divisions of Recreation and Beaches and Parks in their planning process.** Thus, uses, for grazing, hunting, timbering, should be justified or denied upon the bases of a plan of development wherein land, soil, and cover characteristics are the determining factors. These same types of conservation principles ought to determine the decisions regarding additional access roads and trails that would permit or prevent more intensified uses.

The principle involved here is one of conservation. It is the belief of the subcommittee that this principle is more authoritative than some of the bases upon which current decisions are made controlling the use of park areas. It is the recommendation of the subcommittee that Assembly Bill No. 3048 included with this report be adopted.

USE OF PARKS FOR HIGHWAY AND FREEWAY LOCATION

This subcommittee and those of Highways and Planning are struck by the use of state, county and city parks for highway and freeway location. In many cases, such as the case of Griffith Park in Los Angeles where approximately 146 acres of highly developed and irreplaceable park land was taken, the ability of parks to serve their communities has been vitally affected. A survey of past and projected encroachment of park areas prepared by the Division of Highways at the request of this subcommittee indicates that in very few instances were replacement in kind a factor of settlement for the park land taken.[19]

Projected construction programs by the Division of Highways indicates further and extensive use of park areas for location purposes. This is a policy consideration requiring a directive to the State Highway Commission, more clearly defining the importance of these areas as related to their use for freeways. Shortages of open spaces in urbanized areas place the community value of existing parks at a premium beyond many other land uses. Public policy requires that great care be taken to protect the public interest in many proposed uses of these areas. The broad language now contained in the Streets and Highways Code[20] constitutes uncontrolled discretion for the invasion of these prime areas for highway purposes. It is the belief of this subcommittee that the commission and the division need a clarification of public policy in this regard. **The subcommittee therefore**

[19] See Appendix 5, p 80.
[20] Section 103 5.

recommends that before park areas be acquired, following a public hearing, the commission make a finding on the following issues:

1. Alternative routes not requiring acquisition of the park property are unavailable or too costly, or
2. Contiguous land is or is not available for park purposes in replacement of the land to be taken.

The amendments to the broad discretion provided in Assembly Bill No. 2312 included with this report do not prevent the use of park lands but do require public hearings and more careful investigation necessary to protect the public investment in park areas.

APPENDIX 1

OFFICE OF LEGISLATIVE COUNSEL, STATE CAPITOL
SACRAMENTO 14, CALIFORNIA, October 8, 1956

HONORABLE FRANCIS C. LINDSAY
P. O. Box 463, Loomis, California

Budget Act of 1956: Park
Acquisition Items—No. 3180

DEAR MR. LINDSAY:

Question

You have directed our attention to an item in the "Budget Act of 1956" which appropriates money for the acquisition of property for the State Park System in accordance with a prescribed schedule, and ask whether it requires the State Park Commission to act conformably.

Opinion

It is our opinion that the State Park Commission is not required by the item in question to acquire any property for the State Park System. The effect of the item is merely to make money available to the commission for expenditure by it for such acquisition pursuant to general authority given it by the Public Resources Code.

Analysis

We assume that you are concerned primarily with Item 400 of the Budget Act of 1956, which reads in part:

"400—For acquisition of real property for the State Park System subject to Public Works Board approval, including both additions to properties now owned and the acquisition of new state parks and historical monuments, Division of Beaches and Parks, Department of Natural Resources, in accordance with the following schedule, payable from the State Park Fund ---------- $16,332,370
provided, that not more than 1,200 acres of land shall be purchased in El Dorado County for the Folsom-Nimbus Project; and provided further, that notwithstanding any other provisions of law the appropriation made by this item shall remain available for expenditure until June 30, 1961; and provided further, that no part of the money made available for the Columbia Historic State Park pursuant to this item shall be used for the acquisition of real property by the use of condemnation proceedings unless such procedure is requested by the seller.

Schedule

The schedule lists 68 parks for which the item makes provision, and shows opposite each such park an amount representing a portion of

the $16,332,370 appropriated by the item. Each such amount is the maximum portion of the entire appropriation that may be expended for the particular park to which it relates. The schedule itself "is a restriction or limitation upon the expenditure of the respective appropriation made * * *, does not itself appropriate any money, and is not itself an item of appropriation." (Budget Act of 1956, Sec. 14, fourth par.)

Item 400 simply makes money available for the acquisition of property for the State Park System, to the extent indicated, pursuant to any authority to acquire that may otherwise be vested in the State Park Commission. The item does not itself in any way purport either to grant authority to acquire or to require acquisition.

Authority to acquire property for the purposes of the State Park System is now vested primarily in the State Park Commission (P.R.C. 5003, 5006). We believe that the money appropriated by Item 400 was appropriated by the Legislature with that authority in mind.

Section 5006 of the Public Resources Code states specifically as to such authority:

> "5006. The State Park Commission, with the consent of the Department of Finance, may acquire by purchase or by condemnation proceedings brought in the name of the people of the State of California, title to or any interest in real and personal property which the commission deems necessary or proper for the extension, improvement, or development of the State Park System.
>
> "Proceedings for the condemnation of any real or personal property or any interest therein shall be taken under the provisions of the Code of Civil Procedure relating to eminent domain. The commission shall not commence any such proceedings unless it first adopts a resolution declaring that public interest and necessity require acquisition by the State of the property or interest therein, described in the resolution, and that such acquisition is necessary and proper for the extension, improvement, or development of the State Park System."

It appears from this language that notwithstanding Item 400, the State Park Commission is not obligated to acquire any property for the State Park System unless it considers the acquisition necessary or proper for that purpose. Its discretion in the matter is such that it probably cannot be compelled to exercise it, except where its failure or refusal to do so is either whimsical or arbitrary (see 16 Cal. Jur. 804 and the following; *Bess* v. *Park* (1955), 132 Cal. App. 2d, 49, 55).

It may be noted in closing that there is nothing in Item 400 that might be construed as making it mandatory on the commission to expend any money in accordance with its provisions.

Very truly yours,

RALPH N. KLEPS
Legislative Counsel

APPENDIX 2

ASSEMBLY INTERIM COMMITTEE ON CONSERVATION, PLANNING, AND PUBLIC WORKS

Subcommittee on Beaches and Parks

STATEMENT OF LOS ANGELES COUNTY CHIEF ADMINISTRATIVE OFFICER

Los Angeles County's principal concern over the State's beach and park acquisition program is the State Park Commission's apparent reluctance to proceed with the expenditure of budgeted funds for certain inland parks (Puddingstone and La Mirada) to provide recreational facilities for this entire metropolitan region. Acquisition primarily for recreational purposes is seemingly contrary to the traditional policy of acquiring remote areas of natural beauty or of unusual geological formation.

The State Park Program is at the crossroads. The need for larger recreational areas close to home is apparent to the over 6,000,000 people living within a 60-mile radius of our meeting place here today. If it does not become equally apparent to the State Park Commission, it follows that the State's expenditure of the millions of dollars of tidelands oil revenue will seriously short change one-half of the State's population.

Today, government is responsible for providing recreational facilities as never before. The great surge of population to metropolitan centers has demanded the creation by human effort of recreation facilities—facilities which nature may not have created. Los Angeles County is concerned As the most populous county in the Unted States—and the center of the third largest metropolitan area—we face the greatest demand for recreational facilities found anywhere in the United States. A recent survey of park and recreational areas in this county by the National Recreation Association pointed up the immediate need for 25,000 additional acres *immediately*. We here also advocate the acquition of all beaches under public ownership; this ocean frontage, a most fortunate natural asset, must be acquired and held in perpetuity for the open and free use of all our citizens.

But the need for immediate state acquisition efforts is even more urgent if one looks at tomorrow's needs. The California Committee on Planning for Recreation Park Areas and Facilities convened at the request of the State Recreation Commission, has just issued a report, "Guide for Planning Recreation Parks in California." It combines the collective thinking of all recreation leaders in every part of California. Their comments on what to expect in 1975—20 years from now—are significant in defining our recreation problem. Now the home of 13,000,000 people, California will overtake New York before 1965—will have a population of 20,000,000—21,000,000 by 1975. This growth will be largely urban; the State is already one of the most urbanized, with four out of five people living in cities. Tomorrow will find greater income, shorter hours, and more leisure time—leisure to devote to recreation. The conclusion is that we must plan for more space for leisure

activities in the future than is reserved for recreation in cities today. Delays and inaction in meeting today's needs are tragic enough, but their ill effects will constitute an intolerable imposition on our future.

We in Los Angeles County have long complimented the State for its wisdom and foresight in developing one of the finest and largest state park systems in the Country. In the early part of this century efforts to "Save the Redwoods" have preserved forever these magnificent areas In 1927 the State Park Commission was established—heralding the beginning of a huge state system of state parks, beaches, and monuments The park areas apparently have been selected primarily on the basis of natural scenery, of outstanding or unusual beauty or geological formation, of historical sites, and of unusual physical qualifications (as beaches) for recreational purposes

Los Angeles County too has spent millions of dollars in acquiring and developing large regional park and beach facilities—not to mention additional millions to acquire and develop some 50 local community and neighborhood park and recreational areas.

Los Angeles County's current 1956-57 budget includes $14,642,473 for the county's beach, park, and recreation program. The various cities are contributing millions more. The county's budget includes $5,457,289 for operations and $9,185,184 for capital projects—i e . the acquisition and development program Thus the county is spending huge sums to meet its park and recreational problems—even more than the Division of Beaches and Parks' 1955-56 total support and outlay budget of $8,759,170 for the entire State Park System.

The county, with the immediate availability of over $35,000,000 of released tidelands oil revenues, sought consideration of increasing the state parks and beach system in this county We did not—and do not—want the State to buy a complete park system for us—but simply to supplement the large local effort to meet the public demand for recreational facilities within reasonable reach of our populace.

State administration recognition and appreciation of our needs has not been sufficiently generous, in our opinion. The Governor's budget submitted to the Legislature in 1956 included only $4,636,980 for projects in Los Angeles County, out of approximately a $35,000,000 total project budget. This compares to a county program calling for a needed expenditure of $45,000,000 for regional park and beach acquisition and improvements. We did not agree with the State's low apportionment of funds to this area. Los Angeles County presented its case to the Legislature, where addition projects were added, resulting in a final state budget of $7,867,380 for specific projects in this county In presenting our problem to the Legislature, we pointed out:

1. Present recreation facilities in Los Angeles County were woefully inadequate for its 5¼ million people.
2. A more equitable allocation of state expenditures was in order. Los Angeles County has 40 percent of the state population—but only 9.4 percent of state-owned beach frontage and less than 1 percent of state park and monument acreage. Any expenditure of state funds in this county would, because the facility would serve adjacent county populations in the Los Angeles metropolitan area, benefit approximately one-half of the State's entire

population. No project in any other part of the State could conceivably be of benefit to as many people. Surely, if one were to accept the simple premise that parks and beaches are for people, a reconsideration of the state budget was in order.

3. Immediate acquisition of beach and park property is the only economical approach. Delays in acquisition will greatly increase purchase costs, as presently available lands become developed and diverted to other uses. Certainly the need for acquisition will never diminish with an annual population growth in this county alone of 180,000 per year.

These arguments were logical enough to increase the state budget allocation for Los Angeles County projects.

Our present immediate concern is expediting the budgeted program approved by the Legislature and by the Governor. County representatives appeared before a recent meeting of the Park Commission in San Francisco to urge favorable consideration of and immediate action on Los Angeles County projects. The commission members were most courteous. We received the impression, however, of reluctance on their part to wholeheartedly support acquisition of inland parks to be used primarily for recreational purposes.

With reference specifically to the budgeted item of $2,000,000 for the acquisition of the Puddingstone Dam Park, the commission objected to the purchase of any acreage which would later be developed at county expense into a golf course. The county proposes the acquisition of some 1,000 acres of rolling hills, grass covered with some native oak, surrounding the county-operated Puddingstone Dam Reservoir of some 600 total acres. The idea contemplates a complete recreational facility in the eastern part of the county—to attract not only local county residents but people residing in San Bernardino, Riverside, and Orange Counties. A golf course was part of the multiple recreation facilities contemplated.

As a result of meeting with the commission we have arrived at two conclusions:

1. First, a reconsideration of State Park System policy might well be in order. It is respectfully suggested that the State seriously consider a reorientation of acquisition policy from the traditional conservation concept of acquiring remote areas of scenic beauty to one of acquiring large regional recreation areas adjacent to metropolitan and urban users. The State has acquired magnificent areas of scenic beauty—and we all are thankful for it. Perhaps now, in view of today's and tomorrow's recreation needs, the State Park System program can emphasize the latter. Times change; our needs change. The criterion of desirability cannot always be that of conserving beauty—but rather that of serving users.

   As mentioned before, parks must be for people We have heard of estimates of 11 to 15 million visitors *annually* to our state parks, exclusive of beaches. We have one million jam our beaches on a *single day*. The six million people in the Los Angeles area cannot, aside from an annual vacation period, "get away from it all" by traveling several hundred miles to remote mountain

wildernesses and redwood groves. The congested highways, the terrific strain, the limits of available time, demand recreation facilities in population centers. We must bring the facility to the people; otherwise, regardless of beauty and other characteristics, the remote facility is simply not available.

2. Second, we refer to the State's unwillingness to expend any funds for land which would support a golf course. Why discriminate against golf as a form of recreation? A golf course would be only a small part of the Puddingstone Project, would be just one of multiple types of recreation to be made available. Boating, fishing, bathing, picnicking, hiking, overnight camping are approved—but not golfing. This reasoning is hard to explain to the 400,000 active golfers in this county, who now must literally fight to play on the limited number of courses available. The Southern California Golf Association tells us the number of active golfers would be tremendously larger if additional courses were available.

This, gentlemen, concludes the comments of the Los Angeles County Chief Administrative Office re state acquisition of beach and park properties in this county. We feel the State must recognize, as we do, the public demand for recreation facilities within reasonable reach. We must certainly realize that crowded highways, worrisome traffic conditions, and limited time virtually destroy the availability of the remote state park to the teeming millions of this metropolitan area. It is true that Nature did not endow this county with many of the physical characteristics receiving state approval for the acquisition of state inland parks elsewhere. But this does not mitigate the recreation need nor dismiss the problem. A realistic reorientation of state policy will fulfill the State's responsibility of meeting the recreation needs of its people—and where the people are is where the need exists. It is just that simple.

APPENDIX 3

ASSEMBLY INTERIM COMMITTEE ON CONSERVATION, PLANNING, AND PUBLIC WORKS

Subcommittee on Beaches and Parks

MINUTES OF MEETING HELD IN SACRAMENTO
ROOM 319, EDUCATION BUILDING, NOVEMBER 30, 1955, 10 A.M.

Those present:

Legislators
Frank P. Belotti, Chairman
Mrs. Pauline L. Davis
Thomas M. Erwin
Jack Schrade
John L. E. Collier
Francis C. Lindsay

Staff
Samuel E. Wood, Research Director
Patricia Herrick, Secretary

Others
Dave Keller, Office of the Legislative Auditor
Lowell R. Gano, Department of Finance
Howard Gardner, Assoc. Director, League of California Cities
J. D. Strauss, Legislative Counsel
Newton B. Drury, Chief, Div. of Beaches and Parks
DeWitt Nelson, Director of Natural Resources
Everett Powell, Div. of Beaches and Parks
Earl P. Hanson, Div. of Beaches and Parks
Members of the Press

Chairman Belotti opened the meeting by explaining that following several informal conferences of his subcommittee and discussions with representatives of the Division of Beaches and Parks, it was decided that a clearer understanding and a closer relationship with the division could be maintained through conference meetings where the problems and programs of the division and the commission could be informally discussed. The hearing process, on the other hand, would not elicit the type of information and understanding on this subject that his subcommittee desired.

The purpose of this meeting, scheduled shortly after the adjournment of the Legislature and for a time prior to the budget submission, was first, a consideration of the development of a state-wide beaches and parks program buttressed by adequate supporting data in regard to use, costs, and service areas; and, second, a consideration of policy questions that might be involved both in budget submissions and in the development of an adequate state program.

A. Progress in the State Program to Be Initiated Through Budget Submissions

Mr. Drury and his staff outlined for the subcommittee the approach of the division to the preparation of the budget requests. Shortly after the adjournment of the last general session a selected group within the division began the preparation of the necessary data to determine and support the proposed requests. It is his belief that the data collected for each single item will be adequate to justify the necessary requests. The 1956-57 budget items as to acquisition, development and operation, will be divided into four categories:

1. Scenic areas.
2. Recreational areas.
3. Historical areas.
4. Special projects—riding and hiking trails, roadside rest programs, bypass Redwood Highway, etc.

These four categories are not necessarily exclusive of other purposes. In the scenic and historical monument areas some recreational development is often possible, and is projected as part of the developmental plan. In all acquisitions the judgment of the commission is of prime importance. In the case of recreational areas the following criteria are used:

1. Public need.
2. Economic factors, including the cost of acquisition and development.
3. Geographic distribution of areas.

In answer to questions by the subcommittee, Mr. Drury stated that the plan initiated in the budget would carry a priority of acquisition, determined by the following criteria:

1. Worth of the project.
2. Urgency, from the standpoint of perishability. (For example: historic buildings about to be torn down, forests about to be cut, ocean beaches about to be subdivided.)
3. Urgency, from the standpoint of meeting expanding public needs.
4. Urgency, from the standpoint of increasing costs.
5. Proportion as to types of areas (scenic, recreational, and historical).
6. Proportion as to location of areas, in the interest of a state-wide system.

In explanation of these criteria, Mr. Drury emphasized that in many cases of identified park areas the State is paying dearly for delay in purchase

Effort has been made in developing the plan to assure the entire State of recreational areas within reasonable reach. Some areas of state-wide interest, appropriately identified, should be purchased as soon as possible irrespective of local demands. While the plan to be submitted in March will list projects in order of priority, it will be a state-wide plan, calling for an eventual expenditure of approximately 65 million dollars. Acquisition of land for park purposes would use about half this amount, the remainder to be expanded on development, operation, and special projects. The sum available will not be adequate

to carry out all acquisitions listed in the previously approved five-year plan.

Mr. Nelson outlined the difficulty of discussing individual budget item requests before the budget had been adopted by the Governor, and the subcommittee did not insist that individual items be identified.

B. Policy Matters

1. **The Matching Principle.** Mr. Lindsay informed the subcommittee that he had requested the Legislative Auditor to prepare a study on the continuance of the matching principle. He was impelled to do this by the Governor's statement in his veto of park bills passed during the last session of the Legislature, and by a developing challenge against this principle as inapplicable to this stage of the State's accelerated growth. He further stated that he had requested an examination of the bases of the matching principle, and a recommendation in regard to its continuance from the Division of Beaches and Parks

Mr. Drury summarized a policy statement of the State Park Commission, approved on November 18, 1955, in response to Mr. Lindsay's request (see Exhibit A). The statement and the supporting notes prepared by the division summarize the experience of the State on the matching principle, and while matching money should be acceptable for the purchase of recreational areas, the insistance on the principle at this stage in the State's development is not realistic.

Consequently, the budget submissions by the commission and the division will be made without the requirement that state funds be matched. Specific amendments affecting the matching principle will be prepared, if necessary, by the subcommittee for the consideration of the Legislature, following the report from the Legislative Auditor's Office and additional conferences and recommendations of the commission.

In the general discussion of this policy statement by the Park Commission there was agreement that a revision of legislation should not preclude the possibility of accepting matching, if money is available for that purpose. In answer to a question by Mr. Collier and comments by Mr. Erwin and other members of the subcommittee, Mr. Drury emphasized that it is becoming more and more difficult to identify specific parks as purely of local service, since intensive local use of one area will relieve other parks within the State Improved transportation facilities permit people to travel greater distances in order to enjoy recreational areas. Actual counts of park visitors indicate that many areas considered local have state-wide appeal. A large proportion of daytime visitors come more than 100 miles.

2. **State Responsibility for Coordinating Recreational Development in Reservoir Areas.** Mr. Lindsay informed the conference that he had recently written a letter to Mr. John Peirce, Director of the Department of Finance, regarding the importance of designating a state agency as responsible for the coordination of recreational planning on federal, state, local and private reservoir projects. A copy of this letter and Mr. Peirce's reply is attached as Exhibit B. The same subject has been discussed informally with Messrs. Nelson and Drury and with Mr. Harvey Banks, Acting State Engineer. The purpose of this proposal would not be to require the state agency to actually do the planning, but simply to coordinate the planning function in order that the

total development of the reservoir area can be projected, and appropriate cost allocations made at the time the engineering and economic feasibility studies are in progress. Representatives of the Department of Natural Resources emphasized the importance of such studies and their proper coordination, but stated that at the present time the Division of Beaches and Parks does not have adequate staff to assume this responsibility.

Mr. Drury stated that this was the type of work that called for many technical abilities in a fairly heavy staff for intensive work during a limited time. Consequently, it would be difficult to recruit these technical abilities when there was no guarantee that the full staff would be retained as permanent employees of the division. It was his thought that this might well be a situation where the State should contract for the work required with a qualified consulting firm.

Irrespective of the over-all job that must be done, the division should have staff additions specifically designated for planning work. Mrs. Davis and Mr. Erwin suggested that budget submissions be prepared covering the inauguration of the full recreational study and the addition of necessary planning people to accomplish the present need of the division, in studying the recreational problems of existing and proposed reservoir projects in California.

Mr. Belotti specifically requested that the division prepare the necessary budget changes, together with supporting information, for consideration at the budget hearings.

3. **Roadside Rests.** Mrs. Davis submitted for the consideration of the conference two proposed budget item requests (see Exhibit C). The purpose of her submittals was to make more explicit the language of possible budget requests for the initiation of a roadside rest program in California. Representatives of the Division of Beaches and Parks agreed to present to the commission for its consideration the language of these requests, if the program is included in the Governor's budget.

The meeting adjourned at 12.25 p.m.

EXHIBIT A

October 17, 1955

MR NEWTON B. DRURY
Chief, Division of Beaches and Parks
Department of Natural Resources
Sacramento, California

DEAR NEWT: I recently requested the Legislative Auditor's Office to prepare a study on the matching principle. No doubt, you will be contacted regarding this study in the near future. In the meantime, I would like to request that your office prepare its own study in the same area in such form that it can be submitted to our Subcommittee on Beaches and Parks at a hearing in the near future.

I hope that your study, in addition to a realistic analysis of the proposal, will recommend legislation that you feel appropriate to meet the present beaches and parks acquisition requirements of our expanding State.

Attached to this letter is a copy of my letter to Mr. Post.

Sincerely,

FRANCIS C. LINDSAY, Chairman

October 4, 1955

MR. A. ALAN POST
Legislative Auditor
State Capitol, Sacramento, California

DEAR ALAN: You will recall that one of the reasons given by the Governor for his veto of park bills, passed at the last session of the Legislature, was the failure of these bills to incorporate the matching principle. You are also aware that certain interests in the State challenge the whole basis of the matching principle as inapplicable to this stage of the State's accelerating development.

On the other hand this problem has not been assessed, it seems to me, in terms of the recreation needs of the present and future anticipated population of California in relationship to possible acquisition of prime recreational areas. There appears to be little correlation between the location of these areas and the ability of localities to participate on a matching basis.

It will be extremely useful to the Legislature if the matching principle is re-examined in the light of the growth of the State and the recreation requirement, for the purpose of determining whether or not the principle has any utility at this time, and if utility is found what possible formula might be used in applying this principle to possible acquisitions The analysis may be given realism by an examination of the Division of Beaches and Parks' acquisition program for the coming year.

It is my understanding that your office is now engaged in an examination of this principle, which you have deemed necessary for your service to the Legislature I hope, consequently, that this request will not entail costs outside of your normal operating budget.

Sincerely,

FRANCIS C. LINDSAY, Chairman

November 21, 1955

HONORABLE FRANCIS C. LINDSAY
Member, State Assembly
State Capitol, Sacramento, California

MY DEAR ASSEMBLYMAN LINDSAY: In further response to your letter of October 17, 1955, on the subject of the matching principle, I enclose extract from a memorandum approved in principle by the California State Park Commission at their meeting in San Francisco on November 18, 1955, together with some notes on the subject that were presented to the commission at that meeting. Our staff stands ready to furnish additional information on this subject to your committee.

With best regards.

Sincerely yours,

NEWTON B. DRURY, Chief

11/18/55

Notes Regarding the Matching Provisions

The Assembly Interim Committee on Conservation, Planning and Public Works has asked the California State Park Commission to make a study of, and recommendation upon, the policy of requiring that state funds be matched in acquiring state park lands. At their meeting in San Francisco, the California State Park Commission approved the text of a statement to be included in the Five-year Master Plan. It was as follows:

"The Matching Principle·

"Since the matching principle was originally established by the Legislature, and at the last session appropriations in the sum of $12,947,000 were passed without matching, it is now recommended that expenditures for new acquisition be made without the requirement of matching, as indicated below. This principle has been of advantage to the State, particularly in establishing coast redwood parks and the Calaveras Big Trees State Park, as well as some beach parks and historic monuments. It is the hope of the commission that, when possible, interested communities and groups such as the Save-the-Redwoods League will continue to contribute toward state park projects. The commission recognizes, however, that many desirable areas, particularly in the interior counties, have thus far failed to be included in the State Park System and will continue to fail to be included because of the lack of available matching

"We recommend to the Governor and the Legislature that future appropriations for land acquisition, when included in the Governor's Budget as a part of a comprehensive long-range plan, be made without requirement that state funds be matched."—Extract from memorandum approved in principle by California State Park Commission at meeting in San Francisco, November 18, 1955.

As bearing on this statement, it should be noted that the Legislature in its last session passed appropriation bills totaling $12,947,000 for purchase of state park lands and in no case included provision for matching

Governor Goodwin J. Knight in vetoing these bills gave as one of his reasons that he desired a recommendation as to policy as to matching from the California State Park Commission.

The Division of Beaches and Parks has made an analysis of the operation of the matching provision under Chapter 1422, Statutes of 1945. It is the conclusion that while the matching provision in the past, notably under the State Park Bond Act of 1927, has been of great benefit in building up the State Park System, numerous worthy projects included in the Five-year Program, particularly in the interior of the State, have thus far failed, primarily because of the absence of available matching. This has prevented in some degree the attainment of the commission's program for a well-balanced state-wide park system.

Matching has not been the universal rule. For many years the Governor's Budget has contained, and the Legislature has passed, appropriations without matching for additions to existing parks, $800,000

for this purpose having been appropriated in 1955. On several occasions, notably to acquire Huntington Beach in 1945 ($400,000) and Emerald Bay in 1953 ($750,000) the Legislature has by special act waived the matching provision.

Various organizations, including the Shoreline Planning Association and the Sierra Club, have urged that the matching provision be modified in the interest of accelerating the park acquisition program.

With full recognition of the value of the matching provision in the past, it is suggested that the California State Park Commission recommend to the Governor and the Legislature that future appropriations for land acquisition, when included in the Governor's Budget as a part of a comprehensive long-range plan, be made without requirement that state funds be matched.

NEWTON B. DRURY, Chief
Division of Beaches and Parks

EXHIBIT B

STATE OF CALIFORNIA, DEPARTMENT OF FINANCE
SACRAMENTO 14, CALIFORNIA, October 25, 1955

HONORABLE FRANCIS C. LINDSAY
Member, California State Assembly
State Capitol, Sacramento, California

DEAR FRANCIS: In reply to your letter of October 17th, dealing with the development of recreational facilities in conjunction with federal, state and local reservoirs, I agree with you that this is something that should deserve special study.

We are already cooperating with the State Division of Beaches and Parks with regard to the preparation of a coordinating state beach and park development program for inclusion in the Governor's Budget which will be submitted to the Legislature next March.

I am referring your letter to our Budget Division for study and report and will advise you thereon shortly.

Yours sincerely,

JOHN M. PEIRCE
Director of Finance

October 17, 1955

MR. JOHN M. PEIRCE
Director, Department of Finance
State Capitol, Sacramento, California

DEAR JOHN: One of the functional areas presently unoccupied by any state agency is that of responsibility for the development of recreational facilities in conjunction with federal, state, local or private reservoir developments. The planning of recreational developments at reservoir areas should proceed in conjunction with the project developmental plan, and the responsible state agency should enter the picture in the early stages of project planning. This is necessary in order that required land acquisition for recreational purposes can be made

at the same time that lands are acquired for other project uses. Oftentimes location of access roads, the location and facilities of the construction camp, and the necessary supervision buildings, can be made so that some of these facilities can remain for later recreational and administrative purposes.

If this responsibility were now located in a state agency, that agency could be working closely with the Bureau of Reclamation in the Trinity Project to assure that Trinity County has the maximum recreational resource available to it upon the completion of the project.

I am not indicating that the planning itself should be done by the responsible administrative agency, but I am insisting that some agency at the state level should be given the coordinating responsibility of working with the planning and construction agency for the planning and development of these reservoir areas. In some cases perhaps the actual planning, or part of it, can be delegated to local planning commissions where these are strong enough to assume the function. The real void, however, is the absence of a state agency with this positive responsibility.

It would be useful to our committee to have the recommendations of your staff on definition of the function itself, its location, and its approximate responsibility and authority.

Samuel E. Wood, research director of the committee, is acquainted with the problems involved in such coordinated planning, and will be available for any assistance he can give your office.

Sincerely yours,

FRANCIS C. LINDSAY, Chairman

EXHIBIT C

For acquisition of real property and minor construction, improvements, and equipment, for state parks to be used and maintained as roadside rests, State Park Commission, payable from the State Park Fund 1,000,000

Provided, no money appropriated by this act for state park acquisition or improvement, other than for parks for which specific appropriations are made by this act or for parks for which appropriations have heretofore been specifically made or for parks heretofore specifically authorized by law, shall be expended for the acquisition of any park site without first seeking the advice and recommendation of the planning commission or board of supervisors of the county in which the park is to be established.

For maintenance of state parks used and maintained as roadside rests, State Park Commission, payable from the State Park Fund 50,000

Provided, no money shall be expended from this item of appropriation except under contract for maintenance of such parks by the Division of Highways, Department of Public Works, counties, cities, or private persons, as the State Park Commission finds to be in the best interests of the State.

APPENDIX 4

STATE AND FEDERAL AGENCIES

STATE AGENCIES ADMINISTERING LAND AND WATER AREAS HAVING POTENTIAL FOR RECREATION

Department of Fish and Game
Operates state-owned waterfowl management areas; propagates and protects fish and game

Wildlife Conservation Board
Acquires lands and constructs facilities suitable for wildlife production and preservation

Department of Natural Resources
Division of Beaches and Parks
Administers, protects and develops parks, beaches, historical monuments and riding and hiking trails

Division of Forestry
Acquires and manages state forests

Department of Water Resources
Plans for the development and constructs multiple purpose water reservoirs and makes studies relating to the recreational use of such reservoirs

Department of Finance
Lands Commission
Has authority to acquire, develop, maintain and operate small boat harbors.

Division of Fairs and Expositions
Supervises development of agricultural district fairgrounds and properties

STATE AGENCIES WITH INTERESTS, RESPONSIBILITIES AND SERVICES RELATED TO OUTDOOR RECREATION

Recreation Commission
Studies the whole problem of recreation of the people; makes inventories of facilities, programs and services which exist or may be needed; assists in coordination of local, state and federal programs

Department of Public Health
Conducts programs having a direct bearing on sanitation of outdoor recreation areas

Water Pollution Control Board
Protects the quality of water for recreational purposes

Department of Finance
Local Planning Office
Constitutes the official State Planning Agency

Department of Education
Approves site utilization plans for school districts and for state colleges

Aeronautics Commission
Studies and compiles information on recreational airports

FEDERAL AGENCIES ADMINISTERING LAND AND WATER AREAS HAVING POTENTIAL FOR RECREATION

Department of the Interior
Bureau of Land Management
Leases or sells unreserved nonmineral public lands to states, counties or municipalities for recreation purposes

Bureau of Reclamation
Constructs multipurpose reservoirs and investigates recreation potentials in connection with reclamation projects

Fish and Wildlife Service
Reviews plans for water impoundments in determining the effects on fish and game

National Park Service
Administers the use of national parks, monuments and reservations

Department of Defense
Corps of Engineers
Constructs multipurpose reservoirs

Department of Agriculture
Forest Service
Regulates the occupancy and use of national forest lands, including the use of these lands for recreation

APPENDIX 5

STATE OF CALIFORNIA
DEPARTMENT OF PUBLIC WORKS
SACRAMENTO
January 9, 1957

HONORABLE FRANCIS C. LINDSAY
Chairman, Assembly Interim Committee on Conservation, Planning, and Public Works
State Capitol, Sacramento 14, California

DEAR MR. LINDSAY: This is in further reference to your letter of November 20, 1956, in which you requested a schedule, covering the past five years, showing lands required for state highway purposes through state and local parks.

The attached tabulation indicates, as requested, land activities in this field for the past five years and, also, our anticipated future requirements.

All of this activity has been carried on within a policy requiring that all lands, including park lands, required for highway purposes shall be purchased at a fair market value. In addition, our policy encourages, wherever it is possible, the securing of additional lands in substitution for those required.

Very truly yours,

G. T. McCOY
State Highway Engineer

HIGHWAY CONSTRUCTION INVOLVING STATE OR LOCAL PARKS

Dist.		Name of park	Acres	Nature of work	Redevelopment or replacement	Payment	Fiscal Year	Remarks
I	Redwood Highway	√Humboldt Redwood State Park	----------	Minor	None	None	53–54	House Resolution—verbal agreement
	Redwood Highway	√Prairie Creek State Park	0 7	Minor	None	None	53–54	Verbal agreement
	Redwood Highway	√Humboldt Redwood State Park	----------	River bank protection	None	None	53–54	Permit Dept. of Natural Resources
	Redwood Highway	√Humboldt Redwood State Park	----------	Minor	None	None	54–55	House Resolution—informal agreement
	Redwood Highway	√Del Norte Coast State Park	1 58	Line change	None	None	55–56	Easement deed Dept of Natural Resources
	State Sign Route 36	√Grizzly Creek Redwood State Park	0 25	Line change	None	None	53–54	Agreement Dept of Natural Resources
	State Sign Route 128	√Indian Creek State Park	0 10	Bridge approach	None	None	52–53	Permit
	State Sign Route 1	√Van Damme State Park	0 80	Line change	None	None	55–56	Permit Div of Beaches and Parks
	Redwood Freeway	√Humboldt Redwood State Park	175±	Relocation	None	†	56–57	Condemnation by stipulated judgment
	Redwood Freeway	√Humboldt Redwood State Park	175±	Relocation	None	†	57–58	Condemnation by stipulated judgment
	Redwood Freeway	√Humboldt Redwood State Park	240±	Relocation	None	†	58–59	Condemnation by stipulated judgment
	Redwood Freeway	√Humboldt Redwood State Park	30±	Relocation	None	†	59–60	Condemnation by stipulated judgment
	Redwood Freeway	√Prairie Creek Redwood State Park	20±	Relocation	None	†	60–61	Condemnation by stipulated judgment
	Redwood Freeway	√Little River Beach State Park	2±	Relocation	None	†	61–62	Condemnation by stipulated judgment
	Redwood Freeway	Clam Beach County Park	20±	Relocation	None	†	-----	By fee deed (future)
II.	U. S. 99	U. S. Forest Service Camp	1 26	Line change	‡	None	-----	----
	State Sign Route 36	U. S. Forest Service Camp	1 0	Line change	**	None	-----	Special use permit
	U. S. 99	√Castle Crags State Park	28 09	Line change	††	$108,698 50	-----	Agreement Div of Beaches and Parks
	U. S. 99	Redding City Park	0 4	Minor	None	Unknown	-----	Agreement with City of Redding
III.	None acquired in the past 5 years							
IV.	Ala-227-Oak	Diamond Park	0 034	Minor	††	$514 50	56–57	Agreement with City of Oakland
	Ala-227-Oak	Joaquin Miller Park	0 50	Drainage	None	$3,101 19	56–57	Agreement with City of Oakland
	SM-55-D1C	√Thornton Beach	0.389	Relocation	None	None	56–57	----
	SCr-116-A	√Cowell Redwood State Park	----------	Disposal site	None	None	56–57	Agreement Div of Beaches and Parks
V.	State Sign Route 150	City of Santa Barbara Bird Refuge	1 57	Realignment	None	$2,000 00	55–56	Purchase—City of Santa Barbara
	State Sign Route 1	√Morro Strand State Park	10,000 sq ft.	Realignment	Unknown	Unknown	Future	
VII.	Ventura Freeway	Sepulveda Dam Park	84 97	New alignment	None	None	¶	Easement U. S. Government
	Ventura Freeway	√Ventura State Park	20 98	New alignment	†	‡	¶	Agreement Div. of Beaches and Parks
	Golden State Freeway	√Griffith Park	6 54	New alignment	None	Pending	¶	Under condemnation
	Golden State Freeway	Griffith Park	139 19	New alignment	None	Pending*	¶	Under condemnation
	Golden State Freeway	Hollenbeck Park	1 81	Bridging lake	None	Pending	¶	Agreement City of Los Angeles
	Golden State Freeway	Paxton Park	12 00	----	----	Pending	¶	----
	Foothill Freeway	Arroyo Seco Park	6.07	New alignment	None	----	¶	Agreement City of Pasadena

	San Diego Freeway	√San Clemente State Park	9 91	New alignment	None	§	¶	Agreement Div. of Beaches and Parks
	Santa Ana Freeway	Prentice Park	0 33	New alignment	None	----	¶	Acquired by condemnation
	Hollywood Freeway	North Hollywood Park	31 50	New alignment	----	----	¶	----
	Hollywood Freeway	Victory-Van Owen Park	57 20	New alignment	----	----	¶	----
	Riverside Freeway	Griffith Park	47 20	New alignment	None	----	¶	----
	Riverside Freeway	Buena Vista Park	2 80	New alignment	----	----	¶	----
	Pomona Freeway	Park facility in Whittier	67 00	Flood control	None	----	¶	----
VIII.	Riv-43-Riv	Not given—City Park	24,000 sq ft.	Minor	None	$28,550 00	Past 5 years	Purchase—City of Riverside
	Riv-19-Riv	North Park	3,000 sq ft	Minor	None	----	Future	----
	Riv-19-Riv	De Anza Park	4.18	New alignment	None	----	Future	----
	Riv-19-Riv	Fairmont Park	2.00	New alignment	None	----	Future	----
X.	Sta-4-Mod	Maze-Wren	2 41	New alignment	----	----	Future	----
XI.	SD-199-Cord	√Silver Strand State Park	30 0	New alignment	----	----	Future	----

* $1,000,000 partial payment.
† Market price for stumpage.
‡ Exchange of land.
§ Under negotiation
** Construction of six camp sites and service road.
†† New road connections
‡‡ Replace 30 redwood trees.
¶ All transactions, current or complete.
√ = State park.

APPENDIX 6

Statement by Harvey O. Banks, Director of Water Resources, Before the Subcommittee of the Assembly Committee on Conservation, Planning, and Public Works on Responsibility of Department of Water Resources for Planning for Recreational Development
January 19, 1957

The statement desired from the Department of Water Resources concerns the responsibility which, in the opinion of the department, should be vested in it.

Present Authority

Existing legal authority for including public recreation as a project purpose to be included in investigations and reports for water development projects stems from the following items in Part 6 of Division 6 of the Water Code, quoted as follows:

> "12581. In studying water development projects full consideration shall be given to all beneficial uses of the State's water resources, including irrigation, generation of electric energy, municipal and industrial consumption of water and power, repulsion of salt water, preservation and development of fish and wildlife resources, and recreational facilities, but not excluding other beneficial uses of water in order that recommendations may be made as to the feasibility of such projects and for the method of financing feasible projects.
>
> "12582. Fish and wildlife values, both economic and recreational, shall be given consideration in any flood control or water conservation program. If the design, construction, and operation of projects for engineering and economic features of the project make it practicable, adequate provision shall be made for the protection of migratory fishes and the designs for structures and facilities required for such protection shall be prepared in cooperation with the United States Fish and Wildlife Service and the California Department of Fish and Game."

Present Recreational Studies of Multipurpose Reservoirs

The Department of Water Resources has been engaged in recreational studies of multipurpose reservoirs in four general areas of investigation: (1) California Water Plan; (2) Feather River Project; (3) Northeastern Counties Investigation; and (4) Upper Feather River Basin Investigation. The California Water Plan is a comprehensive program for full utilization of the State's water resources. It therefore includes broad studies for the use of multipurpose reservoirs as attractions for on-site recreational activities, and for the maintenance of stream flow for fishery enhancement. The plan also includes reservoirs to be operated solely for stream flow maintenance. These studies for recreational purposes at Oroville Reservoir have been made in cooperation with the Division of Beaches and Parks, the Department of Natural Resources, and the Department of Fish and Game. A master plan is in the formulative stage for Oroville Reservoir, and will include recommendations for the purchase of recreation areas. Also a study has been

conducted of the effect of Oroville Reservoir on fish and game, with plans being developed to enhance the fishery below the dam structure

The Northeastern Counties Investigation has as its objective the evaluation of ultimate water requirements, predicated upon full development of all natural resources in 15 counties in Northern California In this connection, a study by a private planning firm is in progress to evaluate the regional recreational potential of the area The study includes an evaluation of lands most adaptable to recreational use a long-range general plan for the development of the recreational resources in conjunction with the plans for water development, and, finally, a determination of the ultimate water needs for public and private recreation facilities.

The Upper Feather River Basin Investigation is being conducted to complete engineering studies for a multipurpose water development in the basin, studies of a construction program for such development, and report thereon to the Legislature. Plans included will provide sizable recreational benefits, both for on-site and downstream development. Studies for both a master recreational plan and an evaluation of benefits in monetary terms are in preparation by a private planning firm. The Department of Fish and Game and the Division of Beaches and Parks have also worked cooperatively on special phases of the planning.

Responsibility Recommended to Be Vested in Department of Water Resources as to Planning for Recreational Developments

1 Investigation and planning for water development works and the several project purposes thereof, including provisions for public recreation, are now and should remain a prime responsibility of the Department of Water Resources The department would coordinate and consult with other state, federal, and local agencies concerned with recreation in the preparation of reports and master plans for recreational uses.

2 Lands required for public recreation in connection with reservoirs and other facilities of water development projects, additional to those lands needed for primary project purposes, should be acquired by the Department of Water Resources in connection with the land acquisition program for the project; provided that, such land acquisition for public recreation shall have been reported to and authorized by the Legislature and funds for such acquisition shall have been appropriated by the Legislature. Costs for such acquisition should be nonreimbursable

3 Construction, operation, and management of facilities for public recreation at sites acquired for the purpose in connection with reservoirs and other water development facilities constructed by the Department of Water Resources as a part of the California Water Plan not being a regular organized function of the department, *should be turned over by means of grant, lease, license, or other agreement to other state agencies or local agencies prepared to undertake that responsibility.*

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REPORT OF THE SUBCOMMITTEE ON HIGHWAYS

A Subcommittee of the

ASSEMBLY INTERIM COMMITTEE ON CONSERVATION, PLANNING, AND PUBLIC WORKS

House Resolution No. 239, 1955

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March, 1957

Published by the
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COMMITTEE LETTER OF TRANSMITTAL

ASSEMBLY INTERIM COMMITTEE ON
CONSERVATION, PLANNING, AND PUBLIC WORKS
SACRAMENTO, CALIFORNIA, March 1, 1957

Hon. L. H. Lincoln
Speaker of the Assembly
Members of the Assembly
Assembly Chamber, Sacramento, California

This report of the Subcommittee on Highways summarizes a full two-year investigation that approaches with moderation the problems of highway location and construction.

I heartily recommend the legislation proposed for passage during this session, and I compliment the subcommittee on the thoroughness of this investigation and the merit of its recommendations.

Respectfully submitted,

FRANCIS C. LINDSAY, Chairman
Assembly Committee on
Conservation, Planning, and Public Works

SUBCOMMITTEE LETTER OF TRANSMITTAL

ASSEMBLY CHAMBER, STATE CAPITOL
SACRAMENTO, CALIFORNIA, March 1, 1957

Hon. Francis C. Lindsay, Chairman
Conservation, Planning, and Public Works Committee
California State Assembly, Sacramento, California

DEAR SIR: This report of the Subcommittee on Highways of the Assembly Interim Committee on Conservation, Planning, and Public Works, prepared in accordance with H. R. 239, 1955, reviews the current administrative practices and policies of the Division of Highways and the commission for the location, design, and construction of freeways.

The many hearings and conferences of this subcommittee have demonstrated a wide variety of practices among the various highway districts in their relationship with responsible local agencies. Where local government has been strongly organized and staffed to do appropriate planning studies for freeway location, the relationship between the locality and the State has been one of confidence and mutual good will. The Division of Highways on the other hand, has failed to adopt uniform procedures that would encourage local cooperation in freeway location and design.

The legislation submitted with this report will result in uniform procedures and give minimum recognition to local interest in the early planning stages of the process. It is the belief of the subcommittee that this procedure will result in more local participation and support for the important decisions affecting highway and freeway location without disturbing the final responsibility of the Highway Commission for the protection of the state interest.

Rather than delay the process of highway construction, as accelerated by the federal program, the recommendations of this report will permit an orderly process of sound planning and expedition.

Respectfuly submitted,

RICHARD J. DOLWIG, Chairman
THOMAS W. CALDECOTT
VERNON KILPATRICK
PATRICK D. MCGEE
ALLEN MILLER
SHERIDAN N. HEGLAND
FRANCIS C. LINDSAY
CHARLES W. MEYERS
Subcommittee on Highways

March 27, 1957

HONORABLE RICHARD J. DOLWIG
Chairman, Subcommittee on Highways
State Capitol, Sacramento, California

DEAR SENATOR DOLWIG: While I concur generally in the findings and recommendations of our subcommittee, I feel this situation does not apply in all counties and that I should describe briefly a plan that has operated in Alameda County for a number of years that has resulted in the most amicable local—state relations in the field of highway location, design and construction.

As I sat through many hearings and conferences of this committee, I was struck by the fact that the major difficulties involved could be credited to the lack of unified action by the several local governments affected by highway matters in each county. This has not been true of Alameda County where cooperation has been excellent and a feeling of mutual respect has developed as a result of the county's own action. Some years back there was organized in Alameda County an informal highway advisory committee consisting of the county supervisors, the county engineer, the mayors of all cities, members of city councils, city managers, city engineers, city and county planning directors, members of State Legislature, the presidents and managers of each chamber of commerce, and interested citizens.

The professional engineers and planners constitute an engineering subcommittee that surveys the county highway needs, drafting a plan for county-wide highway location and development and submits this plan to the full committee for consideration and approval, following discussion, hearings, and adjustments in the plan. This voluntary advisory method from its inception has resulted in full county support of the recommendations of the advisory committee regardless of the effect these recommendations might have on the northern or southern portions of the county. After the plan has been adopted by the advisory committee, one man speaks for the committee before the Highway Commission and Division.

This local volunteer group has been so effective and has had such wide acceptance that all local interests, including the county, the cities and the special districts work through the committee and the Division of Highways looks to the committee to speak for the pople of the county.

I hope you will include this letter with the subcommittee report to demonstrate a method of informal local coordination that has been effective in meeting many of the problems we consider in this report.

Very truly yours,

THOMAS W. CALDECOTT

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SCOPE OF REPORT

This report (1) reviews testimony regarding difficulties and inadequacies in planning, selection, and adoption of state highway routes, condemnation procedures, and design; (2) defines the present procedures utilized by the agencies involved in administering the state highway system; (3) recommends changes in present procedure when practicable to alleviate difficulties and remove inadequacies; and (4) proposes legislation, the product of two years of investigation, that will result in a more understandable process and sounder relations with local agencies of government.

THE FINDINGS

1. The present procedures of the Highway Commission and the division involving the selection and adoption of freeway routes were found to be inadequate in the following particulars:

a. Inadequate liaison between state and local agencies involved.

b. Inadequate consideration on the part of the Division of Highways of local community plans and objectives.

c. Inadequate provisions for public information and local participation in the determination of freeway routes.

d Failure of the Division of Highways and local responsible agencies to adjust problems during the planning stage.

e. Lack of uniformity in the procedures utilized by the various district offices of the Division of Highways.

f. The Highway Commission itself in its relationships with local agencies is inappropriately involved as a protagonist in what should be administrative level discussions.

2. Within the Division of Highways there exist inadequate provisions for advance planning and coordination in the development of a state highway system In particular,

a. Advance planning as it exists in the Division of Highways is keyed to alleviating present deficiencies rather than providing for future needs.

b. No long range, over-all master plan exists for state highways, either as a statement of the present or to provide for the future transportation needs of the State.

c. There is need of an agency at the state level to develop a state highway plan that will be coordinated with the physical developmental plans of the State and those of the local communities.

3. Certain procedures in the acquisition of right of way operate to the disadvantage of the public interest.

a. By present court rules under condemnation procedure, the prices of comparable sales cannot be introduced as direct evidence.

b. Circumstances surrounding the deposit paid by the condemning authority to the court create hardships to the property owner.

c. Present trial costs disallow equality of right of property owner to contest Division of Highways offer for the acquisition of property.

4. There is need for greater emphasis upon features of highway design concerned with storm drainage, escape routes, and freeway landscaping.

RECOMMENDATIONS

1. The proposed legislation (A. B. 4057) submitted with this report correcting the existing deficiencies involved in the selection and adoption of freeway routes should be accepted.

2. The attached legislation (S. B. 729, S. B. 730, S. B. 731) which will correct the disadvantages to the property owner as presently contained in the condemnation procedure should be passed.

3. Senate Concurrent Resolution No. 26 (Appendix 7, p. 51), providing for a study to be performed by the Department of Public Works as a basis for an over-all state-wide plan of freeways, should be adopted.

4. The subcommittee recommends that the Division of Highways be instructed to place greater emphasis upon the features of highway and freeway design concerning (a) storm drainage as a factor of land use and conservation; (b) escape ramps as a factor of driver safety; and (c) freeway landscaping as a factor of safety, integration with local communities, and public acceptability.

CALIFORNIA LEGISLATURE—1957 REGULAR SESSION

ASSEMBLY BILL **No. 4057**

Introduced by Messrs. Meyers, McGee, Hegland, Lindsay, Belotti, Biddick, Busterud, Gaffney, Kilpatrick, Miller, O'Connell, and Schrade

January 25, 1957

REFERRED TO COMMITTEE ON TRANSPORTATION AND COMMERCE

An act to add Article 6 (commencing at Section 210) to Chapter 1 of Division 1 of the Streets and Highways Code, relating to state highways.

The people of the State of California do enact as follows:

SECTION 1. Article 6 is added to Chapter 1 of Division 1 of the Streets and Highways Code, to read:

Article 6. Freeway Location

210. As used in this article "action" means the declaration or making of any section or portion of a state highway a freeway or the laying out, acquiring, or constructing of any section or portion of a state highway as a freeway, or the relocating of any state highway which as relocated is to be a freeway.

211. Neither the commission nor the department shall take any action until the procedures set forth in this article have been complied with and a resolution approving the action has been adopted by the commission.

212. The department shall notify and confer with the governing body and planning commission of each city and county in which the section or portion of state highway as to which action is proposed passes and shall also notify and confer with any districts in which the section or portion of state highway as to which action is proposed passes. The notification to the governing body of a city or county shall include the provisions of Section 75.5. The governing body of any city, county, or district and each planning commission may designate officers or employees with whom the department shall confer, and the department shall confer with officers and employees so designated.

The purpose of such conference shall be to provide a full interchange of information concerning the subject matter of Section 75.5 with respect to the proposed action.

213. If a city or county has adopted a master or general plan pursuant to law, the city council or board of supervisors shall at the time of the conferences, certify the master or general plan to the department. The department and the commission shall deem the plan to be information as to local policy on freeway locations and community values under Section 75.5.

214. After the holding of such conferences and before the department makes any recommendation to the commission as to action affecting a section or portion of state highway, the department shall hold one or more public hearings within the area to be affected by the action in order to present the proposed action to such interested persons as may attend the hearings.

215. Prior to any hearing the department shall publish within the area affected by the action pursuant to Section 6064 of the Government Code notice of the hearing or hearings and a map showing generally the proposed location or locations of the section or portion of state highway as to which action is proposed and a general description of the location or locations proposed by the department. The determination of the department of the area within which publication is required shall be conclusive.

216. After holding the public hearing and completing the publication of the notice, the department shall notify the governing bodies of the cities and counties through which any section or portion of the state highway passes of the State Highway Engineer's proposed recommendation to the commission with respect to action relating to the section or portion of the highway. Such notification shall be received 45 days prior to the public hearing by the commission with respect to action relating to the section or portion of the state highway. Such notification shall include a copy of the engineering plans and location design, engineering, and other data to be submitted by the department to the commission with respect to the highway.

217. Such notification shall also include a statement of the law providing for agreements with the governing bodies of cities and counties for the closing of city streets and county highways and shall request

that the local governing body adopt a resolution of its position with respect to the proposed recommendation of the department to the commission. If such a resolution is received from a governing body prior to the hearing, the department shall forward the resolution to the commission for its consideration, and the resolution shall have no other effect.

218. The commission may hold hearings in areas affected and shall hold a public hearing in Sacramento prior to approving any proposed action. At the hearing, or any adjournment thereof, the commission may by resolution approve the recommendation of the department, any alternative submitted by the department, or any modification of either.

219. This article shall not be applicable with respect to any action as to which a public hearing has been held prior to the effective date of this article in accordance with any resolution of the commission requiring the holding of a public hearing prior to commission action with respect to the action.

220. Failure of the department or the commission to comply with the requirements of this article shall not invalidate any action of the commission as to the adoption of a routing for any state highway, nor shall such failure be admissible evidence in any litigation for the acquisition of rights of way or involving the allocation of funds or the construction of the highway.

SENATE BILL **No. 731**

Introduced by Senators Dolwig, Cobey, and Dorsey

January 17, 1957

REFERRED TO COMMITTEE ON JUDICIARY

An act to add Section 1845.5 to the Code of Civil Procedure, relating to eminent domain.

The people of the State of California do enact as follows:

SECTION 1. Section 1845.5 is added to the Code of Civil Procedure, to read:

1845.5. In order to qualify a witness in an eminent domain proceeding to testify with respect to the value of the real property or interest in real property to be taken, the witness may testify on direct examination as to his knowledge of the amount paid for comparable property or property interests.

SENATE BILL No. 729

Introduced by Senators Dolwig, Cobey, Dorsey, and Farr

January 17, 1957

REFERRED TO COMMITTEE ON JUDICIARY

An act to add Section 1254.5 to the Code of Civil Procedure, relating to eminent domain.

The people of the State of California do enact as follows:

SECTION 1. Section 1254.5 is added to the Code of Civil Procedure, to read:

1254.5. At any time after money has been deposited as security as provided in Section 14 of Article I of the Constitution for the condemnation of any property or interest in property for state highway purposes, upon application of the party whose property or interest in property is being taken, the court shall order from the money deposited in connection with such property or interest an amount equal to 75 percent of the amount deposited for the respective property or interest to be paid to such party. The receipt of any such money shall constitute a waiver by operation of law to all defenses in favor of the person receiving such payment except with respect to the ascertainment of the value of the property or interest in the manner provided by law, and title to the property or interest as to which money is received pursuant to this section shall vest in the State as of the time of such payment. Any amount so paid to any party shall be credited upon any judgment providing for payment to such party and shall be considered payment upon the judgment as of the date the withdrawal is made so that no interest shall be payable upon the amount so withdrawn after the date of its withdrawal. Any amount withdrawn by any party in excess of the amount to which he is entitled as finally determined in the condemnation proceeding shall be returned to the party who deposited it, and the court in which the condemnation proceeding is pending shall enter judgment therefor against the defendant.

SENATE BILL No. 730

Introduced by Senators Dolwig, Cobey, and Dorsey

January 17, 1957

REFERRED TO COMMITTEE ON JUDICIARY

An act to add Section 1255.5 to the Code of Civil Procedure, relating to eminent domain.

The people of the State of California do enact as follows:

SECTION 1 Section 1255.5 is added to the Code of Civil Procedure, immediatetly to follow Section 1255 of said code, and to read:

1255.5. Notwithstanding Section 1255 costs in connection with any proceeding in the superior court for the condemnation of real property for state highway purposes shall be allowed if the amount awarded for the taking of the property or any interest therein is more than the amount last offered by the Department of Public Works immediately prior to the actual commencement of the trial of the proceeding. Such costs, to be fixed by the court, shall include the reasonable and necessary fees of attorneys and appraisal witnesses incurred by the owner of the property or interest condemned

SUBCOMMITTEE ACTIVITIES

July 13, 1955 ——— Conference on grade separations, San Bernardino

August 22, 1955 ——— Organizational and program conference, Sacramento

September 27-28, 1955 ——— Hearing, Los Angeles

November 21, 1955 ——— Conference on highway procedure and process, Sacramento

December 5, 1955 ——— Hearing, Merced

December 12, 1955 ——— Meeting with Toll Bridge Authority on Southern Crossing, San Francisco

March 13, 1956 ——— Hearing, Southern Crossing, Sacramento

March 20, 1956 ——— Hearing, Southern Crossing, Sacramento

September 12, 1956 ——— Hearing, Encinitas

September 13, 1956 ——— Hearing, Los Angeles

September 14, 1956 ——— Hearing, condemnation procedure and process, Los Angeles

September 24, 1956 ——— Hearing, highway procedure and process, Redwood City

September 25, 1956 ——— Hearing, highway procedure and process, Redwood City

November 26, 1956 ——— Final hearing, Sacramento

December 4, 1956 ——— Executive meeting, discussion of findings, State Capitol

December 14, 1956 ——— Executive meeting, discussion of proposed legislation, State Capitol

January 16, 1957 ——— Executive meeting, final review of proposed legislation, State Capitol

FULL REPORT

INTRODUCTION

The study of the process of controlling the selection, adoption and construction of freeway routes in the State of California has convinced this subcommittee that there is inadequate liaison between the Division of Highways and local politically responsible agencies. This lack of liaison exists from the very beginning between the district engineers and (a) the local political body, as well as (b) the local technical agencies. As a result, considerable engineering work is done without adequate consideration of local attitudes and plans.

When the Division of Highways provides public hearings on route proposals, the purpose of the hearing is not to develop mutually agreeable and beneficial programs, but on the contrary to sell predetermined route locations.

The district engineers of the division have not been fully cognizant or sympathetic with local community values and objectives. Within the context of present administrative procedures and directives, it appears difficult for the division, through its district engineers, to assess uniformly and appropriately community values involved in highway and freeway location.

There exists such a lack of uniformity in route adoption procedure among the 11 districts throughout the State that this subcommittee believes that a sound and workable route designation procedure should be controlled by legislation. There has been no legislative direction prior to this time, and the Division of Highways operates according to a Highway Commission policy statement which, in itself, does not demand uniformity or conformance. Legislation would demand uniformity and remove administrative discretion regarding compliance.

The legislation presented in this report is not designed to slow down highway construction programs, but by providing checkpoints to obviate the controversies and misunderstandings that exist under present procedure, actually to advance the program The legislation is designed to outline and formalize the procedure and relationships between the State and local agencies concerned with highway and freeway route selection and adoption by providing for the following procedural steps:

1. Notification of local agencies by the Division of Highways of conferences and the exchange of information regarding local plans and objectives.

2. Hearings held by the Division of Highways. When studies are advanced and before recommendations to the Highway Commission, officially to inform the affected area of tentative route proposal or proposals.

3. Official notification of the local community by Headquarters Office, Division of Highways, of route proposal to be presented to Highway Commission, such notice to include recommendations and documents supporting the proposal.

4. Mandatory public hearing by Highway Commission prior to adoption of a route to guarantee local agencies and affected persons the opportunity to be heard.

This proposed legislation is not significantly different from the revised policy statement which has been under consideration by the Highway Commission during these subcommittee hearings.

I. INADEQUACY OF PRESENT PROCEDURES INVOLVING SELECTION AND ADOPTION OF FREEWAY ROUTES

A. According to G. T. McCoy, State Highway Engineer, the present procedure utilized by the division is as follows: [1]

1. The division has an accurate inventory of the physical needs of each road in the State Highway System, as illustrated by the division's report submitted to the Legislature at the 1953 Session Furthermore, the division takes traffic counts annually on all state highways. It is thus in a position to know what the total needs of the State Highway System are, and the necessary surveys and engineering work for planning purposes are so scheduled as to provide for the orderly development of the entire State Highway System in accordance with the formulae provided by law for the expenditures of state highway funds.
2. A complete engineering study and report is made for each project in the planning program or, in some cases, for a combination of several adjoining projects. This report includes factual engineering data setting forth the deficiencies of the existing highway and also the best and most practical solution from an engineering standpoint.

The procedure followed after these preliminary engineering studies have been completed on freeway projects is set forth in the "Policy of California Highway Commission in Regard to the Adoption of Freeway Routes":

3. When sufficient engineering and economic data have been accumulated to support a tentative conclusion as to a basic plan for the location or relocation of any highway proposed to be constructed as a freeway, the State Highway Engineer, or his authorized representative or representatives, will confer with the appropriate city council or board of supervisors, or both such council and board, and with their technical staffs, including planning commissions and staffs, and will publicize and hold such meetings as may be reasonably necessary to acquaint interested individuals, officials, and civic or other groups with the information developed.[2]
4. After such conferences and meetings, the State Highway Engineer will submit a report to the commission covering the results of such conferences and meetings, the studies made, and a recommendation as to the location or relocation of the highway, or

[1] G. T McCoy, "General Report on Condemnation Practices for Dolwig Committee": letter to Subcommittee on Highways, November 10, 1955, see Appendix 1, p. 37
[2] Policy of California Highway Commission in Regard to the Adoption of Freeway Routes, February 18, 1955, see Appendix 2, p. 42.

section of highway, proposed to be constructed as a freeway which in his judgment, subject to all laws applicable thereto, will serve the best interests of the State

5. The State Highway Engineer, on authorization of the commission, will give public notice of the commission's intention to consider the adoption of the location or relocation of the highway, or section of highway, in question and will also give written notice to the city council or board of supervisors, or both, as the case may be, of such intention. Unless the local legislative body or bodies by resolution have previously declared that no public hearing by the commission is necessary or desirable, such notice to the local legislative body or bodies shall specify that if any such legislative body considers a public hearing on the matter necessary, the commission will hold, or cause to be held, such hearing, if so requested by any such local legislative body within thirty (30) days after the first regular meeting of such body following receipt of such written notice.

   a. If any such legislative body requests such hearing, the commission, or designated members thereof, will hold, or cause to be held, a hearing, after due public notice of the time and place thereof, at which time and place all persons and organizations, and official bodies interested in the matter will be given opportunity to be heard.

   b. The commission may, on its own motion, call a public meeting or hold such hearings, or rehearings that it may deem appropriate.

   c. After the expiration of such period of thirty (30) days, if no hearing is requested, or after such hearing as the commission may hold on its own initiative, the commission will take action in respect to the location or relocation of such highway proposed to be constructed as a freeway.

At the conclusion of this procedure, the California Highway Commission takes action with respect to adoption of the route and declaring the route a freeway.

B. The hearings of the subcommittee have shown there is a lack of uniformity in the stated procedure of the Division of Highways as it is applied in the districts.

Mr. Booker, District Engineer, District No. 4, Division of Highways, has stated regarding meetings at the technical level, prior to starting freeway survey, "I would like to explain what we do in District 4. It isn't the same procedure that is followed all over the State "[3] The degree to which the stated procedure is followed and is supplemented appears to depend largely on the belief and working processes determined by the engineer in charge of the district. For example, Mr. Walker R. Schroeder of the Planning Department, City of Stockton, states: "Not much work has been done in

[3] California Legislature Assembly, Interim Subcommittee on Highways *Redwood City Hearing*, unpublished transcript, September 24, 1956, p 67

the Stockton area so far and we have a very good working agreement with District 10. Our district engineer seems very cooperative. For instance, Bakersfield (District 6) could not get a street paved which was directly parallel to a proposed route, but we had just the opposite experience where they are going to put in an interim system for us, which is about a 5- to 10-year program." [4]

C. Inadequate considerations on the part of the Division of Highways of local community plans and objectives which should affect highway location.

The present considerations used by the Division of Highways include traffic relief to the existing road system, traffic service to highway users expressed in terms of savings in distance and time, and total cost of project to the State. The Division of Highways attempts to determine disruption of a freeway location on the area traversed, including the number of homes and businesses that a freeway location will take, and also the effect on the existing street pattern, school zones, fire zones, etc.

In matters of this type, however, the division must lean heavily on the official local governmental body.[5]

1. **That the present procedure is inadequate in its consideration of the affect upon the community is demonstrated by the proposed freeway through the City of Merced.** Three routes were surveyed and studied by the Division of Highways. The route recommended to the Highway Commission for adoption, according to Senator Cobey, Merced County, "will cost approximately $2,000,000 more than the alternate route that goes out five blocks further. Number two, the freeway as proposed will take off the tax rolls 200 residences, 2 churches and 34 business establishments including industries." The alternate route "* * * will not remove any commercial developments or industries from the tax rolls at all. It will take out 100 fewer homes and the same two churches." The City of Merced would lose over a million dollars worth of assessed valuation from the tax rolls within the city, which will not be replaced. The commission adopted the route since the alternate route according to their figures would cost about $700,000 more to the State." [6]

2. **Consideration of community views could be provided by formalizing coordination between the Division of Highways and local responsible agencies.** Agreement on the importance of this process is evidenced by both local officials and the Division of Highways:

Assemblyman Caldecott: Do you feel that you can work better through the city or the county government than directly with the individual people of the area?

Mr. Booker (District Engineer, District No. 4): Yes, I do. I think there is a broader community view taken by the elected or appointed official of a community. There is more intimate knowledge of

[4] California Legislature, Assembly Interim Subcommittee on Highways *Sacramento Hearing*, unpublished transcript, November 26, 1956, p. 36
[5] G. T. McCoy, *op. cit.*, par. 1, p. 4
[6] California Legislature Assembly Interim Subcommittee on Highways *Merced Hearing*, unpublished transcript, December 5, 1955, pp. 16-17

the problems of the community, and there certainly is a greater appreciation of the benefits as well as the detriments of such a thing as a freeway.

Assemblyman Caldecott: My point is, do you feel that the city should represent the people before the commission * * *

Mr. Booker: I don't think there is any better way than to get a committee appointed in each of the cities as we have in San Francisco and as we have in Oakland, in which the City Engineer is represented, the Department of Public Works, the Planning Section, Police, Fire Department, and utilities, schools, etc. If you have that type of committee, you can work well with it; it is not too large. Each one has intimate knowledge of his own problem and how this particular thing will affect it. I can't think of any better way to explore this proposition of a freeway which has a great impact on a community.[7]

Paul Opperman (Director of Planning, San Francisco): In presenting recommendations to the subcommittee, stated there should be * * * formal coordination between the Division of Highways and the city and county technicians to achieve what has been generally achieved in San Francisco through informal, cooperative measures.[8]

If such meetings were arranged with the city council and/or board of supervisors, including their technical staffs, the purpose of the meetings would be twofold: (a) to alert the locality, through its governing body, that action on a proposed local freeway is contemplated and (b) to acquaint the responsible district engineer staff with local community plans and criteria which will affect freeway location and design.

3. **Many of the problems uncovered in the investigations of the subcommittee relating to highway and freeway planning, design, and construction, result from the failure of the Division of Highways and local responsible agencies to adjust problems during the planning stage.**

Testimony submitted to this subcommittee and to the Subcommittee on Planning and Zoning indicates that local agencies feel that their participation is not enlisted at the appropriate planning stage, where it would affect freeway and highway location. The conferences and hearings of the subcommittee tend to substantiate this failure on the part of the Division of Highways to fully enlist responsible local agencies in the planning function. The policy statement of the Highway Commission in regard to the adoption of freeway routes, for example, states "when sufficient engineering and economic data have been accumulated to support a tentative conclusion * * *" the highway engineer is instructed to "confer" and hold hearings to "acquaint" the local officials with this tentative plan. True participation, on the other hand, would bring these local agencies into the planning process at a stage sufficiently early where the local community desires, plans, and community values would be an important factor in the development of a "tentative conclusion." **It is therefore recommended by the subcommittee that the Division of Highways contact the local agencies at the inception of any freeway proposal.**

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[7] California Legislature Assembly, Interim Subcommittee on Highways *Redwood City Hearing*, unpublished transcript, September 25, 1956, p. 18.
[8] *Redwood City Hearing*, *op. cit.*, September 24, 1956, p. 27.

D. Inadequate provisions for public information and local participation in determination of freeway routes.

1 Meetings Inadequately Publicized.

According to the stated present procedure, the Division of Highways "* * * will publicize and hold such meetings as may be reasonably necessary to acquaint interested individuals, officials and civic or other groups with the information developed." It has been found that these "meetings" are inadequately publicized, the public participants have inadequate information as to the proposed route or routes, and this information is not fully divulged at the meetings. An example of the results of the inadequate publicity is expressed by Mr. George Christopher, Mayor of San Francisco, in a communication to the subcommittee:

> For your consideration I submit the following: (1) In planning more freeways within metropolitan areas, the division should publicize at greater length its intentions and provide sufficient public hearings to give everyone an opportunity to express his contentions. Too often the construction of a freeway is announced and the residents of a particular area, not being fully informed, may protest the construction under any circumstances, even though they would be in favor of it.[9]

Adequate public notification has admittedly been neglected in some cases:

Assemblyman Meyers: This is not a criticism, this is just a constructive suggestion. I happen to have in my own district six small district newspapers and in talking with the editors of these papers, they have received very little correspondence or notices of meetings from the Division of Highways. I just pass that on to you for your information.

Mr. Booker: I think perhaps that is a legitimate criticism, Mr. Meyers. I think we have neglected that particular feature in San Francisco.[10]

* * * * *

Assemblyman Caldecott: I think our real problem here is a matter of communication between the Division of Highways through the city to the people whose property is going to be affected, and furnishing the information to the property owner of just what routes are being considered. We have heard this morning, and last night, and also in San Diego, that the local people didn't have too much information on which to act.[11]

In recognition of this difficulty, recommendations have been offered the subcommittee:

Arthur Sullivan (City Manager, San Mateo): Place the responsibility for notification of hearing upon city and county government for the public organizations affected, leaving it to the press to notify private individuals and organizations.[12]

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[9] *Ibid*, p 7
[10] *Redwood City Hearing, op cit*, September 25, 1956, p 13
[11] *Ibid*, p 81
[12] *Ibid*, p. 81.

Mr. Booker: I think individual notification of all the property owners on two or three alternative routes might misinform people and I do believe publishing a map showing all of the alternative routes and publishing that in the newspaper fully informs anyone that the hearing is to be held and that they can attend the hearing [13]

2. **Inadequate information given by Division of Highways concerning proposed route or routes.**

The usual procedure as found by the subcommittee is that the property owners are not given explicit information on the route or routes proposed until they arrive at the public hearing. **Actually, the information developed in the study of proposed routes is not fully divulged. The Division of Highways endeavors to "sell" the community the route which it considers the best.** This inadequacy was discussed before the subcommittee:

Mr. Vickrey (Assistant State Highway Engineer, Planning). The first meeting, and everything that the Division of Highways does in this regard we refer to as meetings and not hearings, but the first meeting under this policy is held after we have reached a tentative conclusion as to where the route should be [14]

Assemblyman Miller: it appears to me in the several hearings in the districts that have been held, there is a concept of the engineers who were there, as well as the people that this is all cut and dried. This hearing is set up solely for the purpose of satisfying the public that it has been heard.

Mr. Vickrey: I think you have put your finger on the hardest part of this particular problem to solve. In the first place, it is very difficult to get over to the people at this meeting that you have not reached a final conclusion.

Assemblyman Miller: I have seen the situation when you have studied two or three lines and you come to the conclusion that this is the route you are going to recommend, and yet in the presentation of these hearings you haven't described to the people the various considerations that were taken sufficiently. They want to know 1, 2, 3, 4. What are the drawbacks? Too many curves, too much grade, or something of that kind. At the hearings I have attended there has been insufficient explanation of why you arrived at your conclusion that this route was the best route [15]

Senator Cobey (Merced County) The crux of it is that both the commission and the division try to sell their choice at these hearings instead of trying to let the matter be decided on its merits [16]

Leland Gunn (City Manager, Bakersfield): As a result of our experiences with these hearings, we have formed the conclusion that public hearings are held in the localities affected only for propaganda purposes. We have yet to see one concrete example of constructive use being made of valid criticisms by public participants in such a public meeting. The general attitude of the representatives of the division

[13] *Redwood City Hearing, op cit*, September 24, 1956, p 65
[14] California Highway Commission Policy Statement *Op cit* (see Appendix 2)
[15] California Legislative Assembly Interim Subcommittee on Highways *Sacramento Hearing*, unpublished transcript, November 21, 1955, pp 28-31.
[16] *Merced Hearing, op cit*, p 17.

seems to be that the die is cast and the decisions have all been made. The protests are without merit and are to be beaten down at all costs [17]

An excerpt furnished the subcommittee from a transcript of hearing held by the district engineer in Bakersfield reflects the attitude of the Division of Highways in that district:

Mr. Welch (District Engineer, District No. 6, Division of Highways): Ladies and gentlemen, you probably recall Abe Lincoln's speech to the effect that a man went out where he came in at. I think perhaps, unfortunately, we may all be going out of here just where we came in at. I doubt if I have convinced any of you. Nevertheless, I do appreciate your courtesy and your taking your time to come down here and giving us an opportunity to explain this route.[18]

3. **As a result of the present procedure the freeway agreement between the Division of Highways and the local community on the closing of city or county streets often delays freeway construction.** According to the present procedure, after a freeway route has been adopted by resolution of the Highway Commission, the Division of Highways negotiates a freeway agreement with the local city council or board of supervisors as to the closing of streets or highways intersecting the freeway.[19] Local communities refuse to negotiate the freeway agreement as an expression of their disagreement to the freeway route as adopted by the Highway Commission. This delays the construction program. Consequently, in many cases the division resorts to such pressures as freeway agreements with surrounding communities and purchase of right of way to force acceptance of the route as adopted by the commission.

In several cases, the community has not been fully aware that freeways necessitated the closing of intersecting streets and roads and that a freeway agreement is required. Communities base their disagreement on this point.

4. **It is possible that the plans for location, design, and construction of freeways as presented to the local responsible agencies by the district engineers may be altered when reviewed by Headquarters Office, Division of Highways.** Presently, there is no provision for notifying the local communities of such alteration prior to delivery of the proposed route location to the Highway Commission for adoption procedure. Under such a condition, the local legislative body, unaware of the changes and in accord with the original proposal, does not request a pre-adoption hearing by the commission [20] but later causes construction delay by disagreement. Or, if such a hearing is requested, the community is not informed of the changes until the actual hearing. Controversy and delay begin at this point.

5. To obviate unnecessary difficulty and controversy over freeway route proposals, the subcommittee recommends that the Division of Highways inform the communities of the agreement or differences in the route to be proposed to the Highway Commission and the community's plans and objectives. This notification should be made 45

[17] *Sacramento Hearing*, November 26, 1956, *op cit*, 5-A.
[18] *Ibid*, Rec 6, pp. 32-33.
[19] "Acquisition of Right of Way of Freeway Routes," a procedural chart, see Appendix 3, p 45.
[20] See Appendix 3, p. 45.

days prior to the public hearing held by the Highway Commission to afford the community sufficient time to gather the information with which to address the commission in case of controversy. At this same time, the division should notify the legislative body that the proposed route will require an agreement to close specific intersecting streets and county highways.

E. Certain procedures involving the California Highway Commission are found inadequate.

1. **Testimony indicates the State Highway Commission at times negates its responsibility to protect the interests of the public by becoming involved in local controversy.** By the present practice of holding the commission hearings in the localities of the controversial route proposals, the commission becomes inappropriately involved in antagonistic discussions at the local level. The result is that often the commission becomes spokesman and defender of the Division of Highways. As in the case of Merced, the commission avoided the expression of community views by not postponing a public hearing scheduled in March until after an election involving public consideration of the route. Mr. Bagshaw, Assistant Director of Public Works, stated that "The commission felt that if it acceeded to the request for the delay, it would be bound by the outcome of the election." [21] In fact, the commission stifled consideration of an alternate route, according to Senator Cobey.

Chairman Dolwig: Now, will you inform the committee whether the commission in the March hearing took into consideration any alternate proposals, if they were made.

Senator Cobey: I testified at that hearing and asked them about this alternate route across the tracks and at that time they presented a mimeographed, about 12-page report, in which they merely said that that alternate route would cost, I think, $700,000 more.[22]

R. J. Cooney (City Manager, Merced, testified that the commission itself did not conduct this hearing): It was conducted by a referee. Now I realize fully that the calendar and the work involved by an agency in a state as large as ours, they probably can't attend to every detail themselves as a commission, but it does seem to me that anything so vital to the social and economic welfare of a city, should have the personal attention of an impartial committee, not just a referee.[23]

2. **The functional capacity of the commission is overtaxed under the present procedure.** The commission members are not full-time officials. They are appointed by the Governor for a period of four years and receive traveling expenses and a per diem while attending public hearings. The work of the commission throughout the 11 districts of the State is spread among six members, the seventh being an ex officio member, the Director of Public Works. According to Mr. Bagshaw, Assistant Director, Department of Public Works, the commission, when setting hearing dates, designates those commissioners who are able and available to attend the hearings. The work is subdivided because of its volume and its importance. The commissioners are specifically

[21] *Merced Hearing, op cit*, p. 16.
[22] *Ibid*, p. 17.
[23] *Ibid*, p. 13.

delegated to hold the hearings, transcripts are made of the proceedings and the entire commission secures and studies the transcripts. Decisions are made by the commission as a whole.[24]

3 **It is not the uniform policy that a public hearing be held by the Highway Commission.** Under the present procedure, public hearings are held by the Highway Commission prior to the adoption of the proposed route only if requested by the local legislative body. Also, according to Mr. Emerson Rhyner, (attorney, Contract and Right of Way Division, Department of Public Works): "Quite often there is no controversy regarding a freeway location. * * * These figures are off the cuff, but I think out of about 350 locations only about 50 hearings have been held."[25] Nevertheless, the testimony on this topic stresses the necessity of hearings by the commission in all cases, even though some might be perfunctory. Since considerations under the authority of the division can be altered or over-ruled by the authority of the commission, the case for the people and the community should be put before the deciding authority.

The subcommittee recommends that the Highway Commission hold mandatory public hearings in Sacramento prior to the adoption of freeway routes. This would properly allow public and community objections to be heard. The commission would be removed from the administrative level of freeway engineering and construction to more properly perform as a commission with quasi-judicial powers operating to protect the public interest. The strain on the commission would be reduced by concentrating its final hearings in the Capitol.

F. The lack of uniformity in the procedure for the adoption of freeway routes plus the general inadequacy of that procedure are the main arguments for codification.

The necessity for codification of freeway adoption procedures has been discussed before the subcommittee:

Thomas Rees, State Assemblyman from Beverly Hills, as a result of his experience with the Highway Commission in the case of the Olympic Freeway, recommends a comprehensive review of the administrative procedures used by the Highway Commission with the view to codifying those concerned with the adoption of freeway routes. The reason for codifying being "That once these are in the code, the Highway Commission will be a little more respectful of regulations and systems by which they should be adopting freeways."[26]

Assemblyman Dolwig: * * * would it be effective to have this whole procedure outlined as part of the administrative procedure of the Division of Highways, or should we pass some legislation on it so that the public is informed as to what your procedures are? * * *

Robert E. Reed (Chief of Division, Department of Contracts and Rights of Way): There have been suggestions in the past that the Highway Commission resolutions be written into the statute. The resolution, as indicated, has been revised since that time. The very fact that

[24] *Merced Hearing, op. cit.*, Rec. 2, p. 1
[25] *Sacramento Hearing*, November 26, 1956, *op. cit.*, p. 6.
[26] California, Legislative Assembly Subcommittee on Highways, *Los Angeles Hearing*, unpublished transcript, September 13, 1956, p. 56.

it has been revised indicates one reason why I don't think it ought to be in the statute because as these things develop it should be flexible so that you can work this thing out without having to wait two years to amend a bill * * *[27]

The present commission policy, however, as inadequate as it has been found, has not been revised as often as every two years and its elasticity is so great as to allow for a lack of uniformity throughout the districts.

Assemblyman Dolwig: Mr Reed, one thing I think is important is this: Your liaison between your districts and your uniformity as far as procedures are concerned within your districts so that you have uniformity throughout the State insofar as these procedures are concerned * * * I think once you have that you're going to have the problem pretty well licked. * * *

Mr. Vickrey (Assistant Highway Engineer, Planning): As far as I am concerned, Mr. Dolwig, No. 1, I am going to hope that you don't get to this matter of actually putting this into law until 1957. I would like to see this thing tried out for a longer period of time. I believe this policy, if we can follow it through properly, is going to work. There is some indication that we are going to have to make some changes with regard to it along the lines of thinking expressed by some of you gentlemen That's largely because of the difference in the method of handling a thing of this sort in different districts, a personnel problem.[28]

Since the preceding testimony, objections to this policy have been voiced along with suggestions for codification:

Assemblyman McCollister (Seventh District) I think in the first place rather than a resolution by our Highway Commission as to how they are going to proceed, we very likely should spell it out in a statute, and although the personnel of the State Highway Commission might change while we are not in session the procedure would be secure. And I think that when we do it, as a minimum we should legitimize the requests of local government by spelling out in our legislation that the Highway Commission shall at least take cognizance of them or shall consider them. Now even that, mild as that is, is currently missing from anything you will see with reference to the procedures of locating a highway, * * *[29]

Since the publication of the current Highway Commission Policy in February, 1955, and as a result of the hearings held by this subcommittee, a revised commission policy has been proposed. This revised policy which has been circulated but not adopted closely resembles the legislation proposed by this subcommittee After discussion before the subcommittee, in November, 1956, opinion was still in favor of codification:

Gordon Forrest (Field Representative, League of California Cities): The League of Cities has not adopted a policy on this question of the location of freeways and I do not want it to be considered that I am putting into the record an official statement by the league. However,

[27] *Sacramento Hearing*, November 21, 1955, *op cit*, pp 38-39
[28] *Ibid*, pp 43-44
[29] *Ibid*, pp 16-17

I believe that it would be the feeling of the cities that they would favor this statement of policy that Mr. Rhyner presented to you this morning, with that statement of policy put into the statutes.[30]

This subcommittee recommends that the codification of freeway adoption procedure be achieved. The legislation submitted with this report outlines a route adoption procedure designed to correct present deficiencies and provide for uniformity. Enactment of this legislation would alleviate present difficulties and accomplish codification.

II. INADEQUATE PROVISIONS FOR ADVANCE PLANNING AND COORDINATION IN THE DEVELOPMENT OF A STATE HIGHWAY SYSTEM

To have a balanced and orderly development of the State Highway System in accordance with available funds and to provide for the transportation requirements as growth demands, some form of advance planning must be accomplished. This advance planning, based upon projection of present requirements and anticipated land use, is set forth in a master plan, which is a comprehensive statement of the State Highway System—present and future—that is reassessed and adjusted as the projects approach construction. Such a master plan to be valid must be geared directly to future population studies and long-range land use planning.

A. Such advance planning is not presently performed by the Division of Highways.

The following testimony by Mr. J. W. Vickrey, Assistant State Highway Engineer, Planning, illustrates this present deficiency:

Assemblyman Lindsay: The problem arises, do we have any kind of a state plan set up where future highways and roads should be? Are you looking to the future, planning highways that are not now in the highway system?

Mr. Vickrey: To some extent That's done through the agency we refer to as the California Highway Planning Survey and that operates under the Division of Highways and is a joint venture between the Division of Highways and the Bureau of Public Roads and is paid for in part by federal money.[31]

1 **No master plan exists of state highways, either as a statement of the present or to provide for the future transportation requirements of the State.**

Assemblyman Lindsay: Has there been any attempt to lay out a master plan of freeways for the State?

Mr. Vickrey: No, not specifically There never has been a system of freeways laid out for any particular purpose. There is some consideration given by the department as to what routes will be freeways and what routes will not be freeways in the State Highway System, but insofar as laying out a master plan of freeways, I would say no, that has not been done in California.[32]

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[30] *Ibid*., Rec 15, p 1b.
[31] *Sacramento Hearing*, November 21, 1955, *op cit.*, pp. 6-7.
[32] *Ibid*, p. 7.

2. **"Advance planning" as it exists in the Division of Highways is keyed to correcting present deficiencies rather than providing for future needs.**

Since the Division of Highways bases its projects on present physical needs of existing highways and present traffic counts,[33] these projects answer present deficiencies rather than provide for future needs. More clearly, it has been the case that:

A complete engineering study and report is made for each project in the planning program or, in some cases, for a combination of several adjoining projects. This report includes factual engineering data setting forth the deficiencies of the existing highway and also the best and most practical solution from an engineering standpoint.[34]

3. **Present advance planning is further inadequate due to the restricted consideration of meaningful factors.**

Even though "it is the policy of the Division of Highways to construct enough capacity into a highway to satisfactorily handle traffic for a period of 20 years after construction and to acquire sufficient right of way to provide additional capacity that may be needed soon after that 20-year period,"[35] the division finds it impossible to maintain a definite planning program. The inadequate scope of present highway planning is illustrated in this explanation by the division:

While it is impossible to maintain a definite and rigid planning program because of uncertainties as to highway revenues, construction costs, the fact that the California Highway Commission must allocate funds on an annual basis, possible legislative changes, and changing traffic conditions, the Division of Highways nevertheless does maintain a tentative and flexible planning program. The primary purposes are to provide for an orderly conduct of the necessary engineering work and to assure that the provisions of the Mayo Formula (Section 188.4, Streets and Highways Code) will have been complied with at the end of the periods set forth in that formula during which certain minimum expenditures must be made in each county.[36]

Other factors, aside from proper expenditure of funds and the orderly conduct of engineering work, should properly influence the development of a system of highways. These would include estimated growth and distribution of future population, future economic potential of state resources, the effects of highways upon resource development, and the effect of alternate routes upon community values.[37]

4. **Adequate advance planning needs to be based upon a statement of present development and future needs.** Testimony has been presented to the subcommittee emphasizing the need for genuine advance planning based upon a master plan of state highways. Here, for example, are the comments contained in a statement to the subcommittee by William E. Spangle, Jr., Chief, Master Plan Project, San Mateo Planning Commission:

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[33] G. T. McCoy, *op. cit*, para. 4, p. 2.
[34] *Ibid*, para. 2, p. 3
[35] *Ibid*, para 2, p. 4.
[36] *Ibid.*, para 3, p. 2
[37] CF., Statement of Lawrence Livingston, Jr, City and Regional Planning Consultant, Los Altos, *Redwood City Hearing*, Subcommittee on Highways, September 24, 1956, see Appendix 4, p. 46.

The process of planning for a highway system should be done in three stages: In the first stage a general plan should be prepared defining points which should be connected in order to serve state-wide interest. The second stage would be the definition of actual routes to connect these points. The third stage would involve the development of a system of priorities for acquisition of rights of way and actual construction.

5. **Legislation is needed to get the program under way.** "The basic need is for changes in legislation so that long range planning for highways will not only be permitted but required In our rapidly growing State it is essential that a general highway plan be prepared and adopted well in advance of availability of funds for highway construction." [38] Such advance planning should be done looking 20 to 30 years ahead The first phase of such a plan should include:

1. Long range projection of future state population.
2. Evaluation of state resources and estimates of future economic potential.
3 Definition of state policy regarding agricultural and industrial land use and water resource development.
4. Estimates of population distribution throughout the State based on factors 1 through 3 above

The action in adopting such a state-wide plan should be taken only after regional and state-wide hearings. The basic information needed for decisions on this plan should be maintained in current status and the plan itself should be subjected to complete periodic review, possibly at five-year periods." [39]

Evidence of the benefits of a master plan of highways is contained in a report to the subcommittee by Earl J. Esse, Chief Deputy Director, Regional Planning Commission, County of Los Angeles

"Los Angeles County has been very fortunate in having developed a highway plan and a freeway plan many years in advance of the tremendous increase in population and the attendent development of a great industrial and commercial areas.

State highway engineers confer regularly with representatives of the Regional Planning Commission, the County Road Commissioner and the County Engineer to discuss the relationship of the freeway routes to the county highway plan and the land use pattern. Interchange points on major highway routes and access facilities to residential and industrial areas are worked out to provide for the most satisfactory development of the adjacent territory." [40]

6. **Senate Concurrent Resolution No. 26, 1956 Regular Session, initiates a study by the Department of Public Works to provide the basis for an over-all state-wide plan of the freeways for the State of California.**

[38] William E Spangle, Jr., Statement to Assembly Interim Committee Meeting on Highway Planning Procedures, City Hall, Redwood City, California, September 25, 1956, see Appendix 5, p 48

[39] *Ibid*

[40] Los Angeles County Highway and Freeway Plan, a report by Earl J Esse, September 28, 1955, see Appendix 6, p 50.

In view of the preceding inadequacies and because of the great present need for the establishment of a plan for a state-wide system of highways, Senate Concurrent Resolution No. 26 as introduced by Senators Collier and Richards provides that the Department of Public Works:

"* * * undertake a study which will provide a basis for an over-all state-wide plan of freeways and expressways for the State of California, such study not to be limited to state highways and such study to locate the potential freeway and expressway routes of such a state-wide system and the necessary connections thereto as nearly as is practicable in advance of detailed engineering design of projects."[41]

The subcommittee recommends that this resolution be adopted as (1) the first step in developing the essential master plan of highways to allow for the adequate future development of the state system of freeways, and (2) would provide the basis for coordination of state and local plans and objectives.

B. Inadequate coordination of planning.

1. As a recent example, the counties and cities of Merced and Madera failed to coordinate their planning function, with the result that agreements were reached by the counties leading up and dedicating a location immediately through the downtown areas of these two cities.

2. **The present condition of inadequate coordination is the result of deficiencies at both the state and local level.** Karl Belser, Planning Director, Santa Clara County, makes the point that the freeway is regarded by communities as a disruptive element in the local plans.

"There is something wrong with the present system where the State Division Engineers do exhaustive planning and research and design on these highways, only to find when they come before the local community for approval that they are thwarted by the opinions of local officials. * * * This is not a controversy so much between the state and local jurisdictions as it is between the local jurisdictions themselves."[42]

* * * * *

Walter R. Schroeder (Planning Department, City of Stockton). I think there is a criticism that the State could level at many communities—that they don't have a general plan. The State says we want to put a highway through and the city says we don't want it where you want to put it, but when they ask where you would like to have it, of course, there is no plan for it. So I think local communities can help themselves a little bit too[43]

3. **It is essential that the planning of local communities be coordinated with the planning of state highway system.** This belief on the part of the local agencies is so strong that much of the support for a

[41] California, Legislature, Senate Concurrent Resolution No. 26, 1957 Regular Session, see Appendix 7, p. 51

[42] County of Santa Clara Planning Department, *The Problem of Freeway Locations in Local Communities by the State Division of Highways*, a presentation to the Subcommittee of the Assembly Interim Committee on Conservation, Planning and Public Works, Redwood City, September 24, 1956, p. 2, see Appendix 8, p. 53

[43] *Sacramento Hearing*, November 26, 1956, *op. cit.*, Rec. 55, p. 5b.

planning office at the state level to coordinate the physical developmental plans of the State is based on the necessity of local participation in highway and freeway planning. On the basis of his planning experience, Mr. Karl Belser, Santa Clara County Planning Director, recommends a coordinating program:

"(1) Establish master plan section within Division of Highways (by Legislature) to be solely concerned with laying out state system of highways—present and proposed.

(2) Section given authority to enter counties, work with county officials in developing master plan of state highways for each county—coordinated with abutting county master plans.

(3) Broaden basis of criteria for route location to include all planning aspects of each community (community master plan).

(4) Over-all master plan adopted by Legislature as Master Plan of State Highways—each phase to be adopted by local jurisdiction."[44]

III. CERTAIN PROCEDURES IN THE ACQUISITION OF RIGHT OF WAY OPERATE TO THE DISADVANTAGE OF THE PUBLIC INTEREST

A. By the present court rules under condemnation procedure, the prices of comparable sales cannot be introduced into direct evidence.

The only way the information may be introduced occurs with the appropriate question on cross-examination. In many cases on cross-examination this is not developed. This procedure is not equitable since it hinders the presentation of the facts in determining fair value.

The view of the appraisers has been established on this point:

Grant N. Lorrainne (Appraiser, 32 years' experience in California): I'm strongly in favor of the recommendation that on direct (examination) the appraiser be permitted to give the value of the properties he has investigated. The attorney on the opposite side may not wish to bring them out at all and all the appraiser can do is to say that I have investigated this and I have investigated that and I have consulted the records * * * If the attorney is wise, and sometimes I've had it happen, he'll ask very few questions to bring out the values, so I think something should be done there. I think it could be more equitable. I see nothing to defend the present practice.[45]

It is also the opinion of the attorneys appearing before the subcommittee that the prices of comparable sales be allowed on direct examination. Such a practice is the federal rule in condemnation trials.

It is the recommendation of the subcommittee that legislation be enacted to permit the introduction of comparable land sales on direct examination in condemnation trials, in accordance with the legislation submitted with this report.

[44] *Ibid.*, pp 3-4.
[45] *Los Angeles Hearing, op. cit.*, p. 98.

B. Circumstances surrounding the deposit paid into the court by the condemning authority create hardship to the property owner.

Seth Hustedler (Attorney, representing the Los Angeles Bar Association): Now let me mention one situation where we felt very clearly the law should be revised immediately pending a general overhaul And that's the provision where the government, pursuant to its authority under the constitutional provisions, exercises its right to immediate possession prior to the time the condemnation procedure is completed That's under the provisions of Article I, Section 14 of the Constitution. As you are aware, under those proceedings, the Division of Highways for highway matters or for property taken for reservoir purposes, the division may obtain immediate possession by complying with the procedure and depositing an amount determined by the court to be adequate security. The landowner cannot obtain that amount and here's the landowner's predicament He's required to move from the premises and surrender possession. He is given no funds. If he has a business on this property, he must find a suitable location for it. He must acquire that by purchase or lease He must move his business. He has no funds to do this and the result is that the landowner is placed in the position, practically speaking, where he has to lose his business, lose what he has on the premises, or he must accept the best offer which the condemning authority has made. If that's a fair offer, that's fine; if it's an unfair offer, he's denied his constitutional right to have that determined by a court [46]

Another attorney has stated in regard to this deposit:

Millner E. Gleaves (formerly with Condemnation Division, Los Angeles County Counsel). * * * the property owner is entitled to no part of it unless he desires to settle and take his money and go hence * * * My suggestion is this * * * change the law to permit a property owner to draw down some of this deposit without prejudicing his right to go ahead and contest the value in court.[47]

On the basis of testimony presented at the hearing and consultation with the Division of Highways and Legislative Counsel, the subcommittee recommends that the State be required to deposit with the court 90 percent of the offer at the time of filing the condemnation action and to allow the condemnee to withdraw up to 75 percent of the deposit, with no interest to accrue on the withdrawn portion.

C. Present condemnation trial costs disallow equality of right to property owner to contest division offer for acquisition of property.

Present costs of attorneys and appraisers to contestants in condemnation trials tend to inhibit property owners from contesting in court what they consider to be an unfair offer. The result of the typical situation in such cases where the property owner is offered a final figure by the division which is less than fair market value is related by an attorney with 43 years of practice in Northern California.

[46] *Los Angeles Hearing, op. cit.*, pp. 48-49.
[47] *Ibid.*, p. 38.

T. M. Chamberlain (Attorney): The property owner, by the time he goes through that ordeal (the condemnation trial), has run up an expense for the defense of his rights and the presentation of his side of the case of anywhere from maybe $1,500 to $3,500. In many instances, the property owner is actually deprived of what we under the Constitution think he is entitled to in just compensation for that which is taken from him because of this expense.[48]

It is, therefore, the recommendation of the subcommittee that trial costs, attorney and assessor fees be granted to the condemnee, if the amount awarded by the court is more than the final amount offered by the Division of Highways It is felt that this legislation as prepared allows for greater equality and fairness. Aside from removing the present condition operating for inequality, it would operate to discourage those who might risk the court costs to raise an already fair offer.

IV. THERE IS A NEED FOR GREATER EMPHASIS UPON THE FEATURES OF HIGHWAY DESIGN CONCERNING STORM DRAINAGE, ESCAPE ROUTES, AND FREEWAY LANDSCAPING

Testimony given during the subcommittee hearings has shown inadequate consideration by the Division of Highways in the following areas of design and construction:

A. Storm drainage.

Wendell Jones (Field Secretary, Los Angeles County Farm Bureau): Our organization is made up of almost 4,000 ranching members who are ranching in Los Angeles County. The matter that we wish to bring before you this morning is in connection with the construction and maintenance of highways, state highways, the matter of diversion of storm waters onto fertile agricultural land and, by diversion, I mean just that. I think we all recognize that, with housing developments going in and as housing developments go in, we have greater peak loads on storm waters because of the rapid runoff. We recognize that the highway construction is only a part of this problem, but it is a very major influence on the situation we feel. We note with very serious concern, the Farm Bureau, the growing tendency, we feel, on the part of the Division of Highways, to adopt a doctrine of expediency, bluntly speaking, in picking the first open field, or the nearest open field, to run storm water onto rather than to run it onto housing developments, where it probably went originally. We feel that here in Los Angeles, we are almost criminally wasting, unnecessarily wasting, a lot of valuable and irreplaceable fertile agricultural land through apathy and indifference on the part of the public, through avarice and greed on the part of a few, and through short-sighted planning on the part of those in authority.[49]

Mr. Rowe (Division of Highways): Ordinarily, instead of diversion, the increase in water is due to the elimination of infiltration areas, the paving of streets, the roofing of houses, the rapid concentration of flow so that it reaches the highway in greater volumes than

[48] *Sacramento Hearing*, November 26, 1956, *op cit*, p 17-A
[49] *Los Angeles Hearing*, September 14, 1956, *op cit*, pp 2-3

before. We are obliged to receive that water. By receiving it, I mean we either have to receive it on our highway, let the highway be flooded or we have to increase our facilities so that they can go under the highway without harming the highway. Ordinarily that is a matter of highway economics, which is the cheaper for us to do in the proper expenditure of highway funds In some places we let it pond on the highway, because the highway is not particularly damaged by it and the traffic is not too great but what it can be detained or slowed down when there is water standing on the highway. But if the highway is important, it becomes quite necessary to increase our facilities and pass that water more rapidly to the lower land.[50]

Recommendations for change:

In discussing this storm drainage problem, it was the personal opinion of Mr. Rowe, Division of Highways, that to provide better equity and public recourse as to flooding of abutting land in the construction of freeways, a grade ordinance with provisions similar to those contained in the Streets and Highways Code Ordinance establishing grades of city streets, would be an advantage.

It is the further recommendation of this subcommittee that there be consideration by the division of future land use in providing for storm drainage in highway construction.

B. Escape routes.

Bert Trask (California Trucking Association): The problem of runaway trucks has plagued the industry for years, and even though we have spent a lot of time, I might say and money too, on this problem, we have been unable to find a way to control every driver to the point where he will descend these grades at a slow speed which would enable him to control his vehicle at all times. As they build the highways better and we have more four-lane highways with less curves, the speed on the highways will increase, so this problem will continually get worse.[51]

* * * * *

Assemblyman Dolwig: Mr. Sands, what is your opinion as to the need for these (escape ramps) on the basis of the surveys that you have made?

Charles Sands (Interstate Commerce Commission): Well, I certainly recommend escape ramps. There are several places on the Ridge (Ridge Route) where additional escape ramps could be placed because —I agree with Mr. Trask—I don't think we will ever educate all of the drivers * * * and an isolated case is capable of killing as many people as get in the way of trucks that run away on that hill.[52]

* * * * *

Assemblyman Dolwig: Well, if you had a legal speed limit of 25 miles an hour, which was adequately enforced, do you feel that there should still be escape ramps?

John Wilson (Chief Engineer, Truck Insurance Exchange): Yes, I do. It is possible that you might blow a diaphragm in a trailer or a truck, and then you would actually have what we might call a real

[50] *Ibid*, p 11
[51] *Los Angeles Hearing*, September 14, 1956, *op cit*, p 1.
[52] *Ibid*, pp. 4-5

runaway. Instead of a man failure like we now have, we would have a mechanical failure, so we need these escape ramps.[53]

Recommendations for change:

The subcommittee recommends that the Division of Highways study the problem of escape routes to be incorporated in highway design and construction, as a provision for driver safety.

C. Freeway landscaping.

Paul Oppermann (Planning Director, City of San Francisco) · An important phase of design, I mention this again, is landscaping and planting. If the people in the vicinity of the Western Freeway could be given positive assurance that the Western Freeway would be in effect a parkway amply provided with buffer planting, that in effect constitutes a green park or strip park with a roadway in its center, if the people could have been given this assurance, the menace of a steel and concrete monster, as I referred to it, would have been more readily disproved as a menace. But with the present limitation on planting as that which can be justified as necessary for erosion control or traffic safety, reducing headlight glare and the like, the Division of Highways could not present a strong enough case for an acceptable and locally satisfactory design, in my opinion. The nature of freeways and their impact on cities should be fully recognized There should be provided ample allowance in the procedure for achieving higher design standards. I strongly commend this matter of design, that type of design that is more appropriate and acceptable to the cities and to the citizens, to the attention of your committee.[54]

Karl Belser (Planning Director, Santa Clara County): A great deal of the controversy over freeways might be alleviated if the State were to place through residential areas a parkway type of road with limited access, depriving that parkway of certain types of highway use.[55]

Ross Miller (City Manager, Modesto): We would urge that greater consideration be given to the appearance of freeways as a location factor in cities. Landscaping, and where feasible, use of underpasses instead of massive overpasses, would enhance the appearance of freeway projects, and would, we believe, substantially minimize local opposition to freeway locations.[56]

Recommendations for change:

Based upon these representative views of city officials, the subcommittee recommends that the Division of Highways give additional consideration to appearance of freeways through landscaping, planting, and design.

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[53] *Ibid*, p. 12.
[54] Paul Oppermann, Director of Planning, City and County of San Francisco, Statement to Subcommittee on Highways, *Redwood City Hearing, op cit*, see Appendix 9, p 55
[55] *Ibid*, p 10
[56] *Sacramento Hearing*, November 26, 1956, *op cit*, p 31-A

APPENDIX I

STATE OF CALIFORNIA, DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS
November 10, 1955

RW-General Report on Condemnation Practices for Dolwig Committee

HONORABLE RICHARD J. DOLWIG
Member of the Assembly, Twenty-Sixth District
Redwood City, California

DEAR MR. DOLWIG: This is in reply to your letter of September 8, 1955, requesting certain information for the Subcommittee on Highways of the Conservation, Planning, and Public Works Interim Committee.

You first request a review of procedure utilized by the Division of Highways for the planning, construction and awarding of contracts, together with a reference to legislative directives where they exist.

Article IV, Section 36, of the California Constitution provides that the Legislature shall have power to establish a system of state highways or to declare any road a state highway and to pass all laws necessary or proper to construct and maintain the same, and to extend aid for the construction and maintenance, in whole or in part, of any county highway.

The statutory provisions covering routes of state highways are set forth in Sections 230 to 614 of the Streets and Highways Code.

Section 90 of the Streets and Highways Code provides that the Department of Public Works shall have full possession and control of all state highways and all property and rights in property acquired for state highway purposes. This section authorizes and directs the department to lay out and construct all state highways between the termini designated by law and on the most direct and practicable locations as determined by the California Highway Commission. Section 50 of the Streets and Highways Code provides that there is, in the department, a Division of Highways. Section 70 of the Streets and Highways Code provides that there is, in the Department of Public Works, the California Highway Commission consisting of seven members, of which the Director of Public Works is ex officio member and chairman.

Section 71 of the Streets and Highways Code provides that the California Highway Commission may alter or change the location of any state highway if, in the opinion of the commission, such alteration or change is for the best interest of the State.

Section 75 of the Streets and Highways Code provides, in part, that the California Highway Commission may at any time select, adopt and determine the location for state highways on routes authorized by law. In selecting these highway locations, the California Highway Commission is guided by its Procedural Resolution adopted February 18, 1955,

which provides for consultation with local officials where areas under their jurisdiction are affected by proposed state highway construction, and also for public hearings. Your committee has already been furnished with a copy of this resolution. More copies are available if desired.

While it is impossible to maintain a definite and rigid planning program because of uncertainties as to highway revenues, construction costs, the fact that the California Highway Commission must allocate funds on an annual basis, possible legislative changes, and changing traffic conditions, the Division of Highways nevertheless does maintain a tentative and flexible planning program. The primary purposes are to provide for an orderly conduct of the necessary engineering work and to assure that the provisions of the Mayo Formula (Section 188.4 of the Streets and Highways Code) will have been complied with at the end of each of the periods set forth in that formula during which certain minimum expenditures must be made in each county.

The division has an accurate inventory of the physical needs of each road in the State Highway System, as illustrated by the division's report submitted to the Legislature at the 1953 Session. Furthermore, the division takes traffic counts annually on all state highways. It is thus in a position to know what the total needs of the State Highway System are, and the necessary surveys and engineering work for planning purposes are so scheduled as to provide for the orderly development of the entire State Highway System in accordance with the formula provided by law for the expenditure of state highway funds.

Because of the several uncertainties and the possibility reliance will be placed on the carrying out of a program exactly as planned at any particular time, and because of the legislative delegation requiring the California Highway Commission to budget funds on an annual basis (Section 143.1, Streets and Highways Code), the Division of Highways does not attempt to prepare a publicized and long range program. Such a procedure would not, in my opinion, be for the best interest of the State.

A complete engineering study and report is made for each project in the planning program or, in some cases, for a combination of several adjoining projects. This report includes factual engineering data setting forth the deficiencies of the existing highway and also the best and most practical solution from an engineering standpoint.

The procedure followed after preliminary engineering studies have been completed on freeway projects is set forth in the "Policy of California Highway Commission in regard to the adoption of freeway routes," which has already been referred to. You will note that the Division of Highways after having arrived at a tentative conclusion based on engineering studies is required to (1) confer with the proper local governmental body and its technical staff, and (2) hold a well-publicized public meeting for the purpose of making all information developed available to interested individuals and groups.

In the public meeting held by the Division of Highways the results of the engineering studies are presented to everyone in attendance and each is given an opportunity to express his views on the subject. A transcript of the complete meeting is prepared and made a matter of record.

The Division of Highways arrives at a final conclusion upon which to base its recommendation to the California Highway Commission only after full consideration has been given to the results of all conferences and meetings so held

With respect to the economic factors considered in highway location studies, the two most important engineering factors are the total cost of the project, including construction and right of way, and the traffic service rendered Traffic service is usually expressed in terms of savings in distance and time, which savings can be translated into dollars

Another factor considered is the traffic relief to the existing street or road system that a freeway location will give. Furthermore, regarding the safety features of freeway traffic, consideration is also given to the reduction in accidents in terms of lives and injuries that it is estimated each alternate will give. In addition to the above factors, the Division of Highways attempts to determine disruption of a freeway location on the area traversed, including the number of homes and businesses that a freeway location will take, and also the effect on the existing street pattern, school zones, fire zones, etc. In matters of this type, we must lean heavily on the official local governmental body

You also requested the factors that determine the capacity for a highway plan of construction It is the policy of the Division of Highways to construct enough capacity into a highway to satisfactorily handle traffic for a period of 20 years after construction and to acquire sufficient right of way to provide additional capacity that may be needed soon after that 20-year period. It is also the present policy of the Division of Highways, with minor exceptions, not to construct or plan freeways of more than 8 lanes

For your further information concerning the planning aspects of highway work, I am sending you those sections of the Planning Manual of Instructions which have been published to date, namely Part 1—General Information, Part 7—Design, and Part 8—Traffic. You will note particularly in Part 8 pertaining to traffic, Section 8-100 pertaining to traffic counting and computing and the traffic census; Section 8-200 pertaining to the analysis of accident records; Section 8-300, traffic studies of alternate routes including origin and destination surveys; Section 8-330, the economic comparison of alternate routes, including highway costs, road users' operating costs and benefits to road users.

After the California Highway Commission adopts the highway route considered to be for the best interest of the State as a whole, the Division of Highways begins detailed surveys for design purposes. In the case of highway routes declared freeways by the California Highway Commission (Section 100.3, Streets and Highways Code), and where public roads are affected by the freeway, the division begins negotiations for a freeway agreement with the city council or county board of supervisors involved This agreement is provided for in Section 100.2 of the Streets and Highways Code and gives the locations of interchange and separation structures, frontage roads, and any changes to the local street or road system After design has progressed sufficiently to determine the right of way requirements of the project, maps delineating these requirements are prepared, and from that point work on design and right of way are carried on simultaneously.

The procedure for acquiring right of way is set forth in detail in the Division of Highways Right of Way Manual. This booklet also contains statutory references where pertinent. I am, therefore, forwarding to you a copy of the 1955 Edition of the Right of Way Manual and a copy of the 1955 Edition of the Right of Way Form Book.

You will note that Paragraph 1.12 of the Right of Way Manual provides, in part, that the first step of right of way acquisition is the review of all proposed projects which will subsequently be part of the District Planning Program. This review is prepared at the request of the District Engineer for inclusion in the project report which outlines the economic justification for the proposed highway improvement. A part of this report includes an estimate of the cost of right of way acquisition. All general effects upon the adjacent land of the proposed construction are thoroughly considered at this time to the end that the proposed project to be submitted to the State Highway Commission for inclusion in a subsequent budget shall be as practicable and as economically sound as possible.

You will note that Section 1.131 of the Right of Way Manual provides that in addition to the regular annual budget the Districts administer the Highway Right of Way Acquisition Fund (Chap. 20, Stats. 1952 (Second Extra Session) as amended), keeping the various areas through which future highways will pass under surveillance. In the above connection, I wish to point out that the law does not permit expenditure of state highway funds for purchase of right of way or improvement of a route on the new or revised location until the commission has voted adoption of the route (Section 193, Streets and Highways Code).

Paragraph two of your letter requests a review of the existing condemnation practices with appropriate references to legislation where these affect or control present procedure. Paragraph V of the Right of Way Manual contains a general review of existing condemnation procedure and the matter found on pages 170, 171 and 172, in particular, provides statutory references to the more important sections.

Section 104 of the Streets and Highways Code provides that the department may acquire, either in fee or in any lesser estate, any real property which it considers necessary for state highway purposes, including rights of way for state highways. The Right of Way Department of the Division of Highways makes every effort to acquire such property by purchase. If, after a reasonable effort to negotiate, it determines that the property cannot be acquired by purchase, the Right of Way Department requests that the California Highway Commission authorize condemnation.

Article I, Section 14, of the California Constitution provides that private property shall not be taken or damaged for public use without just compensation having first been made to, or paid into court for, the owner. This section also authorizes the public agency to take immediate possession and use of lands acquired for right of way.

In acquiring property by condemnation, the department is guided by the Constitution and statutory provisions on that subject. Section 102 of the Streets and Highways Code provides that the department may condemn for state highway purposes under the provisions of the Code of Civil Procedure relating to eminent domain any real

property, or interests therein, which it is authorized to acquire (the referred-to sections of the Code of Civil Procedure are found in Sections 1237 to 1266.2 of the Code of Civil Procedure). Section 102 of the Streets and Highways Code further requires that the California Highway Commission first adopt a resolution declaring that public interest and necessity require the acquisition, construction and completion by the State, acting through the department, of the improvement for which the real property, or interest, is required, and that the real property, or interest therein described, is necessary for the improvement. As a matter of policy if, prior to the trial in eminent domain, the department finds that one of its independent appraisers who will testify at the trial has appraised the property at a higher figure than the last offer made to the property owner, a further offer is made to the property owner, based on the appraisal of the independent appraiser.

Assuming that a given project is financed, it is prepared for advertising as soon as design is completed, right of way acquired, and any necessary agreements executed with other governmental agencies and railroads. In the case of Federal Aid projects, the plans, specifications and estimates are submitted to the United States Bureau of Public Roads for final approval and authorization for advertising. The State Contract Act, Sections 14250 to 14424 of the Government Code, applies to the erection, construction, alteration, repair or improvement of any state structure, building, road, or other state improvement of any kind which will exceed in cost a total of $2.000. In the performance of construction on the State Highway System, it is the policy of the department to perform all work, if possible, by contract, after competitive bidding by contractors who have been prequalified as to financial ability and experience. The State Contract Act provides in detail for the preparation, plans and specifications, advertisements for bids, a uniform system of rating bidders, referred to as prequalification, the award of contracts, the relief of bidders, payment, and various other contract requirements.

When all is in order for advertising, approval of the Director of Public Works for the Call for Bids is requested, and when received a Notice to Contractors is sent to the Department of Finance for placing the advertisements, according to statutory requirements. In order to secure the widest circulation possible in the Notice to Contractors and insure the utmost in competitive bidding, copies are mailed to all prequalified contractors and interested firms and individuals. Upon request, Plans, Specifications and Proposal Forms are issued to the prospective bidders who are properly prequalified (Section 14313 of the Government Code).

At the time and place specified in the Notice to Contractors, bids received are publicly opened and read by the State Highway Engineer, or his representative (Sections 14291, 14330, Government Code). Bids for work in Ventura, Los Angeles, Orange, San Bernardino, Riverside, Imperial and San Diego Counties are opened in Los Angeles. Proposals for work in all other counties are opened in Sacramento.

After all bids are checked, and if the low bid is found to be in order and acceptable, the allotment is prepared and award recommended to

the director. If the project is a Federal Aid project, approval of award is secured from the United States Bureau of Public Roads.

The contractor is then notified by letter of the award and the contract forms are prepared for signature by the director, the contractor and the surety. After the signatures are obtained, the signed contracts are sent to the Attorney General's Office for approval (Section 14370, Government Code). The contractor must begin work within 15 days from his receipt of notice that the contract has been approved by the Attorney General.

During the progress of the work, monthly progress pay estimates and final pay estimates are reviewed and processed in headquarters prior to payment. Upon notification by the district engineer that the work is complete and acceptable, a written acceptance of the work is prepared and forwarded to the Director of Public Works for his signature.

For your assistance in obtaining further details concerning highway construction, I am forwarding to you a copy of the Construction Manual and also a copy of the Standard Specifications which are a part of every state highway contract.

For your further assistance, I am sending a copy of the 1953 Edition of Statutes Relating to the Division of Highways. A considerable number of the statutory references to be found in this letter and in the various manuals which I am sending to you can be located in this book. However, it should be borne in mind that some of these statutes have been amended by subsequent acts of the Legislature A copy of the 1955 edition of this book will be sent to you when it is received from the printer.

Yours very truly,

G. T. McCoy
State Highway Engineer

APPENDIX II

POLICY OF CALIFORNIA HIGHWAY COMMISSION IN REGARD TO THE ADOPTION OF FREEWAY ROUTES

WHEREAS, In view of the continuation of present highway user taxes at the level established in 1953, the augmentation of the highway program resulting therefrom, and the state-wide interest in freeways and freeway locations, the California Highway Commission desires to restate and redefine its policy and procedure with reference to the adoption of the location or relocation of any state highway which is to be constructed as a freeway on substantially new alignment; and

WHEREAS, Section 71 of the Streets and Highways Code provides that "The commission may alter or change the location of any state highway if in the opinion of the commission such alteration or change is for the best interest of the State."; and

WHEREAS, Section 75 of said code provides, in part, that "Except as otherwise provided by law, the commission at any time and from time to time may: (a) Select, adopt, and determine the location for state highways on routes authorized by law."; and

WHEREAS, Section 111 of said code provides, in part, that "Whenever the natural course of a state highway passes into or through any city and a state highway route through or around such city is not specifically described by law, the commission shall determine the location of the connecting portion necessary to make the state highway continuous. Such location may be either through or around such city, depending upon the commission's determination as to which location will be of the greatest benefit to through traffic upon such state highway."; and

WHEREAS, Section 100.3 of said code provides, in part, that "From and after the adoption of a resolution by the California Highway Commission declaring any section of state highway to be a freeway, the highway described in such resolution shall have the status of a freeway * * * ," subject to acquisition of affected private property or private property rights; and

WHEREAS, In order that the commission may act in the best interest of the State in the selection and adoption of locations for state highways, or sections thereof, being considered for adoption and construction as freeways, it is required by the commission that it have before it all pertinent data relative thereto, including engineering and economic analyses respecting particular proposals; now, therefore, be it

Resolved by the California Highway Commission, That the following procedure is hereby established for determination of the location or relocation of any state highway, or portion thereof, which is proposed to be constructed as a freeway on a location not then in use as a traversable state highway:

1. That, when sufficient engineering and economic data have been accumulated to support a tentative conclusion as to a basic plan for the location or relocation of any highway proposed to be constructed as a freeway, the State Highway Engineer, or his authorized representative or representatives, will confer with the appropriate city council or board of supervisors, or both such council and board, and with their technical staffs, including planning commissions and staffs, and will publicize and hold such meetings as may be reasonably necessary to acquaint interested individuals, officials and civic or other groups with the information developed.

2. After such conferences and meetings, the State Highway Engineer will submit a report to the commission covering the results of such conferences and meetings, the studies made, and a recommendation as to the location or relocation of the highway, or section of highway, proposed to be constructed as a freeway which in his judgment, subject to all laws applicable thereto, will serve the best interests of the State.

3. The State Highway Engineer, on authorization of the commission, will give public notice of the commission's intention to consider the adoption of the location or relocation of the highway, or section of highway, in question and will also give written notice to the city council or board of supervisors, or both, as the case may be, of such intention. Unless the local legislative body or

bodies by resolution have previously declared that no public hearing by the commission is necessary or desirable, such notice to the local legislative body or bodies shall specify that if any such legislative body considers a public hearing on the matter necessary, the commission will hold, or cause to be held, such hearing, if so requested by any such local legislative body within thirty (30) days after the first regular meeting of such body following receipt of such written notice.

4. If any such legislative body requests such hearing, the commission, or designated members thereof, will hold, or cause to be held, a hearing, after due public notice of the time and place thereof, at which time and place all persons and organizations, and official bodies interested in the matter will be given opportunity to be heard.

5. The commission may, on its own motion, call a public meeting or hold such hearings, or rehearings, as it may deem appropriate.

6. After the expiration of such period of thirty (30) days, if no hearing is requested, or after such hearing, or after such hearing as the commission may hold on its own initiative, the commission will take action in respect to the location or relocation of such highway proposed to be constructed as a freeway.

7. The authorization referred to in numbered Paragraph 3 of this resolution, to give public notice of the commission's intention to hold a hearing, shall be by resolution of the commission relating to each specific location or relocation of the highway proposed to be considered. In all other respects, this resolution authorizes the State Highway Engineer, without further resolution or order of this commission, to do such things and take such action as may appear to him to be necessary or proper to comply with the above specified procedure and to comply with the herein announced purpose of the commission to inform the interested individuals and officials as to the nature of and the reasons for the particular proposal.

8. The resolutions of the commission regarding the subject matter hereof, adopted on July 15, 1948 and on July 23, 1953, are hereby rescinded.

This resolution is hereby adopted by the California Highway Commission at Sacramento, California, this 18th day of February, 1955.

APPENDIX III

ACQUISITION OF RIGHT OF WAY OF FREEWAY ROUTES

California Highway Commission	Department of Public Works, Division of Highways	Local responsible agencies
Specific route is adopted and then declared to be a freeway by Commission resolution.	Agreement made with city council or board of supervisors as to closing of streets intersecting freeway[1] This agreement provides also for under- or overpass of certain streets[2]	Contacted by Division of Highways for agreement on closing or streets intersecting freeway routes.
	Right of Way Section proceeds with negotiations with individual property owners for purchase of property.[3]	Individual property owners contacted by right of way agent to negotiate purchase of land. a negotiations successful, property acquired. b disagreement on value of property, negotiations unsuccessful, Agent reports to Headquarters Office.
Authorizes condemnation proceedings.	Headquarters Office, Right of Way Section, recommends Highway Commission authorize condemnation proceedings.	
	Necessary papers prepared and filed by legal division Condemnation procedure started.[4] Case heard and final judgment made.	Individual property owner presents case in court. Final judgment made.
	Upon completion of right of way acquisition of the entire project, Certificate of Completion forwarded by District to Headquarters Right of Way Office for closure of files.	

[1] No city street or county highway may be closed, directly or indirectly, without such agreement

[2] No city street or county highway can open into or connect with any freeway unless specifically consented to by Highway Commission resolution.

[3] Appraisal and negotiations with individual proerty owners cannot begin until the freeway agreement has been executed and delivered to the Department of Public Works In some cases, with extenuating circumstances, however, negotiations may proceed upon recommendation by the district engineer and approved by Headquarters, Division of Highways This is accomplished with Chapter 20 funds

[4] This action does not preclude continued negotiations with property owner for amicable settlement outside of court

APPENDIX IV

STATEMENT OF LAWRENCE LIVINGSTON, JR., CITY AND REGIONAL PLANNING CONSULTANT REPRESENTING THE CITY OF LOS ALTOS

Before the Subcommittee on Highways of the Assembly Interim Committee on Conservation, Planning, and Public Works, San Mateo County Hall of Justice and Records, Redwood City, California, September 24, 1956

MR. CHAIRMAN AND MEMBERS OF THE COMMITTEE: I have been requested by the City of Los Altos to express my views on the factors which should be considered by the Division of Highways in studying the effects of alternate freeway routes on community values as prescribed by the Streets and Highways Code, Section 75.5. I believe that the following issues should be studied in each instance:

1. To what extent is the proposed freeway currently needed and to what extent will it be needed in the future to carry interregional traffic, intraregional traffic and local traffic? By interregional traffic I mean movement between metropolitan areas like San Francisco-Oakland and Sacramento, and by intraregional traffic I mean movement between centers and subcenters of the same metropolitan area such as San Francisco, San Mateo and San Jose. This question can be answered by studying the relationship of the proposed freeway to present and proposed state-wide and regional freeway systems and to present and proposed local street systems.

2. What are the relative advantages and disadvantages of the proposed freeway being so located that it can carry local traffic movements? Assuming the advantage of a bypass route relieving local traffic congestion, the distance of the bypass from principal avenues of local movement must be considered. US 101 through Santa Rosa is only a short distance removed from the center of the community and consequently carries a substantial amount of local traffic, but it is a relatively ineffective element of the State Highway System compared with US 101 east of San Jose which almost completely bypasses the community. In terms of the prospective future traffic pattern, US 101 east of San Jose is a better located route, although it does not eliminate the need for local street improvements. Sometime in the future the Santa Rosa route may have to be replaced by a peripheral freeway alignment.

3. How will the effects of construction of a freeway within the next five years differ from its effects over a 20 to 25-year period? The answer to this question is particularly important with respect to the impact of the freeway route on an area which is not yet completely developed, like the route of the proposed Junipero Serra Freeway in San Mateo and Santa Clara Counties and on an area which is likely to be redeveloped within the life span of the freeway, such as the route of portions of the Eastshore Freeway in Oakland.

4. Will the proposed route tend to have a divisive effect or a unifying effect on the community? It should be recognized that freeways constructed at grade tend to split a community, except for areas located close to interchange structures. On the other hand, an elevated freeway or a freeway located in a cut with relatively closely spaced overpasses

may have a unifying effect if it replaces a heavily traveled major artery. An example of division is the Eastshore Freeway through San Lorenzo Village in Alameda County, and an example of unification is the elevated freeway structure on Cypress Street in Oakland, currently under construction.

5. If the freeway will tend to have divisive effect, does it split off portions of an area currently or potentially served by the same schools, recreation areas, shopping centers, churches, library, police station, fire house or other community facilities? Consideration should be given to the true location of community boundaries. Generally it is more realistic to consider such boundaries in terms of service areas rather than in terms of city limits, particularly in counties where annexations have not followed logical patterns.

6. At what locations would the divisive influence of a freeway route be desirable in that it would serve as a means of helping to preserve community identity? Most city planners agree that it is advisable to separate logical community units in order to achieve more efficient service areas and to prevent the metropolitan region from becoming a continuous urban sprawl. An example of a freeway route which provides a logical dividing line betwen communities is the proposed Stephens Creek route between Los Altos and Sunnyvale.

7. In what instances are the divisive effects of a freeway so undesirable from social and esthetic viewpoints that they outweigh the economic advantages of the particular route? Examples of freeway proposals which may fall into this category are the proposed route through Golden Gate Park in San Francisco and alignments which have been discussed for the Mountain Boulevard Freeway through the Mills College campus in Oakland and for the Junipero Serra Freeway through the Stanford University campus reserve lands

8. What will be the effects of the proposed freeway in opening new areas to population growth (and consequently creating a need for new community facilities and services) and to commercial and industrial development? Examples of this phenomenon are numerous. Perhaps the most spectacular is the effect of the construction of the Eastshore Freeway on the urbanization of southern Alameda County. To cite another instance, the cities of Martinez and Benicia have experienced relatively little growth since the war, but they are expected to grow very rapidly when a freeway on State Highway Route 21 and the Martinez-Benicia Bridge are constructed.

9. What is the relation of the proposed freeway route to the recommended Bay Area Rapid Transit System? Consideration should be given both the proposed alignments and timing of the rapid transit routes. In some instances the construction of a rapid transit line might eliminate the need for a freeway or bridge project. Possibly the proposed San Francisco-Tiburon Bridge would not be needed if the rapid transit system were extended into Marin County across the Golden Gate Bridge.

10. What kinds of properties must be acquired to provide the right of way for the proposed freeway? In some instances the acquisition of rights of way will prove advantageous to the community, and in other cases it will prove disadvantageous. Construction of the portion of the Eastshore Freeway in Oakland which is resulting in the demolition of

residential slums helps to solve a local problem. Conversely, removal of industrial plants to make way for the Bayshore Freeway in San Francisco reduced local employment and taxable values.

11. What will be the effect of the freeway on the appearance of the community? Study should be given to whether it will harmonize with the surrounding area and enhance its appearance or whether it will downgrade the area. While these factors are matters of taste to some degree, most people agree that the elevated portions of the Bayshore Freeway enhance the appearance of the industrial areas of San Francisco, but similar structures in a residential are would be inharmonious.

APPENDIX V

STATEMENT TO ASSEMBLY INTERIM COMMITTEE MEETING ON HIGHWAY PLANNING PROCEDURES

September 25, 1956

By WILLIAM E SPANGLE, JR, Chief, Master Plan Project
San Mateo County Planning Commission
City Hall, Redwood City, California

The basic need is for changes in legislation so that long range planning for highways will not only be permitted but required. In our rapidly growing State it is essential that a general highway plan be prepared and adopted well in advance of availability of funds for highway construction. At the present time our highway planning is geared to correct existing deficiencies. The basic approach should be changed so that planning is done looking ahead 20 to 30 years.

The process of planning for a highway system should be done in three stages. In the first stage a general plan should be prepared defining points which should be connected in order to serve state-wide interest. The second stage should be the definition of actual routes to connect these points. The third stage would involve the development of a system of priorities for acquisition of rights of way and actual construction.

The preparation of the general plan would involve primarily the definition in clear terms of state interest in highways. It should first define the points that should be connected in order to provide for intercounty and interregional travel. The second element of definition should be related to those routes that are needed in order to further the economic development of the State and its regions. This plan should be prepared through coordinated effort of appropriate state agencies, including the State Division of Highways and the State Planning Committee. In order to develop this kind of a general plan, the following information is needed:

1. Long range projection of future state population.
2. Evaluation of state resources and estimates of future economic potential.
3. Definition of state policy regarding agricultural and industrial land use and water resource development.
4. Estimates of population distribution throughout the State based on factors 1 through 3 above.

The action on adopting such a state-wide plan should be taken only after regional and state-wide hearings. The basic information needed for decisions on this plan should be maintained in current status and the plan itself should be subjected to complete periodic review, possibly at five-year periods.

The second stage of planning, that of actual route designation, should be undertaken with active cooperation of local government and in particular local planning agencies. In establishing routes the factors relating to community development outlined last night by Lawrence Livingston, Jr., should be given positive consideration. When studies are started to define actual route location on a new route, a public hearing should be held in the locality to provide residents of the area information regarding:

1. The need for the route as a part of the state system.
2. The standards of highway design and other factors that will be taken into consideration in actual route selection.

In the third phase of the planning process, in which a system of priorities would be developed for right-of-way acquisition and actual construction, primary emphasis should be on state-wide interest but due consideration should be given to the desires of local government as expressed through their legislative bodies. The procedures followed in developing priorities by the State Park Commission and State Lands Commission provide a pattern that could be followed in relation to highways. This procedure involves the preparation of a county-wide general plan and the designation of local priorities. These plans are then coordinated at the state level and an over-all system of priorities established by the state agency.

Priorities for both land acquisition and construction should be subjected annually to review by both local and state legislative bodies. As is the case with the State Park Commission and the State Lands Commission, responsibility for coordinating local thinking should rest with the county board of supervisors.

The orderly and economic execution of highway projects requires that a land acquisition fund be established so that rights of way can be purchased and protected well in advance of construction. Present time limitations on right-of-way acquisition should be modified to permit acquisition further in advance of construction. A second element that would assist in orderly execution of projects would be greater consideration of the relocation requirements of occupants of lands to be taken for highway rights of way. Consideration should be given to the inclusion in state legislation of specific requirements for relocation of site occupants similar to those in the Federal Housing Act. The federal act requires, prior to the execution of a redevelopment project, that a finding be made that suitable housing is available within the means of site occupants. State or appropriate local agencies should actively assist residents and other site occupants with their relocation problems so as to mitigate individual hardship as much as possible.

APPENDIX VI

REPORT BY EARL J. ESSE, CHIEF DEPUTY DIRECTOR, REGIONAL PLANNING COMMISSION, COUNTY OF LOS ANGELES, MILTON BREIVOGEL, DIRECTOR

September 28, 1955

Los Angeles County has been very fortunate in having developed a highway plan and a freeway plan many years in advance of the tremendous increase in population and the attendant development of great industrial and commercial areas.

More than 30 years ago a highway network was established and used as a framework for community development and for the acquisition of through traffic ways.

In 1936 this plan, restudied and brought up to date, was adopted by the county and nearly all of the 44 cities, as the Official Regional Plan of Highways, and property development was made to conform to the plan.

A few years later it became evident to planners and highway engineers that a roadway however wide, with intersections every few hundred feet, could not carry the increasing volume of traffic efficiently and safely.

As early as 1934, studies were started by the staff of the Regional Planning Commission to establish a parkway along the Arroyo Seco to connect the Cities of Los Angeles, South Pasadena and Pasadena.

The engineering departments of those cities with the advice and assistance of the engineers in the local office of the State Division of Highways developed the plans to a point where it was evident that such a facility could and should be constructed.

The State Highway Commission was also searching for a solution of the increasing traffic problems on state highways and when approached by representatives of the local jurisdictions and the various citizen groups who were interested in the local traffic problems, lent their support to the extent that the State Legislature adopted the route into the State Highway System.

The Arroyo Seco Parkway (now named the Pasadena Freeway) was opened to traffic early in 1941, and was instantly accepted by the motoring public as a much needed facility for the rapid and safe movement of large volumes of traffic. This route is the pioneer of the many freeway routes in the vast network now being developed throughout California.

In 1947 a Master Plan of Freeways for the Los Angeles region incorporating the best features of the various plans previously proposed, received the approval of the Metropolitan Transportation Engineering Board, a committee made up of representatives of the planning and engineering departments of the 45 cities and of the county; the Automobile Club of Southern California; the Los Angeles Metropolitan Traffic Association; Los Angeles Traffic Advisory Board; Los Angeles Chamber of Commerce; the Downtown Business Men's Association; and the National Safety Council.

On September 16, 1947, this plan was adopted by the Board of Supervisors as the "Master Plan of Freeways, County of Los Angeles" and the construction of freeways has proceeded according to this plan.

Los Angeles County appreciates the excellent cooperation of the State Highway Department with the county departments in their detailed studies of the freeway routes in the unincorporated area.

State highway engineers confer regularly with representatives of the Regional Planning Commission, the County Road Commissioner and the County Engineer to discuss the relationship of the freeway routes to the county highway plan and the land use pattern. Interchange points on major highway routes and access facilities to residential and industrial areas are worked out to provide for the most satisfactory development of the adjacent territory.

Adjustments in the county highway system are also worked out satisfactorily through this close cooperative effort.

The citizen organizations, previously mentioned, are still active and are giving serious consideration to the many problems of traffic congestion in this area with the assurance that they will receive the fullest cooperation from the staff of the Los Angeles office of the State Division of Highways.

Many of us believe that, as the Los Angeles metropolitan region continues to grow, there will be need for additional freeway routes and these, too, will be worked out satisfactorily through the same program of cooperative effort.

APPENDIX VII

SENATE CONCURRENT RESOLUTION No. 26

Introduced by Senators Collier and Richards

January 14, 1957

REFERRED TO COMMITTEE ON TRANSPORTATION

Senate Concurrent Resolution No. 26—Relative to an over-all state-wide plan of freeways and expressways for the State of California.

WHEREAS, The Legislature of California finds:

(a) Adequate, safe, and economical highway transportation is vital to the future development of the State of California.

(b) It has been amply demonstrated that properly designed and located freeways and expressways are the most economical means of providing highway adequacy and safety.

(c) California is rapidly developing individual freeways and expressways and segments thereof, but in many cases on a piecemeal basis, which program has been greatly accelerated by the enactment of the Federal-Aid Highway Act of 1956 and will be expanded considerably more if Congress carries out its stated intentions regarding apportionments of federal funds for interstate highways.

(d) There is need for the people of California and its agriculture and industry to be informed of plans for the ultimate freeway and expressway system of the entire State as nearly as such can now be determined by basic engineering studies.

(e) There is need for the establishment of a plan for such a state-wide system of freeways and expressways determined without regard to present jurisdiction over the highways, roads, and streets that might be included, in order that appropriate state, county, and city transportation plans and fiscal arrangements may be worked out and properly coordinated; now, therefore, be it

Resolved by the Senate of the State of California, the Assembly thereof concurring, As follows:

(a) The Department of Public Works is requested to undertake a study which will provide a basis for an over-all state-wide plan of freeways and expressways for the State of California, such study not to be limited to state highways and such study to locate the potential freeway and expressway routes of such a state-wide system and the necessary connections thereto as nearly as is practicable in advance of detailed engineering design of projects.

(b) The Department of Public Works is requested to employ by contract or otherwise such engineering consultants or other specialists as it deems may be needed for conduct of the study and the preparation of reports.

(c) The Department of Public Works is requested to defray the costs of the study from moneys available in the State Highway Fund for highway planning and is further requested to undertake to secure matching contributons of federal funds available for highway planning to the extent that such are available.

(d) Agencies of the State Government and cities and counties and the City and County of San Francisco are requested to cooperate with the Department of Public Works in the conduct of the study.

(e) The Speaker of the Assembly and the President pro Tempore of the Senate are directed jointly to appoint a committee of seven officials of counties and seven officials of cities to act in a technical advisory capacity to the Department of Public Works, and the department is directed to cooperate and confer with the technical advisory committee so appointed.

(f) The Speaker of the Assembly and the President pro Tempore of the Senate shall refer the subject matter of this resolution to the appropriate joint interim committee which may deal with highway transportation problems if such committee is created at this session of the Legislature, or if no such committee is created, then the subject matter shall be referred to the appropriate interim committee of each of the respective houses by the Speaker and the President pro Tempore respectively.

(g) The Department of Public Works is requested to report from time to time on the progress of its study to the appropriate interim committee or committees as designated under the provisions of the preceding paragraph and to submit its final report on the subject matter of this resolution to the appropriate committee or committees not later than September 1, 1958.

APPENDIX VIII

THE PROBLEM OF FREEWAY LOCATIONS IN LOCAL COMMUNITIES BY THE STATE DIVISION OF HIGHWAYS

A Presentation to the Subcommittee of the State Interim Committee on Planning and Public Works, Redwood City, September 24, 1956

COUNTY OF SANTA CLARA, PLANNING DEPARTMENT
September 24, 1956

We wish to take this opportunity to place before this committee some of the problems that are being faced by our local community in regard to the location of freeways and the establishment of rights of way. Santa Clara County is unique in this regard, that many of its proposed freeway routes are on new lines which do not now exist. The problem is not the same in Santa Clara County as it is in most of the rest of the State. It is a well known fact that whenever a new line is to be determined through territory which has not been identified as an area to be utilized in this manner, the problems are extremely controversial. But in improving the Bayshore and in developing the Route 5 Freeway through Santa Clara County we hope to experience practically no difficulty with any of the jurisdictions involved in signing freeway agreements. This is because for a long period of time these areas have been identified as freeway routes and most of the difficulties have been ironed out by careful coordination bewteen local jurisdictions and the State.

The recent turn of events in Santa Clara County has brought the problem all the more critically into focus. In 1950 there were seven communities in Santa Clara County, well separated and with ample open space between them for lining up freeways. In this open unincorporated territory it was merely necessary to deal with the County Board of Supervisors in determining freeway agreements. Now we have 14 jurisdictions completely blanketing the northwestern section of Santa Clara County, with practically no unincorporated territory left. It is currently necessary to meet the desires and wishes of at least five or six communities on every freeway line that is to be developed. Regardless of what the county plan was five year ago, the conditioning of the minds of the people in these various communities has diverged generally from the thinking of the rural community of 1950 to that of a metropolitan community of 1956.

Generally speaking, the freeway is looked upon as a disruptive element in the local community's plan. Whether this is correct or not is a matter of contention. Most communities desire the freeway to be close by but not to be in it, or to affect its growth in any way. This has brought controversy to Santa Clara County on every single freeway line and every single route adoption we have before us currently. There is something wrong with the present system where the state division engineers do exhaustive planning and research and design on these highways, only to find when they come before the local community for approval that they are thwarted by the opinions of local officials. I'm sure that no one wishes to imply that the local community should be overriden by the state needs and requirements.

The problem seems to lie largely in the timing of the discussions. The local community is presented with a fait accompli rather than being asked for a decision as to what it really resires. I could recite the recent debacle that took place in our county over the public hearing on the Stevens Creek Freeway. I believe that it is incorrect to say that the state division engineers did not contact the local communities and alert them to what the proposals were, and try to work with them on basic solutions. Not only was there a foul-up at the state level, but there was a foul-up at the local level. Here we have an instance of a rapidly growing metropolitan area which in itself is uncoordinated. Mr. Booker, I am sure, will bear me out in this: that every single routing that we have within the county is in controversy. This is not a controversy so much between the State and the local jurisdictions as it is between the local jurisdictions themselves. When the various local jurisdictions in the community cannot agree on a line, it is virtually impossible to have the State step in and say, "Well you can't agree, so we'll put it where we want to put it." The obvious response of the state engineers to this kind of machination on the part of the local jurisdiction is to say, "Well if you're not ready to decide now where you want to put it, we will wait until you are ready to decide." This waiting has cost the County of Santa Clara millions of dollars in terms of cost of right of way, and no decision has yet been reached on any of the many freeway lines which we require.

I think that one of the best steps that could be taken at this time would be to coordinate local communities in metropolitan areas into a broad program of state highways. An outline of my suggestion would be as follows: that the State Legislature establish within the State Division of Highways a master plan section which would be devoted completely and entirely to the problem of laying out future highways within or proposed to be placed within the state system of highways. This agency would be given the jurisdiction to go into counties and work with county officials in developing a master plan of state highways for each county, and have that master plan for each county coordinated with every other abutting county master plan. It would envision service on the basis of certain specific criteria, and I think the basis of the criteria should be considerably broadened over what the criteria are now for the location of freeways in local communities. All planning aspects of the local community must be taken into consideration in this primary action on the part of the State. This master plan, once firmly established, should be adopted by the Legislature as the Master Plan of State Highways. And it should likewise be adopted by each board of supervisors and each county and city as the Master Plan of State Highways within each jurisdiction. After this is done, the master plan should be distributed to the various districts involved, and from then on the baby is theirs. From that point on they should be able to locate lines, to design, and to provide for the facilities which the community needs. They should even be able to construct and develop the system and establish priorities. The local communities might be consulted, but would not necessarily have to concur in the details of interchanges, and landscaping and other features of the line. I believe that if this were done, 90 percent of the hassling which is going on would be over the

dam. It might be possible in this process to designate the State Planning Office as the coordinating agency between the State Division of Highways' planning engineers and local master plans.

There is one further comment I would like to make on the road building policy of the State Division of Highways. At the present time we have nominal classifications of state highways in primary and secondary systems. In my opinion, this is not enough. This indicates that every road on the primary system shall be a four-lane or six-lane divided freeway with limited access and completely separated in grade. The secondary roads shall be two-lane roads out in the woods somewhere. In a rapidly developing metropolitan area the circulation system is more complex than than and the problem of integrating the State Highway System into the general pattern is likewise more complex. It seems to me that the highway system should be used as a functional element of the community plan, and that the kind of road should be related to its function. I can briefly list for you what I consider some of the functional types of roads which it may be possible for the State Highway Division to formulate for the State. It seems to me the road system could be divided up into metropolitan freeways, industrial expressways, parkways and boulevards, recreational highways and service roads connecting areas of activities. The standards for these various types of roads may not be the same and the amount of money spent per mile would not need to be the same. A great deal of the controversy over freeways might be alleviated if the State were to place through residential areas a parkway type of road with limited access, depriving that parkway of certain types of highway use.

APPENDIX IX

STATEMENT OF PAUL OPPERMANN, DIRECTOR OF PLANNING, SAN FRANCISCO, BEFORE THE SUBCOMMITTEE ON HIGHWAYS OF THE ASSEMBLY INTERIM COMMITTEE ON CONSERVATION, PLANNING, AND PUBLIC WORKS, CONCERNING THE WESTERN FREEWAY IN SAN FRANCISCO

Redwood City, September 24, 1956

The controversy in San Francisco over the proposed Western Freeway has been different in at least one important respect from most of the freeway conflicts elsewhere in the State. The significant difference is this: The Western Freeway is an integral element in the total freeway system proposed for San Francisco, adopted in the Trafficways Plan of the Master Plan by the City Planning Commission in 1951.

As it has been done with other freeway routes acted upon in San Francisco since the preparation of the Trafficways Plan—the Embarcadero, the Central and the Southern—the Division of Highways, in undertaking studies of the Western Freeway alignment and design, was guided by, and took the first step toward effectuation of, an element of the Master Plan of the city. The Department of City Planning and the Department of Public Works of the City and County of San Francisco were in accord, and the Division of Highways was in accord as well, on the necessity for the Western Freeway route. The timing of the study of the route was in accordance with the over-all program for

freeway planning and development in San Francisco by the Division of Highways and the City Department of Public Works. This program was revised with the full accord of the city departments and the State Division of Highways, when the gasoline fuel tax was raised, in order to reflect the increased revenues and stepped-up construction program that would result. Cooperation between the city and the State Division of Highways is further evidenced by the city department of public works relinquishing to the State a section of the Southern Freeway on which it had been working, and coordinating with the State the design and construction program of another section of this route not included in the state system, so that the entire route could be completed concurrently. With the concurrence of the city departments, the over-all program has been presented and advocated each year by the San Francisco Chamber of Commerce before the Highway Commission, for proper inclusion in the highway budget.

Thus, the controversy in San Francisco has not arisen over any basic differences in the point of view of the State Division of Highways and the city departments. Rather, it is my opinion that the controversy has been occasioned by failures on the parts of both the State Division of Highways and the city departments to communicate with and sufficiently inform the citizens of the city.

It will be noted that the Master Plan of the City and County of San Francisco is adopted by the city planning commission, but not by the board of supervisors. It has been felt by some observers that if the board of supervisors had been required to adopt the Trafficways Plan before it became officially a part of the Master Plan, the recent controversy over the Western Freeway would not have arisen at this late date. It is my belief, however, that this would not necessarily have followed. Not one of the 11 members of the board of supervisors today was a member of the board in 1951 when the Trafficways Plan was adopted. Had the board of supervisors adopted the Trafficways Plan in 1951 such action would not have bound the members of the board today. Even if it had, the board would have sought to consider the matter de novo now in the light of changed circumstances and attitudes.

Actually, the controversy over the Western Freeway has arisen from fears on the part of ill-informed citizens, derived from a limited but actual experience with freeways in the city that did not exist in 1949 and 1950, when public hearings were held by the city planning commission. For, in fact, when the public hearings on the over-all Trafficways Plan were held by the city planning commission before adoption, the controversies and subsequent adjustments were all centered on minor localized matters, concerning major and secondary thoroughfares. The freeway pattern was not challenged. The freeway system was not opposed. Rather it was favored by the representative organizations that presented their views formally to the city planning commission. That this was so may perhaps have been due to the limited experience with freeways which the citizens and their organizations had, and with the slower program then scheduled, which placed most of the routes 10 or more years in the future.

The Western Freeway timing was moved ahead with the more rapid program. Fears were aroused in the minds of the people of the Sunset

District of the elevated freeway structures in the South of Market industrial area appearing on their quiet residential streets. A picture of steel and concrete monsters was conjured up in their minds. No assurances would be accepted that a depressed roadway, with landscaped planting buffers was intended, nor that the standard adopted in the San Francisco Trafficways Plan was seriously intended: "Continuous elevated structures should be avoided on freeways except where (a) they form part of a bridge approach; (b) they are required by topographic conditions; or (c) they are located in industrial districts * * *." The people became alarmed when they learned, without the benefit of a detailed public announcement and explanation, that the State had started studies of the Western Freeway alignment as indicated in the Trafficways Plan, and of alternate routes. They feared they would be presented with a completed study and firm recommendations which could not be changed.

Hence there was a failure, in my opinion, on the part of the public agencies responsible adequately to inform the citizens regarding the Trafficways Plan and of the program for carrying it out. The new members of the Board of Supervisors likewise should have been more fully informed of the program and of its meaning to San Francisco.

The State Division of Highways might well have avoided the Western Freeway controversy had it informed our citizens and the board of supervisors, of its preliminary planning study before it was begun. If the people had known before the Division of Highways started what was proposed to be done and what local changes would result, and how property owners would be affected, the hostile "climate" that resulted probably would have been avoided or at least been easier to deal with in a reasonable spirit. This controversy has sharply focused the attention of public officials concerned—both city and state—upon the necessity for keeping the entire freeway planning procedure closer to the people affected and the citizens generally, in order to eliminate the possibility that the city's technical people and those of the State concerned, could not be charged with arbitrary and aggressive behavior by many people who through being uninformed about the freeway plan and program and the procedures for carrying it out, can and have challenged a major link in it.

Additional safeguards in the form of advertised and publicized hearings, and the formal legalizing of unofficial procedures may be desirable. Specifically, I would suggest for your consideration the following:

1. Review and expression of opinion on the Division of Highways budget affecting each county by the board of supervisors, before action by the Highway Commission.
2. A public hearing in the area affected, by the Division of Highways, before preliminary planning studies are started, so that the people may be informed of the initiation of a study.
3. Formal coordination between the Division of Highways and the city and county technicians, to achieve what has been generally achieved in San Francisco through informal cooperative measures.

The insertion of these three steps into the freeway planning procedures, before the point of public hearings on a specific alignment and design recommendation, might do much to increase public understanding and to relieve the technicians of the frustrating anomaly of working on a freeway which is mandatory by law, but through misunderstanding is seemingly unaccepted and unwanted in fact, by at least some of the people in whose interest the law has been enacted by their representatives in the State Legislature.

I have not spoken thus far on the matter of design—the importance of considering the freeways from the point of view of their effects on community values not simply their traffic benefits. Since the San Francisco Trafficways Plan, which contains principles and standards derived from a full consideration of land use and community values, is in our city the accepted guide to the Division of Highways, this has not been a problem in San Francisco. Writing into law the necessary and important consideration of land use criteria might diminish or eliminate such problems elsewhere.

An important phase of design, however, from which San Francisco would benefit by legislative changes concerns landscaping and planting. If the people in the vicinity of the Western Freeway could be given positive assurance that the Western Freeway would be in effect a parkway, amply provided with buffer planting that in effect constitute a green park with the roadway in its center; if the people could have been given this assurance, the menace of a steel and concrete monster could have been more readily disproved. But with the present limitations on planting to that which can be justified as necessary for erosion control or traffic safety—reducing headlight glare, and the like—the Division of Highways could not present a case for an acceptable and locally satisfactory design solution. The nature of freeways and their impact on cities should be fully recognized. There should be provided ample allowance in the procedures for achieving higher design standards. I strongly commend this matter of design that is more appropriate and more acceptable to the cities, to the attention of your committee.

I appreciate the opportunity to appear before you. I share your concern over the problems of freeway locations before you this evening. If I can be helpful to your committee be assured of full cooperation in responding to any further call you may wish to make.

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STATE GREENBELT LEGISLATION AND THE PROBLEM OF URBAN ENCROACHMENT ON CALIFORNIA AGRICULTURE

Preliminary Report of the
SUBCOMMITTEE ON PLANNING AND ZONING

A Subcommittee of the
ASSEMBLY INTERIM COMMITTEE ON CONSERVATION, PLANNING, AND PUBLIC WORKS
House Resolution No. 239, 1955

Report Prepared by
HAROLD F. WISE & ASSOCIATES
BRUCE WAYBUR, SAMUEL E. WOOD

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COMMITTEE LETTER OF TRANSMITTAL

HON. L. H. LINCOLN
Speaker of the Assembly; and Members of the Assembly,
Assembly Chamber, Sacramento, California

This report indicates the need for intensive study of the problem of conserving the State's agricultural resources from unplanned and unregulated encroachment of urban areas.

I join the subcommittee in its efforts to inform the people of California and their representatives of the need for immediate investigation of this problem looking to a program of legislation in the 1959 Session.

It appears urgent that state greenbelt legislation enacted in 1955 on a temporary basis should at this time be re-enacted as a permanent part of the Government Code, in order to hold the line against further unwarranted conversion of prime agricultural lands.

Respectfully submitted,

FRANCIS C. LINDSAY, *Chairman*

SUBCOMMITTEE LETTER OF TRANSMITTAL

HON. FRANCIS C. LINDSAY, *Chairman*
Assembly Interim Committee on Conservation, Planning and Public Works
California Legislature
State Capitol, Sacramento, California

DEAR SIR: This preliminary report has been prepared as a result of our subcommittee's hearing in Santa Clara County, November 27, 1956, and further study by the committee's staff consultants.

The primary object of the subcommittee hearing was to receive testimony on the operation of exclusive agricultural zoning and the so-called greenbelt legislation passed during the 1955 Session (Government Code, Section 35009, added by Stats. 1955, Ch. 1712) from the standpoint of its ability to meet the problems related to the conversion of prime agricultural land to urban uses in Santa Clara County. It was felt that this testimony would assist the subcommittee in developing a program of legislation for the general session.

The testimony received by the subcommittee was fairly conclusive in its evidence that the greenbelt legislation has been a workable tool in the county's program to protect farmers against premature and unwarranted urban expansion, without prejudice to the growth of cities, and should be re-enacted on a permanent and state-wide basis at this session. The subcommittee strongly urges the passage of Assembly Bill No. 1676 to accomplish this purpose.

In the course of the hearing, the subcommittee also heard proposals for a more comprehensive program of legislation to protect agricultural areas. These proposals call generally for state-wide study and state-wide planning to conserve areas of prime agricultural producing ability, and efforts to divert urban expansion to soils of lower grade. Some proposals call for public purchase of greenbelt areas, or development rights on such lands, so that they may be kept in agricultural use as long as such use appears in the highest public interest.

The subcommittee therefore adds to its recommendation for immediate passage of the State Greenbelt Law a further step: The establishment of a State Agricultural Lands Commission, which shall make an intensive study during the next two years of the impact of urban development on California agriculture and on the economy of the State and various local areas. This investigation will provide a basis for consideration by the Legislature of appropriate legislation to cope with this increasingly urgent conservation problem.

Respectfully submitted,

(Signed)	BRUCE F. ALLEN, *Chairman*
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Subcommittee on Planning and Zoning

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I. INTRODUCTION

The subcommittee has long been aware of the increasing impact of urban development upon one of the State's major resources, agricultural land. It has engaged in continuing study of the problems relating to urban encroachment on prime farm land and of legislation designed to deal with these problems.

One of the first actions to protect agricultural land in the State was taken by the County of Santa Clara, which in September, 1953, added to its zoning ordinance an "Agricultural District," or "A" zone, in which nonagricultural uses are prohibited. Altogether, some 18,000 acres of orchard lands have been brought under the "A" zone at the request of the owners.

In 1955, the Legislature added Section 35009 to the Government Code, the so-called "Greenbelt Law," providing that no land under exclusive agricultural zoning could be annexed to a city without the consent of the owners. The legislation was on an interim basis, effective for two years, and applied only to land zoned and restricted for agricultural purposes exclusively pursuant to a master plan for land use adopted before December 31, 1954. The latter provision has limited the application of the law, in practice, to Santa Clara County.

In November, 1956, the Subcommittee on Planning and Zoning heard testimony on the operation in Santa Clara County of the county's exclusive agricultural zoning ordinance and the State "Greenbelt" Law. Testimony was favorable to both measures. Continuation of the state law on a permanent basis was urged by all agricultural representatives who testified, and by the county planning department.

While the testimony taken applied primarily to Santa Clara County, it was evident that the problem confronts all of the State's metropolitan areas. Santa Clara County offers the most impressive case study to date of the impact of unplanned, unregulated, haphazard urban expansion on a prime agricultural producing area. It also offers the greatest body of experience with the pioneering legislative measures—exclusive agricultural zoning and limitations on annexation of land so zoned—which have so far been devised to regulate urban sprawl.

Those who have had most experience with these measures were agreed that, while they form the cornerstone of present agricultural conservation policy in Santa Clara County, they do not go far enough. Unregulated urban growth is a state-wide phenomenon. The protection of valuable agricultural lands, the testimony indicated, requires a state-wide policy and a state-wide plan for agricultural land conservation, consistent with the needs of an expanding urban population.

The report brings together the highlights of the testimony, and additional information on the problem of agricultural conservation gathered by the committee's staff consultants.

II. FINDINGS AND RECOMMENDATIONS

FINDINGS

1. The subcommittee investigation indicates that experience in Santa Clara County under the state "greenbelt" legislation (Section 35009, Government Code) has been favorable and that the legislation (with minor amendments) should be re-enacted on a permanent basis. The growth of cities has not been adversely affected, and a check has been placed on indiscriminate annexation of agricultural lands.

The operation of the Santa Clara County exclusive agricultural zoning ordinance has also been generally favorable. The ordinance plus the State Greenbelt Law have, for the time being, protected nearly 20,000 acres of prime agricultural land from premature, unplanned, and economically wasteful subdivision.

2. It appears evident to subcommittee members that exclusive reliance cannot be placed on these measures to preserve our prime agricultural lands in expanding metropolitan areas. The best efforts of local government are bound to be thwarted by population and other urban pressures which spill over county boundaries, and which demand planning guidance on a regional or state-wide scale. There has also been insufficient attention to the problem of how the farmer, once set up in his greenbelt, can make a living while his land is subject to being assessed and taxed at valuations placed on urban uses.

3. As a result of its investigation, the subcommittee believes that the impact of urbanization on prime agricultural producing areas is sufficiently serious to warrant the formulation of a state policy and a program of legislative action to conserve agricultural lands. The State's interest in agricultural land conservation can be effectively protected only if conservation measures are state-wide. This in no way minimizes the duty and responsibility of local governments to carry out conservation programs. In all probability, local governments will continue to have the operating responsibility for a state-wide program. State participation will ensure uniformity of standards.

4. Enough is known about the impact of urbanization on agriculture to indicate the urgent need for a thorough investigation of California's situation, as a basis for legislative action. In the course of such an investigation, it will be desirable to determine approximately what our agricultural land requirements are going to be over the long run, so that we may start planning now for conservation of the necessary amounts and types of land. This is in the interest not only of conserving our food resources, but is also vital in planning major capital projects such as water resources developments and highways. The view was expressed by witnesses at the San Jose hearing that it would be incongruous to develop a California Water Plan to irrigate more than 16,000,000 acres of agricultural land, if much of this irrigable land is to be converted to other uses. It is wasteful to build elaborate and costly irrigation systems based on a program of agricultural development, only to find that before the works are completed a metropolitan

community has expanded over the land to be irrigated and that this water can now be used only on land of inferior quality.

5. Effective land use controls will have to be provided to protect the farm land which will be needed. Also, land use controls must be supplemented by tax and other measures which will make it economically feasible for farmers to continue in business. Where this it not possible, greenbelt areas can be secured for future generations only by public purchase.

a. It is evident that the full protection the greenbelt laws were intended to give to agriculture is being watered down by a taxing policy inconsistent with their objectives. Under present policy of local government, agricultural lands even when zoned exclusively for agricultural use may be assessed and taxed at valuation placed on land for urban uses. The county assessor still follows the rule that "the market value of 'greenbelt' lands must be ascertained by the same tests as any other class of property." These "tests" assume that the "highest and best use" of land in a metropolitan area is, in almost every case, an urban use. This line of reasoning assumes that "highest and best use" is judged by what developers will pay for a piece of land, rather than by the contribution that land may make to the over-all economy of the area and to the living environment of its inhabitants.

b. Present tax policy puts constant pressure on the farmer to sell out to the subdivider, even when he might prefer to go on farming. Often the values on which he is being taxed are those set by anticipation of speculative gain.

RECOMMENDATIONS

1. The subcommittee recommends permanent re-enactment at this session of the state greenbelt legislation which was adopted by the 1955 Legislature for a two-year period. Slight changes of wording in the existing text of the law (Section 35009, Government Code) are required to make it permanent and applicable to the entire State. Assembly Bill No. 1676, (introduced by Assemblymen Allen, Lindsay, Hansen, Bradley, and Nisbet) would accomplish this purpose.

2. The subcommittee further recommends legislation to establish a state agricultural lands commission, and to authorize such commission to conduct a two-year investigation of the impact of urbanization on California agriculture and on the economy of the State and various local areas where agriculture has predominated. The purpose of this investigation would be to obtain in sufficient detail the necessary facts on which to base appropriate legislative action to conserve agricultural resources. Assembly Bill No. 2867, introduced by the subcommittee, would accomplish these purposes.

3. Development of a further program of legislative action, covering broadly the proposals advanced by witnesses and described in Section 6 of this report, would await the findings of the state agricultural lands commission investigation.

4. Nothing in these recommendations is intended to limit or discourage local governments in initiating and carrying out during the two-year study period agricultural conservation measures as part of their own land use planning programs. Time is of the essence, and every possible effort is needed to set aside valuable agricultural areas *now*

before they are committed irrevocably to other uses. It will always be possible later to provide for orderly conversion of such lands to other uses, when such conversion appears in the highest public interest.

LEGISLATION

CALIFORNIA LEGISLATURE—1957 REGULAR SESSION

ASSEMBLY BILL No. 1676

Introduced by Messrs. Bruce F. Allen, Lindsay, Hansen, Bradley, and Nisbet

January 18, 1957

REFERRED TO COMMITTEE ON MUNICIPAL AND COUNTY GOVERNMENT

An act to amend Section 35009 of the Government Code, relating to annexation of territory to cities.

The people of the State of California do enact as follows:

SECTION 1. Section 35009 of the Government Code is amended to read:

35009. Any territory which is ~~by consent of the owners~~ zoned and restricted for agricultural purposes exclusively pursuant to a master plan for land use in any county shall not, while it is so zoned, be annexed to a city pursuant to Articles 2 or 5, without the consent of the owners of the land in the territory *which is proposed to be annexed*.

Territory so zoned shall not be considered unincorporated territory for purposes of Sections 35158 and 35326.

~~This section shall apply only to counties which have, on or before December 31, 1954, adopted a master plan for land use which includes provision for the zoning and restricting of areas for exclusively agricultural purposes, and this section shall apply to any territory which is so zoned and restricted pursuant to such plan before or after such date.~~

This section shall not be construed and is not intended to prevent the annexation of roads.

~~This section shall be effective until the ninety-first day after final adjournment of the 1957 Regular Session of the Legislature.~~

AMENDMENTS TO ASSEMBLY BILL No. 2867

AMENDMENT No. 1

In line 3 of the title of the printed bill, after "conservation" insert ", and making an appropriation".

AMENDMENT No. 2

On page 1, after line 12, insert: "The Legislature hereby declares that a detailed study of the problem of preserving prime quality agricultural land from unplanned, unregulated urban expansion is of primary concern to the people of this State, and that it is necessary

that the facts of the situation be obained in order that appropriate legislation may be passed.

"65902. There is in the State Government the Agricultural Land Conservation Commission which shall consist of five members appointed by the Governor and serving at his pleasure. The membership of the land commission shall include one each of the following: an agricultural economist, a member of the California State Farm Bureau Federation or the California State Grange, a county supervisor, a city councilman or mayor, and a qualified professional planner.

"65903. The commission shall conduct a two-year investigation of the impact of urbanization on agricultural lands throughout the State, with priority being given to those areas and counties in which the impact of urbanization is already a serious problem.

"65904. The commission may hire such staff as necessary to carry out its functions and may seek the assistance of other state agencies in this investigation.

"SEC. 2. The sum of _____ dollars ($_____) is hereby appropriated from the _____ Fund to the commission to carry out its functions."

III. IMPACT OF URBANIZATION ON AGRICULTURAL LAND

STATEMENT OF PROBLEM

California is faced with continued and serious depletion of its agricultural land resources through the impact of unplanned and unregulated urban expansion.

The dimensions of the problem are illustrated by the following data.

URBAN GROWTH

In 1860, a little over one-fifth (20.7 percent) of California's population was living in urban areas. By 1900 urban population was 52.3 percent of the total. By 1950 two-thirds of the state population was urban under the old Census Bureau definition which limited urban population to incorporated places of 2,500 or more. By the new definition which includes unincorporated places of 2,500 or more and the densely settled urban fringe around cities of 50,000 or more, the State in 1950 was 80.7 percent urban.[1]

The trend of urbanization is further illustrated by shifts in distribution of employment. Excluding the lumber industry which is largely rural in location, the proportion of California workers engaged in manufacturing industries increased from 9.6 percent in 1870 to 17.8 percent in 1950. Employment in extractive industries (agriculture, forestry, fishing and mining) which are rural in location, declined during this period from 46.5 percent to 8.4 percent of state employment. Employment in distribution and service industries, which are largely urban in character, grew from 39.3 percent to 72.0 percent.[2]

Present projections indicate that state population will continue to grow at close to a rate of a half million persons per year, and will reach a "saturation" figure of about 45,000,000 somewhere between the years 2020 and 2050. This represents an increase of more than three times the present population of about 14,000,000. It is further estimated that approximately 90 percent of this future population will live in urban places.[3]

PATTERN OF URBAN GROWTH

Up to the time of World War II, urban growth in California was relatively orderly. For the most part, existing cities and towns expanded gradually outward from their centers. Since most of California's cities and towns originated as processing and distributive centers for a surrounding agricultural area, it was inevitable that urban

[1] Warren S. Thompson, *Growth and Changes in California's Population,* Haynes Foundation, Los Angeles, 1955, p. 13.
[2] Margaret S. Gordon, *Employment Expansion and Population Growth,* University of California Press, 1954, Tables A-13, A-14, A-17, A-18, A-19
[3] Van Buren Stanbery, In projections for State Department of Water Resources Bulletin No. 58, *Report on Northeastern Counties Investigation,* 1957.

expansion would encroach upon agricultural lands. But the encroachment was within tolerable limits.

Beginning about 1942, with the industrial and population boom that accompanied and followed World War II, expansion into the agricultural hinterlands has been at an accelerated rate. It has been disorderly and unnecessarily destructive of farm lands. The temptation for industries and subdividers to use prime agricultural lands even when other lands were available has been great because of topography, drainage, and other natural features which contribute to cheaper construction and maintenance costs.

Professor Ernest Engelbert of the University of California at Los Angeles has identified six methods of unplanned, unregulated urban dispersal which make up the present pattern of urban growth:

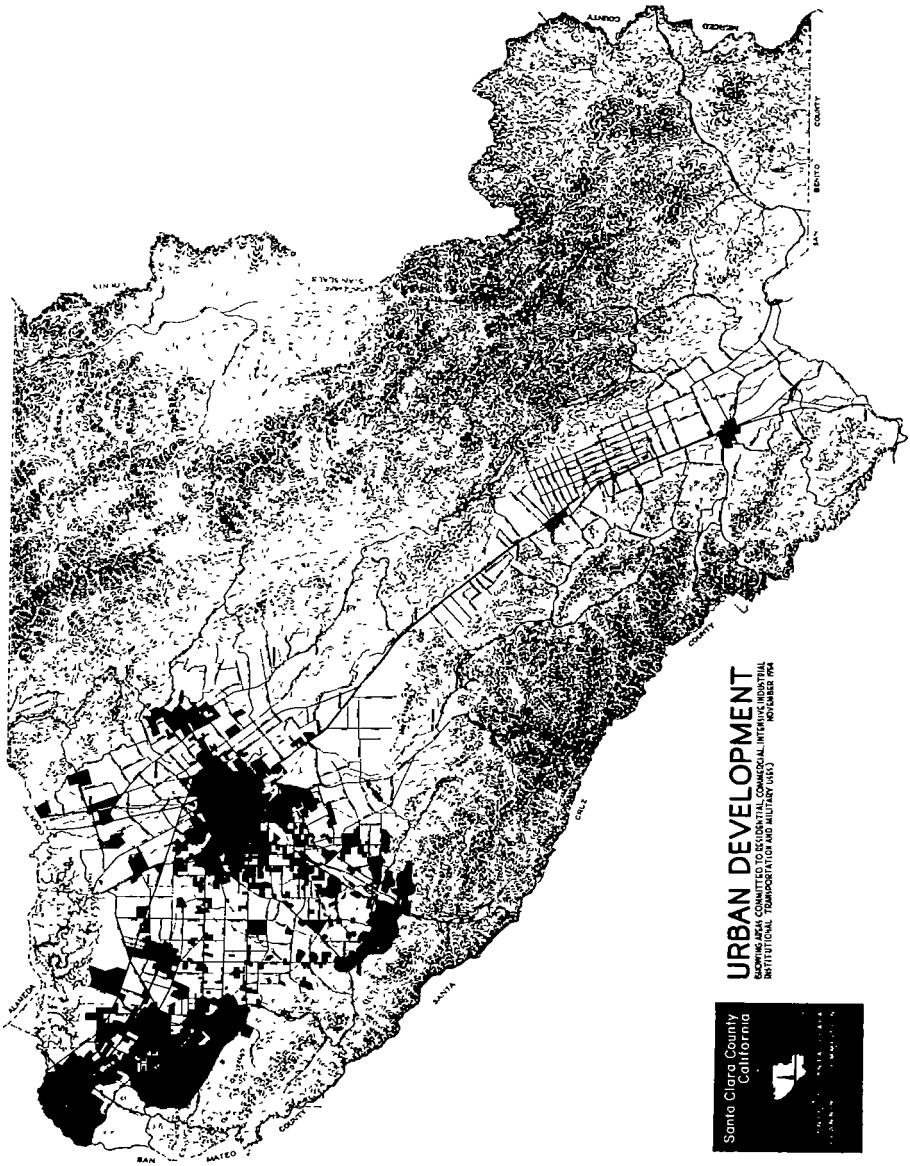
1. Gradual encroachment of the city and its urban fringe into the agricultural hinterland. This is the most familiarly recognized invasion of agricultural land.
2. Urban encirclement of agricultural lands. This occurs when urban development surrounds agricultural areas either by a community extending itself in prong fashion, or when several communities coalesce, leaving agricultural "islands."
3. Radial dispersal in which the urban community extends into the agricultural hinterland along major arteries of traffic arteries.
4. Diffused urban settlement, usually caused by urban workers moving miles out into the country for home sites.
5. Leap-frogging by subdivisions.
6. Industrial decentralization.

"All of these processes of urban dispersal," says Professor Engelbert, "are usually going on within a 50-mile radius of large cities and are producing an urban economy. From the standpoint of agriculture the manifestation of the intermixture of urban and rural uses is a decline in agricultural producing acreage, uneconomic transitions in land uses, inequities in tax burdens, excessive costs for public services, excessive speculative developments, and general instability of much of the local agricultural economy." [4]

Mr. Karl Belser, Planning Director of Santa Clara County, has testified as to the manner of urban development in that county:

> "Our present land use pattern is one of urban scatteration. Urban development might have taken place compactly on the periphery of the existing city cores. Instead it has been scattered all over the valley floor in a helter-skelter, shotgun pattern.
>
> "As matters now stand, Santa Clara County, which is a very good example of a rapidly developing urbanized metropolitan district, is in the position of having the random type subdivision infiltrate into the vast area of its agricultural land. This has blighted the land prematurely for purposes for which it has a high economic use, and consequently the economic base of the established community is seriously jeopardized.
>
> "If all the land in subdivisions and related urban uses which has been withdrawn from agricultural use in the Santa Clara Valley since 1947 were placed in one spot, it would total approxi-

[4] See Appendix No. 2, p. 39.



Urban development in Santa Clara County (as of November, 1954)

Same urban development as it might have been if grouped compactly around existing urban cores

mately 26 square miles. But this development has occurred in such fashion that within the entire valley floor of the northwest section of the county, which embraces an area of approximately 200 square miles, there is not a single square mile which has not already been penetrated with one or more subdivisions.

"The inference of this statement is that the entire 200 square miles of territory embracing the upper valley is now committed to urban development. This would mean the extension of sewers, mass transit, water systems and all of the other facilities appendant to proper urbanized living to all this widespread area."

The United States Department of Agriculture, in Bulletin No. 59 entitled "Rural Zoning in the United States," observes:

"The urban fringe is in transition, not for a distance of only a few miles, as it was two score years ago, but for distances sometimes extending 30 to 50 miles beyond city limits and often overlapping the fringe area of neighboring cities.

"Good roads and automobiles permit spreading the urban populace over the countryside. Yesterday's commuter zones today embrace expanded areas of rural land. Suburbanization is reaching out for many miles, bringing into the rural community scattered residential subdivisions and homes, business centers and strip commercial areas, industries and part-time farms. Haphazard growth and idle land too often prevail. Planned development seems to be the exception."

IMPACT OF URBAN GROWTH ON AGRICULTURAL LAND

Up to and including 1955, urban growth in California had caused some 2,760,000 acres of the State's best farm land to be converted to nonagricultural uses, including homesites, industrial and commercial developments, highways, military establishments, airports, and similar uses.[5] This acreage is all in what the United States Soil Conservation Service classifies as cultivable land (Land Use Capability Classes I to IV.) The total acreage of such land in the State is 17,561,434 acres. Thus it is apparent that 16 percent of the State's cultivable land has already been taken out of agricultural use. (U. S. Soil Conservation Service, estimates of land conversions in California, April 26, 1956.)

The rate of such conversion was gradual up to 1942, but has been greatly accelerated since that date. Thirty percent of the total conversion of prime agricultural land occurred between 1942 and 1956, and there is no indication that the pace is slackening. For each 1,000 persons added to state population, there were approximately 150 acres of cultivable land placed in urban use. If all classes of farm land are considered, urbanization at the current average density of development means retiring approximately 250 acres for each 1,000 population increase.[6]

[5] Area within California cities, January 1, 1956—1,475,650 acres. Average density of settlement: six persons per acre.

[6] Donald J Bogue, *Metropolitan Growth and the Conversion of Land to Nonagricultural Uses*, Scripps Foundation for Research in Population Problems, Miami University, Oxford, Ohio, 1956, pp. 17-18; U. S Soil Conservation Service, previous reference; and Santa Clara County Planning Department.

In the Southern California coastal watershed, which includes all or part of San Diego, Riverside, San Bernardino, Orange, Los Angeles, and Ventura Counties, there are now more than 700,000 acres under urban development, nearly equal to the area of cropland. "This recent expansion has been mostly on the more accessible Class I and Class II lands, with the consequent loss of this good land for agricultural use and the subsequent development of the less desirable lands for intensive cropping." [7]

In Santa Clara County, through 1956, nearly one-third of cultivable lands had been converted to nonagricultural use. Total land in Classes I-IV is 232,080 acres; of this, 76,440 acres had been withdrawn from agriculture. The rate of conversion since 1942 has been 217 acres for each 1,000 population increase. Since 1947, the rate of conversion has been accelerated to 257 acres for each 1,000 population increase.

At the current rates of population growth and land conversion, Santa Clara County is faced with the prospect of losing all its cultivable land to urban uses within 10-15 years.

In several metropolitan counties, the proportion of cultivable land already converted to nonagricultural use greatly exceeds that of Santa Clara County. These are: Alameda, 60.8 percent; Napa, 76.8 percent; San Mateo, 74.3 percent; Los Angeles, 68.5 percent. (U. S. Soil Conservation Service, previous reference.)

IMPACT OF URBANIZATION ON THE FARMER

How has urbanization affected the farmer?

The United States Department of Agriculture, in Bulletin No. 59 previously cited, observes:

> "The impact of these multiple pressures on the agricultural community of the urban fringe is often devastating. Prices of land rise beyond the reach of operating farmers; taxes reflect speculative land values that may never be realized; special assessments for schools, water supply, sewers, or other improvements are voted by the nonfarm landowners, and development costs are thereby shifted to farm lands which may not be ripe for suburbanization for decades. Tax pressures, consequently, may force premature subdivision of good farms or may end in tax foreclosure.
>
> "A rural community's capacity to produce food may be as effectively destroyed by the erosion of premature suburbanization as by the erosion of its soils."

(The subcommittee notes parenthetically that there have been government programs for many years to help the farmer deal with soil erosion and other factors threatening the productivity of our agricultural lands. There have been no programs to control "erosion" through urban development, and in fact the problem is only now being seriously recognized.)

The Santa Clara County Planning Department, in a staff report entitled "Saving Santa Clara County's Farms and Orchards," observes:

[7] State Department of Natural Resources and U. S. Soil Conservation Service, *Know California's Land*, February, 1952, p. 36.

"Farming in itself has enough problems, but there are many more when development penetrates a farming district. Drainage problems are aggravated when the roofs and pavements of a subdivision spill out their large volumes of storm run-off water onto farm land Farm-to-market roads deteriorate under the brunt of heavy traffic they weren't built to carry. Spraying cannot be carried on freely when there are dwellings adjacent to farm land. Harmful insects, nourished on neglected fruit trees remaining in subdivision tracts, move in to infest valuable orchards. The temptation to pilfer fruit is multiplied as the child population increases.

"Urban development penetrating farm lands can cause a farmer's tax bill to rise, even though he may have done nothing to promote this development. First, when his land becomes surrounded by subdivisions, it increases in market value. When this rising market value produces a 'trend,' the assessor values his land in a higher bracket. But even if his assessed valuation remains the same, a farmer may still find his taxes rising. This is because the cost of services for the new subdivisions has added millage to the tax rates. Six hundred new families in an area call for a new elementary school. The cost of sewers, drainage facilities, and other utilities add to the tax burden. These costs cannot be paid for by the residents of a subdivision alone. All taxable property in a given district must be called upon to share these costs. The farmer is put in the position of paying for someone else's sewer, while he continues to use a sewer system which he installed and paid for himself."

Edward Teresi and his father own a 40-acre orchard in Santa Clara County, surrounded by subdivisions. In four years the assessed valuation on their apricot, cherry, prune and pear land has been raised from $375 per acre to $600 per acre. With a 25 percent increase in tax rates, this has about doubled the Teresi's property tax bill. As Mr. Teresi says:

"We're included in the tax districts because we don't have the votes to turn it down. We're being taxed for the subdivision's sewer's, street lighting and schools. It's approaching the point where we can't make a profit." [8]

Cherry grower C. J. Olson, who appeared before the subcommittee, submitted a copy of his tax bill showing that annexation to the City of Sunnyvale has increased his property tax on 15 acres of orchard land from $638.54 under the county to $956.52, an increase of $272.98 or $18 per acre. Mr. Olson also indicated that his cherry orchards represent an investiment of $15,000 per acre, on which during recent years he has averaged a net return of 6 percent. "Therefore," he states, "it is plainly visible that our orchard property is much too valuable to be sold for a subdivision."

Dairy farmers in Los Angeles County offer another example of the adverse effects of subdivisions. Urban expansion has forced many dairies out of the county. Others use temporary feed lots in the county where cows are milked until dry, then shipped out of the county or

[8] *Wall Street Journal*, May 9, 1956.

slaughtered. Dairymen in neighboring Orange County are facing similar pressures. Within the past two years, three groups of dairymen in the two counties have incorporated their farms into cities in order to save the farms. These are Dairy City (4.21 square miles), Dairyland (1.35 square miles), and Dairy Valley (8.46 square miles). According to the *Wall Street Journal's* report of May 9, 1956, the population of Dairyland includes 500 people and 7,000 cows; Dairy Valley has 80,000 cows and about a million laying hens.

Mr. R. Ken Wilhelm, Secretary, Santa Clara County Farm Bureau, told the committee:

> "Many farmers have been hurt and their operations impaired by the unbridled and wanton destruction of an irreplaceable natural resource: our prime agricultural soil. This destruction has been caused by sudden, uncoordinated subdivision growth with no regard for any county or region-wide over-all master planning."

A group of Cupertino farmers, banded together to resist subdivision and annexation of their lands, submitted a statement to the committee which declares:

> "Behind every badly placed subdivision there is an ex-farmer who gave up to the prevailing confusion and salvaged what he could by selling out."

NO PLACE TO GO?

Mrs. Grace McDonald, Executive Secretary, California Farm Research and Legislative Committee, testified:

> "In Santa Clara County, because of the urbanization and the impact of urbanization on farm land, many farmers are moving to the valley only to find when they get there that they are faced with the same type of urban development and being forced out again from the places where they are trying to relocate."

IV. THE NEED FOR AGRICULTURAL CONSERVATION

The impact of urban development on agriculture is of state concern for several reasons:

1. California farms supply an important part of the nation's food supply, particularly in fruits and vegetables.
2. Agriculture is a major element in the State's economy. California leads all states in value of farm production.
3. The supply of farm land in California capable of producing California's specialty crops is limited and cannot be replaced elsewhere in the Nation. The Nation too is faced with a serious agricultural land conservation problem.
4. The conservation of agricultural areas is essential to the orderly development of urban areas.

CALIFORNIA FARMS FEED THE NATION

Mr. R. Ken Wilhelm, Secretary of the Santa Clara County Farm Bureau, testified to the subcommittee:

> "Here in our State we have only 2.6 percent of the farms in the Nation and yet we produce over one-forth of the Nation's table food. Not only do we produce it but we can preserve, freeze, package, store, and transport it.
>
> "Forty-three percent of the Nation's fruit and tree nut crops are produced in our State. We produce about 92 percent of the Nation's fresh vegetables. On the average we ship one carload of farm products every two minutes, 24 hours a day, 365 days a year."

The California State Chamber of Commerce reports in the 1954 California Blue Book:

> "As measured by cash returns, this state produces more than a third of the commercial fruits, nearly a fourth of the commercial vegetables, and more than half of the commercial tree nut output of the entire country. In fact, California is responsible for most of the Nation's supply of lemons, almonds, avocados, walnuts, olives, dates, figs, apricots, grapes, plums and prunes.
>
> "Because of the tremendous production of fruit and vegetables, this State has developed processing industries which supply nearly one-third of the Nation's output of canned fruit and vegetables and more than 85 percent of its output of wine. Besides these, California is a leader in production of oranges, hops, barley, alfalfa, sugar beets, lettuce, asparagus, tomatoes, beans, carrots, spinach, melons, potatoes, cotton, and rice. Its crop culture pattern really is deficient only in some of the great staples such as corn, wheat, oats, grain sorghum and tobacco."

Since the 1930s, California agriculture has suffered relatively little from the traditional farm surpluses which have continued to plague

some other major producing areas of the Nation. When the supply of land suitable for producing California's specialty crops is reduced, the supply of those crops in national markets will be correspondingly short.

AGRICULTURE IS BASIC IN THE STATE ECONOMY

Gross cash farm income in California has consistently exceeded 2.5 billion dollars in recent years, and has usually led all other states of the Nation including such notably rich farming states as Illinois, Iowa and Texas.

Value of state agricultural output far exceeds that of the mineral-producing industries, including petroleum.

Employment in food processing exceeds that in any other manufacturing industry except aircraft production (State Division of Labor Statistics and Research).

The injection of the income of food producers and processors into the State's economy stimulates and supports a very substantial volume of employment and activity in other industries, such as farm equipment, food containers, feed and fuel suppliers, transportation, and retail distribution. Mr. Wilhelm stated for the subcommittee his estimate that:

> "While farmers themselves receive only about 10 percent of our State's total income, they stimulate and cause to exist about 40 percent of our total economy."

In a rural county, most manufacturing, distribution and service industries are organized around agriculture and depend on it for their existence. Many farmers have large investments in processing plant equipment such as dehydrators. Canneries, freezing plants, wineries, bakeries, dairy products plants, bottling plants, producers of cans and

CALIFORNIA CASH RECEIPTS FROM FARM MARKETINGS
SELECTED PERIODS 1929-1956

(In thousands of dollars)

	Crops	Livestock and products	Total
1929	482,607	283,619	766,226
1930-34 average	330,596	166,906	497,502
1935-39 average	403,958	222,294	626,252
1940-44 average	813,772	372,732	1,186,504
1945	1,271,408	561,260	1,832,668
1946	1,529,602	619,176	2,148,778
1947	1,384,531	753,661	2,138,192
1948	1,302,555	830,538	2,133,093
1949	1,296,143	771,849	2,067,992
1950	1,440,152	830,908	2,271,060
1951	1,662,842	1,067,012	2,729,854
1952	1,691,053	1,056,661	2,747,714
1953	1,662,660	971,250	2,633,910
1954	1,613,574	904,810	2,518,384
1955	1,681,277	951,373	2,632,650
1956p	1,839,310	956,583	2,795,893

p—preliminary.
SOURCE: USDA, "The Farm Income Situation," various issues.

CALIFORNIA CASH RECEIPTS FROM CROPS, BY COMMODITY GROUPS, 1946-1955

(In thousands of dollars)

Crops	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955
Food grains	58,274	63,168	55,414	59,320	52,140	70,877	94,765	86,365	64,223	60,059
Feed grains	117,175	129,348	125,821	107,537	125,106	159,948	183,040	140,860	162,344	174,464
Cotton	70,504	137,374	136,341	241,561	260,564	304,147	316,227	381,019	286,022	246,132
Vegetables	387,162	441,153	403,995	401,449	359,829	455,217	487,750	428,998	433,441	479,914
Fruit and nuts	814,892	503,924	463,165	387,117	522,280	545,510	482,607	494,593	518,087	577,083
Oil-bearing crops	7,352	16,016	29,696	14,930	5,812	8,201	6,051	2,985	3,559	5,733
Other field crops	74,243	93,548	88,123	84,229	114,421	118,942	120,563	127,840	145,898	137,892
Total crops	1,529,602	1,384,531	1,302,555	1,296,143	1,440,152	1,662,812	1,691,053	1,662,660	1,613,574	1,681,277

CASH RECEIPTS BY COMMODITY GROUPS AS A PERCENT OF TOTAL CASH RECEIPTS FROM CROPS

Crops	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955
Food grains	3 8	4 6	4.4	4.6	3 6	4.3	5.6	5.2	4 0	3 6
Feed grains	7.7	9.3	9 3	8 3	8 7	9 6	10 8	8 5	10 1	10 4
Cotton	4.6	9 9	10 2	18 6	18 1	18 3	18 7	22 9	17 7	14 6
Vegetables	25 3	31.9	30.7	31 0	25 0	27 4	28.8	25 8	26.9	28.5
Fruit and nuts	53 3	36 4	36 5	29.9	36 3	32.8	28 5	29 7	32 1	34 3
Oil-bearing crops	0 5	0.1	0 2	0 1	0 4	0 5	0 4	0 2	0 2	0 3
Other field crops	4.9	6 8	6 7	6 5	7.9	7 2	7.1	7 7	9 0	8.2
Total	100 0	100 0	100 0	100.0	100 0	100.0	100 0	100 0	100.0	100.0

SOURCE United States Department of Agriculture, "The Farm Income Situation," various issues

canning machinery, manufacturers of agricultural chemicals, machinery, farm implements and parts constitute the major manufacturing industries in rural counties in California,[8a] whose well-being will be directly affected by reductions in prime cropland and agricultural productivity. Food products assemblers and wholesalers represent another large group usually dependent to a great degree on local farm production. In addition, there is the large volume of business done with farmers by establishments in such lines as hardware, plumbing, heating supplies, lumber and construction materials, transportation and storage.

One Santa Clara County rancher has said: "If I go out of business, I know six suppliers who will have to close."

In Santa Clara County, economic dependence on agriculture may be even greater than the 40 percent estimate of Mr. Wilhelm cited above. It was noted at the subcommittee hearing that the *San Jose Mercury* of November 21, 1956, estimated there are more than 30,000 persons employed on Santa Clara County farms, and almost as many in the county's farm processing plants. (This appears to be an estimate for employment at the September peak.) If it is assumed that these employees each support two dependents, and that supporting employment in distribution and service industries (with their dependents) is at a 1:1 ratio, it can be argued that, for a portion of the year at least, some 360,000 persons in Santa Clara County are supported by agriculture, in a total population not yet exceeding 500,000.

Closeness to farms both as suppliers and as purchasers initially provided canners and producers of agricultural machinery and chemicals with a strong incentive for location in the San Jose area. While other factors such as labor supply and closeness to water transportation also favor the San Jose area, it would appear to have lost some of its attractions as a site for new plants which are tending to expand in the Central Valley.

GOOD LAND IS LIMITED

Although California has a total of 100.3 million acres within its boundaries, its supply of agricultural land is definitely limited. The State Department of Natural Resources and the United States Soil Conservation Service, in a joint survey of California's land capability, point out:

> "California lands are characterized by extreme variations in type of soil, slope, erosion, climate, flood hazard and related factors. * * * Of the total area in the State, about 10½ percent is used for crops, 28½ percent for grazing, 36 percent for forests and watershed, 4 percent for road, urban and industrial uses, and 21 percent is barren waste, mostly in the desert."[9]

The 1954 Census of Agriculture reported total cropland, including land which was not harvested or pastured, at 13,227,408 acres. The Soil Conservation Service estimates the supply of cultivable land (Classes I-IV) at 17,561,434 acres. These figures indicate the range of estimates of the supply of good agricultural land.

[8a] Excluding lumber mills in some counties.
[9] *Know California's Land*, p. 1.

Already, however, as noted earlier, some 2,760,000 acres of this land has been converted to nonagricultural use.

The supply of Class I land is extremely limited. Such land amounts to only 1.6 percent of the state's area (*Know California's Land*, p. 7).[10] Yet, as the Santa Clara County Planning Department has pointed out, in almost every case where Class I soils occur, a growing urban center is spreading out from the center of the area."

Extension service economists in San Mateo County have noted that the core of the problem is that much of this (urban) activity takes place on some of our best agricultural land. This is because the fertile soil in California usually lies only in pockets which are also the most easily used for residential, industrial, and commercial developments. * * * It is obvious that this situation cannot continue indefinitely without serious damage to California's agriculture as well as to the nation's future food production."[11]

Bogue observes that "agricultural experts are unusually interested in the California situation because the land being converted is of a special type that is exceptionally scarce in this country: land that can grow high quality citrus and other fruits and winter vegetables at high yields with a minimum amount of crop failure over a span of years. At the current rates of population growth and land conversion in the area of Los Angeles and other metropolitan areas in the State, these experts foresee the rapid decline of these crops to a very small fraction of their former size."[12]

At the subcommittee hearing in San Jose, Mr. Wilhelm of the Santa Clara County Farm Bureau showed soil maps of the United States which indicated that the type of soil which raises California's specialty crops is found in very few places in the entire nation.

C. J. Olson, Santa Clara County cherry grower, who appeared before the subcommittee, declares:

> "There's no other place in the United States where cherries grow to perfection like in the Santa Clara Valley."

Edwin Gould, a walnut grower, has said:

> "What does $10,000 an acre mean to me if I want to remain a farmer? I can't duplicate the climatic, drainage, soil and water conditions anywhere else."[12a]

AGRICULTURAL LAND LOSS IS NATIONWIDE

It is true not only that replacement of California's best soils elsewhere in the Nation is not possible, but also that cultivable lands throughout the Nation are threatened by urbanization. The United States Department of Agriculture reported in 1953 that "although exact figures are not available, records of incorporation of land into towns and cities, construction of factories, highways, airports and reservoirs, and new homes during the last 10 years show that probably as much as a million acres of rural land is absorbed annually by urban and related

[10] *Ibid.*
George Alcorn and R. H. Sciaroni, *Agricultural Zoning Makes Sense*, University of California Agricultural Extension Service, San Mateo County, September, 1954.
[12] Bogue, pp. 17-18.
[12a] *Wall Street Journal*, May 9, 1956.

nonagricultural uses. Much of the land taken up for residential and urban purposes was tillable. As with agriculture, highways and urban developments tend to follow level and valley areas." [13]

The Administrator of the U. S. Soil Conservation Services reporting on a nationwide survey of nonagricultural land encroachments, wrote:

> "I personally was amazed to find that our appraisal throughout the Country indicates the trend of withdrawal of cultivable land from agricultural uses is more than double what we thought it was. During the past 15 years our estimates show about 17 million acres of our flattest and most fertile farm lands have been converted to nonagricultural uses. Each year over one million acres of cultivatable land is going into homesites, industrial and commercial developments, defense establishments, highways, airports, and other nonagricultural uses.
>
> "What will the future trends be in this respect? It is only reasonable to surmise that with the continued rapid growth of suburban developments, superhighways, industrial expansion, etc., that the withdrawal of good land from agricultural use will continue and accelerate, perhaps, in the years ahead. If continued at the present rate, this withdrawal could have a substantial bearing on the future ability of agriculture to meet demands of the Nation." [14]

According to Bogue's estimates, agricultural land in metropolitan areas of the Nation is disappearing at a rate of 238 acres for each 1,000 population increase. This is equivalent to conversion of 0.95 acre for each family of four persons (Bogue, pp. 14, 16). These estimates are consistent with those of the Santa Clara County Planning Department, cited earlier, in this report.

Thus it is evident that California cannot safely rely on ultimately importing all its food from the rest of the Country. Pressure of urban development on productive agricultural lands is nationwide. The national population is increasing at a rate which indicates some 375,000,000 by the year 2050, compared with a present figure of 170,000,000. While population is thus increasing by another 200,000,000, just how much expansion is possible in the Nation's harvested cropland, which for the past 30 years has remained relatively constant at about 400 to 413 million acres? As Bogue notes, all land that is eminently suitable for use as cropland has been pressed into use. Additional cropland can be created by making large capital outlays for irrigation, drainage, flood control, or other major improvements. Continued improvements in soil and plant technology will undoubtedly result in further increases in yields per acre, over and above the gains of recent years. But there are limits to these processes.

A recent study of agricultural land resources in the United States presents the following data, with estimates for 1975: [15]

[13] H. H. Wooten, *Major Uses of Land in the United States*, U. S. Department of Agriculture, Bureau of Agricultural Economics, Technical Bulletin 1082, 1953, cited in Bogue, p. 4.

[14] Donald A. Williams, "Soil and Water for the Future," *Soil Conservation*, December, 1955, pp. 115-116, cited in Bogue, pp. 5-6.

[15] Hugh H. Wooten and James R. Anderson, *Agricultural Land Resources in the United States*, U. S. Department of Agriculture, Agriculture Information Bulletin No. 140, June, 1955.

	(Millions of acres)		
	Cropland available for crops	*Cropland used for crops*	*Pasture and grazing land* *
1929	480	412	--
1939	467	399	--
1949	478	409	950
1975	508	403	925

* Excluding cropland used for pasture.

In 1949 there were 478 million acres of cropland for a population of 150,000,000, a ratio of 3.2 acres per person. By 1975 there may be an estimated 508 million acres of cropland for an estimated population of 218,000,000, a ratio of 2.3 acres per person. The addition of 30,000,000 acres of cropland to make even this latter ratio possible will require irrigation of 6,000,000 acres of undeveloped raw land; drainage, flood control and clearing on another 14,000,000 acres; and conversion of 10,000,000 acres of pasture.

To add to the problem, productivity of existing and future cropland is threatened by erosion. In the 1930's it was found that "mistaken land-use practices in the United States have caused the ruin by erosion of some 50,000,000 acres and seriously damaged 50,000,000 acres more. Much additional land is in danger." [16]

A soil erosion map of the United States shows that in a majority of lands, 25-75 percent of the topsoil has been lost; in a substantial number of areas, more than 75 percent of the topsoil has been lost.[17]

The Department of Agriculture has estimated that of cropland in use in 1949, something like half is subject to erosion in greater or less degree; and about 90 percent of the country's permanently arable area will require a great deal more protection than it now gets if it is to be maintained regularly in cultivation.[18]

AGRICULTURAL AREAS ESSENTIAL TO ORDERLY URBAN GROWTH

The view was expressed very positively before the subcommittee that conservation of agricultural land is not incompatible with orderly expansion of urban areas, and is indeed essential to an effective urban planning program. Woodbridge Marshall, a senior planner of Santa Clara County, observed that "the conservation of agricultural land and enterprise and the planned expansion of our urban centers are two sides of the same coin."

Mr. C. J. Olson told the subcommittee:

> "People come to live in Santa Clara County because of an urban-rural atmosphere. We have here a little bit of green and a little bit of field that people like."

Mr. Wilhelm declared:

> "Cities without country around them are rather hopeless and miserable places to live."

The Santa Clara County Planning Department put the point this way:

[16] *Yearbook of Agriculture*, 1937, p. 19.
[17] *Yearbook of Agriculture*, 1955, p. 406.
[18] Wooten and Anderson, pp. 82-83.

"Unless farms and other open spaces are preserved, we will be building up another solid city. This megalopolis will be more unlivable than the original central city. Under its shroud of smog, it will extend for mile after dreary mile.

"On the other hand, we can follow a balanced land use plan to provide for orderly, separate communities of limited size surounded by open space. The best of the farms and orchards of the valley deserve to be preserved on two counts. First, they are a valuable natural resource and the key to a balanced economy. Second, they are the breathing space which can keep our valley a pleasant place to live."

V. EXPERIENCE WITH THE "GREENBELT" LAW

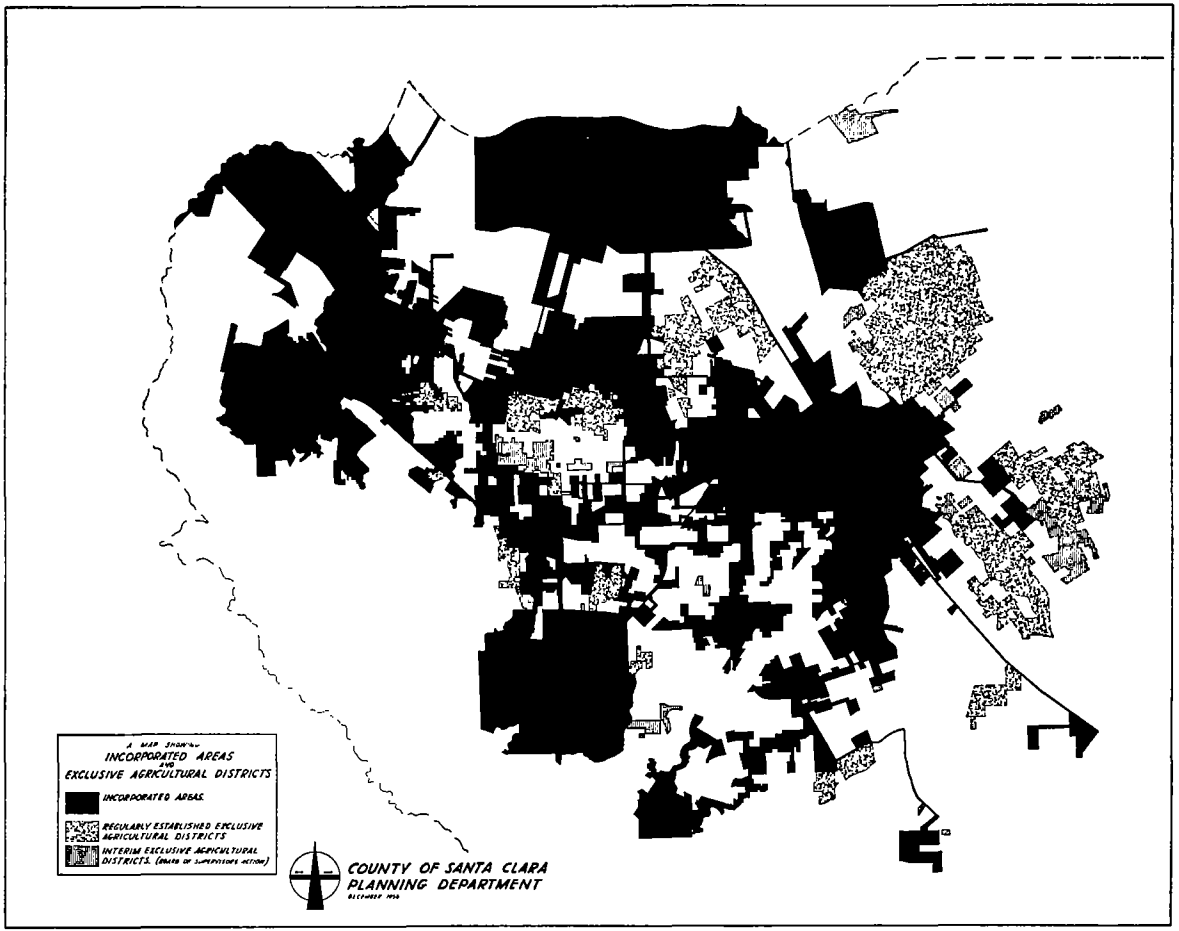
INTRODUCTION

The primary objective of the subcommittee hearing in San Jose, November 27, 1956, was, in the words of Chairman Allen, "to inquire into the operation of the state greenbelt zoning law in Santa Clara County during the past two years, the experience that has been had under that statute, Section 35009 of the Government Code, and the county ordinance for greenbelt zoning * * * what changes are recommended, any objections, etc. The purpose of this hearing is to ascertain the facts so that we can decide what we wish to recommend in the way of additional legislation. * * *"

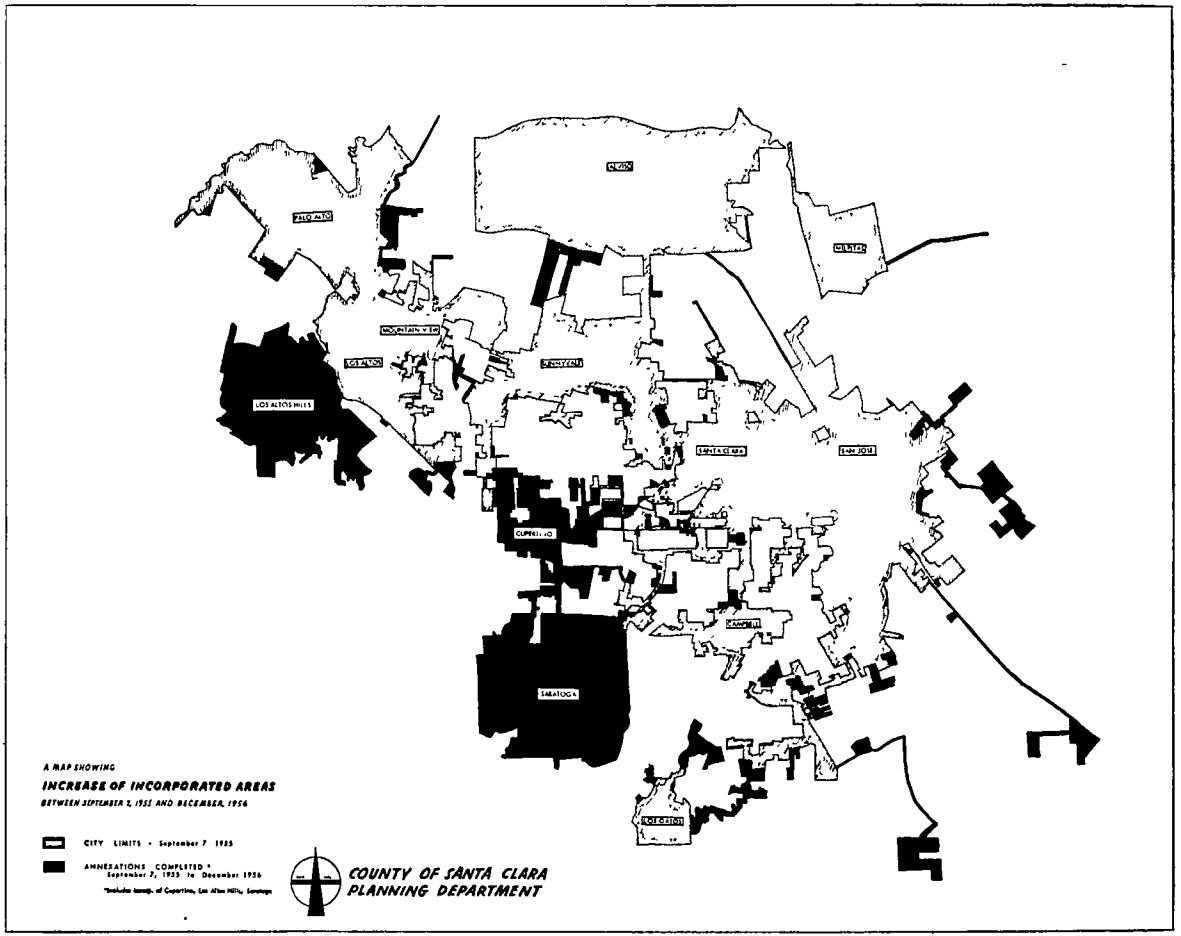
Testimony from county planners and agriculturalists was completely favorable to the state greenbelt law. City representatives, on the other hand, generally expressed disapproval.

The statement of Mr. Karl Belser, Santa Clara County Planning Director, declares in part:

> "We have found that operation under the provisions of this act has demonstrated two basic factors:
>
> "1. That the growth of cities has not been adversely affected in any manner.
>
> "2. That there are other dynamic and important reasons for such zoning than the one much publicized restriction on the annexation powers of cities.
>
> "Taking these points one at a time, it is our opinion from the experience we have had that cities flourished and grew during this interim period. Over 8,000 lots were subdivided and 35,000 people came into the county.
>
> "We would like to point out that the incongruous boundaries which our cities have achieved were in no way caused by our green zones. A survey of the map shows that our green zones are characterized as being well-rounded blocks of land, mostly on the periphery of the expanding area; that in most cases the weaving and staggering boundaries of our cities are not flanked by green zones; and that such zones have not been used in an effort to fence cities or to restrict their growth. Conclusive proof of this is the fact that in this period (September 7, 1955—November 26, 1956) 108 annexations have been made to the cities of San Jose, Sunnyvale and Mountain View alone, adding 5,337 acres to these cities. The fact that these acres are badly distributed is not the fault of the green zone. * * *
>
> "We feel that the extension of this legisation so that this program of conservation of agricultural land may have a full opportunity to mature is reasonable and right when we consider the extent of the public interest involved. Our county is but a microcosm of the State; and although the experiment was given a trial of two years in our county, there are now many counties based on



Map showing incorporated areas and exclusive agricultural districts in Santa Clara County, December, 1956



Map showing annexations since September 7, 1955 (greenbelt law went into effect)

agriculture that have become interested in this matter and taken local legislative action." *

Mr. Belser's second point was that farmers need exclusive agricultural zoning in order to survive economically.

> "Studies made in our department indicate that unless some kind of protection is given good agricultural areas against taxation for speculative increment and the introduction of tax-producing commercial and residential development requiring urban-type services such as schools, sewers, and the like, they cannot economically survive. The exclusive type of zone prohibits premature speculation by ruling out subdivisions, commercial and industrial developments, thus allowing the area to retain its rural character and to work out its problems of services on an equitable basis."

It was brought out that some greenbelt land had been taken into cities during the previous two years. In one case, part of an exclusive agricultural district was taken into the City of Saratoga when it incorporated. In some other cases, greenbelt land was taken into cities by consent of the owners. Neither type of case came under the controls of the greenbelt law.

Mr. Ken Wilhelm, Secretary, Santa Clara County Farm Bureau, reported his organization's wholehearted endorsement of the greenbelt law:

> "What we asked the Legislature for in 1955 was a tool with which we could preserve agriculture's contribution to our total welfare. We are satisfied that the tool is a workable one, one which will provide for the saving of as much of this grand natural resource as possible. We feel that it provides for flexibility and that * * * it is and has been adaptable to local circumstances. * * *
>
> "In the limited time we have had this tool, we have tried it on large areas and small, on those close to cities and those far away. In every case it has served its purpose well. * * *
>
> "We would like to ask very bluntly that this tool for the protection of certain restricted agricultural areas against indiscriminate action of any type be continued."

Mr. Julius Bertrand, Mountain View agriculturalist, stressed the value of the greenbelt law in protecting farmers against annexation of their lands through the uninhabited territories annexation act. Under this act, a city may annex territory without a vote in which there are less than 12 registered voters, provided that there is no protest from the owners of 51 percent of the area. The city may determine the boundaries of the area to be annexed; and this power, according to Mr. Bertrand, opens the way to a "rigging" of the boundaries to exclude owners who might constitute a protesting majority:

> "Under the uninhabited territories act, under the ability of a city to initiate its own annexation proceedings, under the ability of a city to determine exactly what the boundaries are so they can

* About 33 California counties now have provisions in their ordinances for restricted or exclusive agricultural zoning.

> eliminate a majority protest, the farmer does not have his right, and that's all we're talking about in the greenbelt bill. * * *"

Mr. Bertrand recommended that the county boundaries commission be given power to disapprove "improper" annexations of farm lands. He also recommended elimination of the present administrative agreement that land use and zoning issues applying to lands within three miles of a city must be referred first to that city before the county planning commission may act. Where cities are almost contiguous, this is a meaningless requirement and one which encourages hasty annexation proceedings.

Mr. C. J. Olson, Sunnyvale farmer, testified that 15 acres of his cherry orchards were taken into the City of Sunnyvale by "emergency ordinance" without his knowing about the action until he read the legal notice in the newspaper. Mr. Olson was not too surprised, thereafter, to receive a tax bill from the city which was $18 per acre higher than he had been paying to the county.

Mr. George M. Brown, Santa Clara pear farmer, pointed out that city taxes, following annexation, could put a farmer out of business. In the case of pears, he could not easily duplicate his property elsewhere, such as in the Central Valley, for "pears are highly selective as to their soil." If you get over one-fourth of a mile from a creek or river, you are in marginal pear land. * * * We need this greenbelt legislation to protect us in such a way that it will be impossible for a city to come in and arbitrarily annex our property."

> Assemblyman Bradley: "Would I be correct in summarizing your feelings, that in your opinion the greenbelt zoning is worth its while from your point of view and thinking as a guard against indiscriminate uninhabited territories annexation by cities, regardless of the possibilities of holding down the tax?"
>
> Mr. Brown: "That is correct."

Evidence was presented to the hearing that farm lands in the City of Cupertino, whether within or without a greenbelt, will not be rezoned except by request of the owner.

Testimony given by representatives of the Cities of San Jose, Sunnyvale and Mountain View indicated that they are not entirely happy with the greenbelt law, and regard it, in the words of Mr. Lewis Keller, as "more an annexation barrier that it is a preserver of prime agricultural land." The city representatives feel, with some reason, that there has been some agricultural zoning which was not guided by an over-all plan and was, in effect, spot zoning.

Mr. Kenneth Hunter, City Manager of Sunnyvale, a city whose annexation policy has been aggressive, told the subcommittee:

> "Zoning should be established as a part of an over-all master plan with proper consideration for long-term agricultural use."

Mr. Hunter cited the Berryessa planning unit as an example of good agricultural zoning.

It appears to the committee that the altercation and bad feeling over annexations which was reflected in the subcommittee hearing can only be eliminated permanently by a requirement at the state level for regional or state-wide land use planning, with zoning and annexation laws to implement such planning. An agency should therefore be established at the state level which can umpire conflicts between county and city land use plans. At the same time, every encouragement should be given to local governments which have adopted good agricultural zoning districts and are working out their problems on a local basis.

VI. PROPOSALS TO CONSERVE AGRICULTURAL LAND

INTRODUCTION

Testimony before the subcommittee was virtually unanimous that three major actions are needed immediately to extend the protection now provided by county exclusive agricultural zoning and the state law prohibiting annexation of districts so zoned without the consent of the owners. These actions are:

1. Coordination of land-use planning and zoning at the state level.
2. An inventory of agricultural lands, resulting in a designation of these areas which can and should be conserved consistent with the requirements of orderly urban development.
3. Land use controls to hold the designated areas in agricultural exclusive agricultural use.

CONSERVATION PROPOSALS

The subcommittee heard and received the following expressions of opinion on conservation measures:

Mr. Louis Keller, General Counsel, League of California Cities:

> "If the objective is truly to preserve agricultural lands, it should be attacked from a standpoint of achieving an over-all solution to integrated city and county planning * * * to working out by agreement within a county and beyond a county those areas which should be preserved for the next decade or two or three for agricultural purposes, and then working out the legislation that is needed to implement those decisions."

Mr. Julius Bertrand, Santa Clara County agriculturalist:

> "I think that something should be done on a state level to make it mandatory that the cities and counties work together on their zoning so that we get an integration of zoning and planning as against this merchandising of property between counties and cities."

Mr. Roy Cameron, Senior Planner, Santa Clara County Planning Department:

> "The study should be made at the state level as to which areas in the state are those which are needed for agriculture in the future."

Mrs. Grace McDonald, Executive Secretary, California Farm Research and Legislative Committee:

> "I would like to suggest to your committee that they take into consideration the matter of careful study by a standing committee, perhaps yours, of the Legislature, which should include the evalu-

ating of the experience of agricultural zoning by areas and types of farming in relation to remaining acreage of fertile top lands, irrigation, and climate, looking toward a planned reservoir of dairy and poultry products as well as specialty crops, to maintain California's valuable processing industries and the employment as well as the income they provide.

"A step-by-step approach to population growth is needed to achieve a balance between farm and nonfarm production and consumption, employment and income, through establishing a functioning, properly staffed and independent state planning department."

The Santa Clara County Planning Department, in a staff report, declares:

"While the re-enactment of the protective 'greenbelt' law on a permanent basis is essential, it is only a first step in protecting the State's agriculture. Legislation should be passed providing for the establishment of agricultural districts which are administered by the board of supervisors acting as a board of directors. Such districts would have boundaries which could not be violated by a city any more than one city can violate another's boundaries.

"Within such districts, land use planning would be based on the productive capacity of the soil, drainage, irrigability, and other factors related to agriculture. In such districts, the farmer would have a virtually free hand to conduct his affairs as he sees fit. Such districts would be large enough to support their own school or might contract to provide such service. They should have the power to annex contiguous territory; to dis-annex; or to dissolve themselves.

"In addition to providing for agricultural districts, the State Legislature could, if it is in earnest about protecting California's farms, consider laws to provide for:

"(1) A tax moratorium on agricultural land. This would involve the development of a means of using taxation as a medium for extending the open use of land indefinitely into the future. There are several ways this could be done. It should be left to tax experts to determine the required machinery.

"(2) Strengthening county government control over the annexation programs of municipalities. The confusion and rape of the countryside by ill-advised annexation policies make it mandatory to impose discipline of some kind on this activity.

"(3) A curb on the use of eminent domain proceedings by local districts and municipalities to take land for urban use in areas protected for exclusive agricultural use.

"(4) The protection of prime agricultural land on a permanent basis by public purchase from farmers of the surface development rights for any other than agricultural purposes. Such a technique might be similar to that used in acquisition of access rights to freeways or subsurface rights to minerals.

"These may seem to be drastic measures. The time has come, however, when we must decide either that we want to do something about conserving soil, or we don't. We have been made the trustee of some of the finest resources in the world. Future generations will judge us on the basis of how we use them."

GREENBELTS

As to the "greenbelt" aspect of agricultural conservation, the preservation of open spaces between cities in the interest of reducing smog and drainage problems and providing a pleasant environment for people in metropolitan areas, it was suggested that zoning controls are not the answer. Thus Mr. Michael H. Antonacci, Planning Director of the City of San Jose, told the subcommittee:

"If we are really interested in preserving areas within the metropolitan complex which will serve as the greenbelts and the open spaces of the communities of tomorrow, we should concentrate our interests and devote our means toward the acquisition of those areas on a permanent basis."

A corroborating statement has been made by an expert familiar with conditions in an eastern metropolis, where the "flow of asphalt and front lawns has erupted into the countryside in a continuous urban carpet," C. McKim Norton, Vice President of the New York Regional Plan Association, has stated:

"I am convinced that this overwhelming blanket of urbanization cannot be relieved by any other means known to us today short of public acquisition of land as park and open space reservation."

APPENDICES

APPENDIX 1

LIST OF WITNESSES

Subcommittee Hearing, San Jose, California, November 27, 1956
(In order of appearance)

Woodbridge Marshall, Senior Planner, Planning Department, County of Santa Clara
Roy Cameron, Senior Planner, Planning Department, County of Santa Clara
H. K. Hunter, City Manager, City of Sunnyvale
Michael H. Antonacci, Planning Director, City of San Jose
Richard E. Gamble, Acting Planning Director, City of Mountain View
R. Ken Wilhelm, Secretary, Santa Clara County Farm Bureau
George Noel, Assistant Assessor, County of Santa Clara
Julius Bertrand, agriculturalist, Mountain View
C. J. Olson, cherry grower, Route 1, Box 140, Sunnyvale
George M. Brown, pear grower, 1035 Coffin Road, Santa Clara
Robert E. Hanley, California Farm Bureau Federation
Lewis Keller, General Counsel, League of California Cities
Grace McDonald, Executive Secretary, California Farm Research and Legislative Committee
Norman Nathanson, farmer, Cupertino

APPENDIX 2

THE PROTECTION OF AGRICULTURE FROM URBAN ENCROACHMENT IN CALIFORNIA*

ERNEST A. ENGELBERT
University of California at Los Angeles

The Problem

One of the most explosive social forces of modern day society is the phenomenon of urban intrusion into rural areas. The process of urban dispersal has accelerated so rapidly in the last two decades that for vast areas of our Country clearcut distinctions between the rural areas and the urban community no longer exist. For many sections of our Country and notably in California we are moving more and more toward a rurban society.

Despite the fact that the process of urban dispersal is having tremendous social and economic consequences, it is the contention of this paper that, from the standpoint of agriculture at least, we have not adequately recognized the problems or how to deal with them. Neither in research, public policies, nor in local planning is agriculture's position in the rurban economy being adequately provided for or protected.

* This paper is drawn from a larger study which is being prepared for publication. Acknowledgment is gratefully made to the Giannini Foundation for financial aid to undertake research upon which this paper is based. Acknowledgment is also made to Charles Ries and Jess Walters who are collaborating on the more extensive research project.

In the space available, I should like to deal with this subject under four major headings:

1. How is urban dispersal into agricultural areas taking place?
2. What is the status of research and knowledge on this subject?
3. How adequate is the instrument of agricultural zoning as it is now developed to protect agriculture's interests?
4. What steps should be taken to improve the position of agricultural land use in the rurban area?

The Pattern of Urban Dispersal

It is important to note that various patterns of urban dispersal are taking place, each of which call for different kinds of planning and controls. The first pattern involves gradual encroachment, in which the metropolis slowly pushes out its boundaries and urbanizes the hinterland. This gives us the well-known urban fringe environment which produces a retreat of agriculture as the urban economy advances. This is the most familiarly recognized invasion of agriculture.

A second method of dispersal takes place through urban encirclement of nonurban territory. This occurs when an urban development surrounds agricultural areas either by a community extending itself in prong fashion or when several communities coalesce. This leaves agricultural islands which may be subjected to intensive use such as truck gardening or dairying, or land which for topographical or other reasons is not attractive to urban uses. Much of our grazing land within urban areas is of the latter nature.

Urban dispersal may also be radial in character in which the urban community extends out into the agricultural hinterland along major arteries of traffic. Eventually the sectors between the arteryways may be converted to urban uses. More often new urban communities sprout along the highways and in turn encroach upon their respective hinterlands.

Diffusion is another method of urban dispersal. This is a process whereby the urban community fans out into the rural countryside in no predictable pattern. It is usually a residential invasion caused by urban workers who move miles out into rural areas for homesites.

Urban dispersal takes place through what is familiarly called "leap frogging" by subdivisions. Unless controlled the urban relationships which are generated between subdivisions and the main city breakdown established agricutural land use patterns in the intervening areas.

A sixth method of urban dispersal is produced by industrial decentralization. Anyone who has observed the development that has taken place around Kaiser steel mills in Fontana knows what happens to agriculture in this environment. Moreover all trends indicate an increase in the movement of industries away from the centers of cities, so that this type of dispersal will become more prominent in the future.

Finally urban dispersal may be systematically planned. It may be induced by designed greenbelt cities, by the location of military installations, or by the establishment of new communities such as Boulder City as a result of resources development undertakings.

All of these processes of urban dispersal are usually going on within a 50-mile radius of large cities and are producing a rurban economy.

From the standpoint of agriculture the manifestation of the intermixture of urban and rural uses is a decline in agricultural producing acreage, uneconomic transitions in land uses, inequities in tax burdens, excessive costs for public services, excessive speculative developments, and general instability of much of the local agricultural economy. Agricultural planning and zoning for the rurban area presents an entirely different problem than that which exists for agriculture in the distinctly rural environment.

The Status of Research

Unfortunately our research is lagging far behind in meeting the critical needs of the problem. To date there have been only a few studies at best which could be classified as dealing with the rurban land use problem. The U. S. Department of Agriculture with its vast research facilities has only recently started to push research on the subject. To the best of my knowledge projects are currently being carried on in this field at only four universities—Michigan State University; Stanford University; the University of Wisconsin, and the University of California.

We lack adequate statistics for the nation as well as for California concerning the kinds of intrusions that are being made upon agriculture in rurban areas. Figures are available concerning the number of acres which have actually gone from agricultural production to urban uses, and the U. S. Department of Agriculture has made some projections about urban land use needs to 1975, but these are not adequate for measuring what is happening in rurban developments. Furthermore, agricultural economists have been appraising agricultural land uses in terms of crop patterns and production and supply but not from the standpoint of transitions in uses from rural to urban. The approach of agricultural research has been decidedly from the standpoint of rural land economics.

Urban planners on the other hand have looked at the problems of rurban agriculture almost exclusively from metropolitan considerations. They have developed agricultural zoning as a tool for urban land use and control. Until recently they have viewed the agricultural zone as a means of providing an orderly transition from rural to urban use but not in terms of the role and stability of the agricultural economy. Thus we have had division of effort between urban planners and agricultural researchers that has caused rurban land use analysis to fall between the stools.

Another reason or two may be mentioned for the lack of our knowledge in this field. Agriculturalists have been concerned primarily about the problems of food supply and land use needs on a national basis. Not much study has been given to how national land use needs and requirements will affect specific states or areas. People in California do not know what contribution their lands are expected to make to the national agricultural product say in 1975. These projections are of course, complicated by the demands which will be placed upon the State's agricultural acreage by the State's own growth and development. It will be difficult to plan adequately for California's land use needs without a better picture of what national food and fiber demands on the State will be.

There has also been reluctance on the part of some agriculturalists and other researchers to study the urban-agricultural land use conflict on the ground that free economic competition will determine the highest land use. Since most urban uses are a more intensive form of use than most types of agriculture, many researchers believe agriculture should give way. This concept, however, measures the worth of land primarily in terms of net land income and does not take sufficiently into consideration extra-market and social benefits which may accrue to owners as well as to the entire community under some circumstances if the land is retained in agriculture. Aside from what might be the ultimate food supply needs, the protection of agricultural blocks of land in rurban areas may serve to guide urban growth, reduce costs of public services, provide buffer zones between urban communities, and stabilize the general economy of the area. However, neither the agricultural researchers nor the planners have really studied the benefits to be derived from maintaining rurban agriculture. As a result agricultural zoning has not received the economic justification that it warrants. With these kinds of inadequate approaches to the problem it is little wonder that not too much progress has been made for planning and protecting the growth of agriculture in rurban areas.

Agricultural Zoning

As matters now stand agricultural zoning is the only specific device that has been extensively used to carry out agricultural planning in urban counties. As of 1950, 173 counties in 23 states had adopted county zoning ordinances and though precise figures are not available, over 100 have zoned for agriculture, forestry, recreation, or some other rural use. The State of California is perhaps more advanced in county zoning than any other state. Los Angeles County adopted the first county zoning ordinance in the United States in 1927. Over half of California's counties now have zoning ordinances, and a majority of these provide for some form of agricultural or rural land use zoning. No state currently confers broader powers upon the counties to plan and zone than California.

Yet despite the counties' powers and relatively long experience with zoning, agricultural zoning in this State as well as other states has not proven adequate to cope with the task of protecting agriculture in rurban areas. Recent research studies reveal these shortcomings:

1. Agricultural zoning has been applied to selected districts or areas of the county without relation to an over-all agricultural plan. It has been zoning on a piecemeal basis. Moreover, it has been zoning with an urban bias. Agricultural zones have been set up usually for the purpose of reducing premature urban development rather than for protecting agriculture on a permanent basis. This is reflected in the types of zones which are established and uses which are permitted or prohibited.

2. Agricultural zones have not been established on an exclusive basis. A variety of other uses, particularly residential and recreational have been usually permitted in agricultural zones. The only urban counties in the entire country which have established exclusive agricultural zones are in California and these have only been established recently. Planners have been reluctant to establish exclusive zones because they

have had no guidance as to the types of areas that should be kept exclusively in agriculture.

3. Most of the agricultural zones which have been established have not taken sufficient cognizance of what constitutes an economic farming unit. Instead of developing the zoning around the type of farming which prevails in the district and establishing minimum acreages accordingly, agricultural zoning has usually permitted land use occupancies which were so small that they fostered suburban intrusion. Under these circumstances it does not take long before the established agricultural units in the zone are broken down.

4. Also contributing to the inadequacy of agricultural zoning in rurban areas has been the fact that other public facilities and services have not been employed to protect the character of the area. Poor highway and street planning has led to the cutting-up of agricultural zones in such a way as to cause the deterioration of the agricultural economy. Public utilities, schools, and public recreational facilities such as golf courses have been unwisely located in agricultural zones and have brought urban intrusions in their wake. Perhaps even more significant is the fact that our system of property tax assessments has been at variance with the concept of agricultural zoning. With such lack of coordination among public functions it is little wonder that some of our agricultural zones in rurban areas last as long as they do.

5. But even if agricultural zoning could overcome most of the deficiences that have been mentioned, it would still be subject to political breakdown in counties where the urban population is numerically superior in a majority of the supervisorial districts. County planning commissions and boards of supervisors can only go so far in protecting the county's agricultural land use plan in the face of all kinds of strong urban pressures to break down the zones. This problem is aggravated when the agricultural zone is adjacent to the boundaries of another county where urban development is taking place. It raises grave doubt as to whether the county is an adequate governmental unit to undertake comprehensive agricultural planning and zoning.

Particularly within the State of California during the last few years it has been recognized that agricultural zoning as it has been practiced is not the answer. Pressures are building up for new courses of action. A constitutional amendment to change tax assessment procedure is being supported by various farm groups. Some farm areas are considering incorporation into municipalities. A statute was passed during the last legislative session to prohibit municipalities from annexing adjacent areas which are zoned for agriculture without the consent of the owners. These and other solutions may serve the purpose of protecting agricultural land use in some communities, but they do not get at the over-all problem.

Some Tentative Proposals

What steps should be taken to improve agricultural land use in rurban areas? The recommendations which are set forth here should be considered tentative since we have done far too little research on the total problem to reach final conclusions. However, let me also make clear that the rurban land use problem is with us permanently and will become more complex as our population grows, as urban areas expand,

and as our whole economy disperses. To deal with this problem successfully requires a reorientation of our outlook on urban-rural relationships. Agricultural land-use planning and zoning today is not a problem which can be solved by agricultural people alone. It requires urban-rural cooperation. It is not simply a county problem but a state and local problem. What is needed are some standards to guide both private enterprise and public agencies in making decisions.

With this approach in mind the following remedial actions for the State of California are proposed:

1. State legislation should be enacted which will provide that henceforth it could be the State's policy to promote the conservation and best use of agricultural land. The legislation should set forth in general terms the reasons for this policy. It should provide that agricultural land-use plans should be developed in conjunction with urban planning in ways that will provide the highest benefits from all uses. State agencies and local governments should be charged with maintaining the intent and integrity of state policy in their plans and programs.

2. The State Legislature should immediately take steps to have instituted a state-wide study of land-use needs in California. It should be the objective of this study to assess present uses of land and land location in terms of future needs. Based upon probable population increases and economic growth, the study would project by approximate acreages and by geographical area the amount of land that would be needed over the next 25 years for various types of uses such as residential, agricultural, industrial, highways, recreational, and others. The findings of this study would constitute a guide for both private interests and public agencies in land development. Until this kind of study is made, people and agencies at local levels will not have the knowledge and facts to make the best decisions about local land uses.

3. Serious consideration should be given to the establishment of agricultural protection districts to protect the major agricultural producing areas of the State. These districts would have a somewhat different function than our present agricultural zones. They would constitute large blocks of agricultural land that could cross county boundaries. Under general standards established by the State these districts would be protected against urban intrusion that would break down the agricultural character of the district. These areas might be identified and demarcated by the State and the residents of the area given local option as to whether or not they wish to legally create the district. The administration of the land-use protection standards could also be given to local governing bodies.

4. In areas where further urban decentralization will take place agricultural zoning standards should be modified. In these areas agricultural zoning should be utilized for two basic purposes: (a) to provide for orderly transition from agricultural use to urban use, and (b) to provide permanent agricultural buffer zones between urban communities. To carry out these purposes three changes in agricultural zoning should be provided: (1) the zones should be built around land which from the standpoint of soil classification and topography constitutes the best quality for agricultural use; (2) the minimum acreage requirements in the zones should be large enough to protect the pre-

vailing types of farm patterns in the zone; and (3) greater use should be made of the so-called exclusive agricultural zone.

5. To bring about more effective land-use planning for both urban and agricultural uses in rurban areas, regional planning commissions should be established. The authority and powers for these commissions are now provided for in state law. Without going into all of the reasons why regional planning commissions have not been established, suffice it to say that county planning commissions are not adequate agencies to plan for rurban areas which cut across county lines. If the State adopts new policies with respect to agricultural land use then it needs effective local agencies to carry them out.

In conclusion it should be noted that these recommendations do not call for any radical extension of powers over the rights of private property beyond those that have already been granted to state and local government. What these proposals call for is a new orientation to the problem using the same governmental powers and agencies that we now have but with a little more state leadership and guidance on over-all policies. It is also my judgment that if this program is instituted no constitutional changes in tax assessment procedures for farm lands will be necessary. Once lands are clearly earmarked and protected solely for agricultural use, then the property tax assessment should reflect the approximate value for this use.

Whether California citizens are now sufficiently educated and willing to institute a wise program for protecting the land resources of the State is questionable. But we do know that 20 years hence when our population has grown to 25,000,000 and our economic capacity has doubled, the public will rue the day some action was not taken.

APPENDIX 3

SANTA CLARA COUNTY FARM BUREAU
SANTA CLARA, CALIFORNIA

NEW ADDRESS AND TELEPHONE NO.:
1092 North First Street
San Jose 12, California
CY press 4-8616

STATE OFFICE:
2223 Fulton Street
Berkeley 4, California

LOUIS ROZZONI, *President*

November 2, 1956

DEAR FELLOW DELEGATES:

In reviewing the tentative basic resolutions sent out by the State Farm Bureau, I would like to call your attention to pages 24 and 25 of the October 5, 1956, group of resolutions which you have received. Items 6 through 13 originated in Santa Clara County and in reducing these resolutions to simple statements, some confusion of purpose and meaning may be found.

Feeling that these resolution are very important and need time for thought and study before we meet on the 9th I am taking the liberty of writing you to enclose a copy of the resolutions as they were originally worded and to give you a little additional background information. The resolutions are printed in columns 4 and 5 of the Valley Farmer which I am enclosing. If you will bear with me I will discuss each resolution briefly and tell why we feel it is necessary.

Resolution 1 actually is self-explanatory. This law was passed in 1955 for a two-year period and was worded so that there had been considerable discussion as to whether the law was applicable only to Santa Clara County or not. We feel that the law should be renewed and that there should be no question as to its application to all the rest of the counties that wish its protection.

Resolution 2 basically provides that school districts, railroads, highway departments, and others with the power of eminent domain, cannot cut through "A" zoned land or condemn it for school sites and other purposes without first having the approval of the planning commissions and board of supervisors that cooperated with the growers to create restricted agricultural zoning or greenbelting as it is commonly called. In our county we are faced with the problem of a railroad trying to cut through one of our "A" zones and we have a number of school districts that have threatened to condemn land within "A" zones for future school sites. We also have a continuing threat from some of the cities who have threatened to condemn some of our "A" zoned land for parks, golf courses and other municipal purposes. This we wish to avoid.

Resolution 3 is self-explanatory. The uninhabited annexation act has been used unmercifully in this county and others and has lent itself as a tool of subdividers and city councils.

Resolution 4 is very frankly a matter for discussion. The law provides that a city may annex territory which is owned by the city but not contiguous to its boundaries; there are good and bad features of this provision and we feel it should be discussed.

Resolution 5 actually has three parts. The first part deals with the fact that legislation may be introduced to further extend existing provisions for the acquisition by eminent domain of certain land rights.

This resolution was brought about by certain conditions which prevail in this county and may prevail in other parts of the State and Nation as well. To explain these conditions it is best to discuss a specific example. The government has Moffett Field, a Navy airplane base in the north end of our county. To provide jet planes and large aircraft with safe landing patterns, the government is considering buying by voluntary sale or eminent domain a large area of land. The growers who own this land wish to stay in agriculture and they wish to stay in agriculture right where they are. The Navy fears that the growers may sell out to subdivision or industry, and thus create a population hazard because of the low flying planes overhead.

We feel that the proper technique in this case would be to separate the use rights of this land. Growers could then sell voluntarily or the rights for other than agricultural purposes could be condemned by the Navy and the growers would be adequately compensated for those values which would be purchased by the government. Title to the land and the right to farm it would remain with the farmer. His land would be appraised by the tax assessors on the basis of its agricultural value only. If, at a later date a farmer wished to sell his land it would have to be sold for farming purposes and would bring a related agricultural use price. This we feel would be fair as the farmer would already have been compensated for values that he might have received if it had been sold for nonagricultural purposes. To prevent a governmental agency

from becoming a land speculator, as has happened in the case of some of our school districts, we feel that when such nonfarm developmental rights are taken by eminent doman or are voluntarily sold, that if at a later date the government desires to abandon those rights and should offer the rights for sale that the owner should have first right to buy these rights and secondly that he should have a perpetuated interest in those rights in the same ratio that the value of the land for agricultural purposes had to the nonfarm developmental rights value at the time they were originally taken by the government.

The essence of this resolution is that it would keep this land in agricultural production, would maintain a reasonable amount of value on the tax rolls and would compensate the farmer for things beyond his control.

The next to the last part of this resolution provides that the farmer should receive nontaxable cash or nontaxable government bonds in payment of these severances. This will do two things; it would cut down the cost of such purchases to the government because they would be able to obtain voluntary sales of these developmental rights at a much lower cost to the taxpayers and would not penalize the farmer for being willing to cooperate with the government.

We feel that the wording on page 25, item 6, would be a little clearer, if it read "tax exempt remuneration for land owners whose surface rights for other than nonfarm uses are taken for the public purpose of preventing such developments."

Parts of this resolution are related to the resolution from Los Angeles County in regard to buffer strips around government airports. We feel that the two resolutions supplement each other rather than to cancel each other out.

Resolution 6. In our county we have had a number of new cities incorporated recently. There is no protection in the law at present for farmers who have fought to get their land restricted for agricultural use. In these cases some of these incorporation boundaries have cut through several "A" zoned areas. The farmers who own this land did not want to be dragged into the cities; this was one of the reasons they had their land green-belted. The law prevents existing cities from annexing "A" zoned land without permission of the owners but it does not protect them against being dragged into a new city.

Resolution 7. This is basically self-explanatory. If the boundaries commission had any power many of the problems which have arisen in California would not exist today. This resolution is to suggest that the board of supervisors, a legislative and policy making body, should be given the powers as indicated in the resolution. At first we thought that the boundaries commission would be given the powers, but on further study realized that this commission consisted of four employees, the tax assessor, the county auditor, the planning director, and the county engineer. We do not feel that a group of employees should be given policy making powers. Therefore we made the recommendation as you have it.

Resolution 8. A great percentage of the taxpayers and voters in California are homeowners. A great many of these people have mortgages on their homes and therefore do not receive their itemized tax bill. They do not know how much they pay in city taxes, in general

county taxes, special assessment district and district taxes and school taxes and special bond taxes. Their taxes are lumped together in so-called impound accounts by the mortgage holders and are not explained to the mortgagees other than as lump sums. This we feel is one of the reasons that the general voting public has developed its feeling of apathy toward taxes and bond elections.

Item 11 on page 25 should have the words "subject to" inserted before the words "eminent domain" in line 3.

If you wish further information on any of these subjects, write me immediately or if you wish individual members from our county farm bureau or myself to appear before any of your committees at the convention, feel free to call on us.

Yours sincerely,

SANTA CLARA COUNTY FARM BUREAU
W. A. STINE, State Delegate

RESOLUTION # 1

Resolved that present legislation prevent the involuntary annexation of restricted agriculturally zoned land by cities as established by A B 2166 should be maintained and that such legislation and protection should be extended to restricted agriculturally zoned land throughout the state.

RESOLUTION # 2

As there is now a type of restricted agricultural zoning available in many counties in the state and inasmuch as land so restricted is already serving a public purpose in maintaining agricultural production, economic balance, green regions and area stabilization, it is resolved:

That legislation be prepared that would provide that such restricted agricultural land would be subject to eminent domain proceedings by public or quasi-public agencies only after such proceedings have been approved by the planning commission and board of supervisors which created the restricted agricultural zoning.

RESOLUTION # 3

Resolved that the uninhabited land annexation act is not serving the best purposes of government and therefore should be removed from our state law.

RESOLUTION # 4

Legislation passed by the last regular session of the legislature which provide that cities could annex land not contiguous if owned by the city is making a laughing-stock of California annexation law by providing that one city may have an island city within another; therefore be it resolved that the legislation should be rescinded.

RESOLUTION # 5

Recognizing the fact that legislation may be introduced in the next session of the legislature to provide for the acquisition by eminent domain or voluntary sale of the surface rights of development beyond

agricultural purposes of some of the areas which have demonstrated their long range potential as excellent agricultural land;

And recognizing the fact that there is nothing new in such type of removal of certain rights from the land either by voluntary sale or purchase by due process of law (for example, access rights to freeways, easements for power lines, etc.);

Therefore be it resolved that the CFBF should work diligently to provide that such legislation would provide that the farmer (owner) should receive either non-taxable cash or non-taxable government bonds for his interest in the surface rights of non-farm development of his land;

And be it further resolved that if the use of land which has had its surface development rights severed is ever changed by the governing sovereign authority then the farming value at its original dedication shall determine the share of the farmer's perpetrated interest in the land when the use is changed.

RESOLUTION # 6

Resolved that areas zoned restricted agricultural and later proposed as part of incorporation procedures shall become a part of such incorporation only if such election is carried by a majority vote of the people within the area so zoned and such vote also must represent 51 per cent or more of the acreage within the restricted agricultural zoned area included in such proposal.

RESOLUTION # 7

Due to the fact that the County Boundaries Commission is a powerless body which has little power of recommendation and no power of refusal in the matter of city annexation boundaries it is hereby resolved:

That legislation be developed which would:

1. Place the responsibilities of boundary commission upon the County Board of Supervisors;
2. Would make the present boundaries commissions advisory bodies to County Boards of Supervisors;
3. Would give the County Board of Supervisors the power to:
   a. Refuse to grant permission to allow an annexation proceeding to take place;
   b. Alter the boundaries of proposed annexations;
   c. To recommend that certain existing boundaries be modified and if necessary to order such boundaries back to their original positions.

RESOLUTION # 8

Many property owners in California never see their tax bills as the tax bills are sent by tax collectors to mortgage holders rather than owner. Section 2615-5 of the Revenue and Tax code was amended in the last regular session of the legislature to read as follows:

"Title: Agent paying taxes to send bill to assessee.

Any person who receives a tax bill respecting property which has been assessed to another and who has power, pursuant to written or

oral authorization, to pay the taxes on behalf of another shall after the taxes have been paid in full and within 30 days of the receipt of the written request of the assessee, either deposit the original or a copy of the bill in the United States mail in an envelope addressed to the last known address of the assessee as shown on the bill, postage being prepaid, or deliver it otherwise to the assessee within 30 days."

As many assessees are not acquainted with the need to make the written request and therefore have no understanding of what they are paying in taxes or the purposes for which taxes are paid we request that legislation be introduced which will strike out that much of the law as reads: ". . . of the receipt of the written request of the assessee . . ."

APPENDIX 4

November, 1956

RESOLUTION No. R-35

Adopted by 38th Annual Convention of the California State Farm Bureau Federation, San Diego, California, November 9-11, 1956.

Title: Zoning, Annexation and Land Use

We recognize the need for planning and zoning to guide in the orderly development of our rapidly growing communities.

We believe that in planning, zoning and annexation due consideration should be given to the following:

1. Protection to land owners to assure continuation of prior uses as far as possible;
2. Prevention of needless restrictive regulation on farmers operating in agricultural zones;
3. Preservation of highly productive lands as sources of food supply;
4. Tax assessments in accordance with agricultural productivity on farm land zoned for agricultural purposes;
5. Adoption of zoning regulations only with consent of the owners of the majority of the acreage and a majority of the resident voters on the land affected.

We find it necessary that state legislation be enacted prohibiting cities from annexing territory zoned as agricultural.

APPENDIX 5

CALIFORNIA STATE CHAMBER OF COMMERCE
AGRICULTURE AND INDUSTRY
SAN FRANCISCO 4, CALIFORNIA, November 21, 1956

MR. SAM E. WOOD, *Research Director*
Assembly Interim Committee on Conservation,
Planning and Public Works
State Capitol Building, Sacramento, California

DEAR SAM: In accordance with our telephone conversation, I am indicating below the State Chamber's policy on agricultural zoning.

The State Chamber of Commerce will cooperate with other interested organizations in an effort to review and rewrite state

annexation laws where necessary for the purpose of clarifying the intent of the law, and correcting abuses resulting from new techniques of annexation not contemplated under existing law.

Also:

The State Chamber of Commerce will cooperate with other organizations in an effort to assure adequate laws enabling counties and cities to zone land for exclusive uses such as agricultural, residential, industrial, and business purposes.

Sincerely,

NEIL K. HOLBROOK, Director
Agricultural Department

APPENDIX 6

ASSEMBLYMAN BRUCE F. ALLEN
Bank of America Building
San Jose, California

DEAR ASSEMBLYMAN ALLEN: Being unable to be present at the hearing on "greenbelt" legislation on Tuesday I am enclosing a view on the subject. Would you be so kind as to submit it at the hearing?

Sincerely,

MARVIN O. ADAMS

STATEMENT OF MARVIN O. ADAMS

In considering greenbelts we should ask ourself if urbanization is proceeding too fast. I think it is. I also think that the power of government in attempting to correct certain matters may make others worse. Thus in the interests of education we have various types of state aid including state aid to so called "poor" districts. It takes only ordinary observation to notice areas where subdivisions come thick and fast. One might think off-hand that there was a lot of wealth. There may be big profits for "developers," subdividers, "builders," and even real estate salesmen but very often the area becomes classified as a poor district and qualifies for a co-called "loan" at the ultimate expense of the taxpayers of the State. Could set ups of this kind be a reason for present rising taxes?

Let us first look into the social cost of subdivision. Suppose that a ranch of many acres is subdivided. Suppose further that there are three houses per acre erected on what was formerly agricultural land. Three per acre is conservative because in many subdivisions the density is much higher. Suppose further that each house furnishes one school child. Studies may show well above this average in subdivisions but persons who buy new houses tend to have more than the average number of minor children so again we are being conservative. Then we will have at least 30 children per 10 acres. Now school authorities would like to have less than 30 children per room. A school room can be built for less than $30,000 but when one figures the all-over cost of a school building including land and playground cost it runs over $30,000 per room if we have single sessions. So the social cost of the

subdivision in capital outlay for schools alone would be $3,000 per acre. For smaller sized plots and larger number of school age children it may run over twice this. This cost is very rarely borne, even in part, by the seller of the land or by the "developers," "builders" and others who profit by subdividing; but is, in general, born by: (1) the taxpayers of the district who have already paid for their own schools, and will have to continue to bear a share of the cost of even more schools as more subdivisions come in; and (2) by the taxpayers of the State through state aid (so-called).

It is not my purpose here to advocate that subdividers or developers or others benefiting directly should pay more of the expenses that their activities create. * * * It is just my object here to call attention to the actual situation as it presently exists.

In addition, the creation of subdivisions creates the need for more playgrounds. It increases traffic and traffic congestion upon existing roads, etc.

It is interesting to note that automobile insurance rates tend to go up with increased population density, thus it might be said that accidents increase faster than population. Also juvenile delinquency rates tend to rise with population density so it is seen that delinquency increases faster than population. Look at San Mateo County and see how taxes have gone up with population growth and notice Palo Alto's high school taxes. For these increased taxes people now living in Santa Clara County can expect a greater chance of their children going wrong. They can also expect to have their lives made shorter and less pleasant due to increased smog (due to autos and incinerators). But most people in Santa Clara County will not make the "killing" of a few "promotors" and "developers." For years I have been against giving some of our tax money to chambers of commerce to bring people and industries here. I think it could be better used to keep them away! Unpopular view, I admit, at least at present, but maybe the people will start to wake up when it is too late.

The implications of what I have just presented in support of continuing greenbelts is obvious. As very minor matters but worth mentioning we might consider greenbelts as mostly a method of delay. Here again they are advantageous. For instance, at present in the area of new developments the age distribution of school children is not normal (more elementary in relation to High School) and unfortunately few Elementary Schools are easily convertible to other grades as I have advocated a dozen years ago. In a few years we will have a much greater load on our high schools and this load will be even greater if there is tax pressure for immediate subdivision, whereas, if some subdivisions are delayed several years there will be a "smoothing out" of peaks in certain grades. * * * (but things will still be pretty bad). Also there is need for "raw" land for playgrounds, recreation, and civic functions. When we start satisfying these needs it will cost a lot less if there are large "blocks" available without the expense of removing many houses and even roads. So, in summation, we should continue greenbelts so as to keep taxes down and to provide a better future for

this valley and we should have the intelligence and foresight to do it despite the greed of some for immediate profits.

Sincerely,
(Signed) MARVIN O. ADAMS

P.S. A dozen years ago I advocated the above and a lot more, e.g. if classified agricultural and taxed low then a big charge (like back taxes on new classification) if up-graded later (of course charge only in classification at owners' request rather than at request of those wanting to "club" him into use change.)

APPENDIX 7

TAX STATEMENTS SUBMITTED BY C. J. OLSON, ROUTE 1, BOX 140, SUNNYVALE, CALIFORNIA, SHOWING INCREASE IN PROPERTY TAX ON 15 ACRES OF CHERRY ORCHARD WHEN IT WAS ANNEXED BY THE CITY OF SUNNYVALE

1955-56 tax, County of Santa Clara	$683.54
1956-57 tax, City of Sunnyvale	956.52
Increase	$272.98

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California
press 5 1050

ATEMENT 1955-1956
For the fiscal year July 1, 1955 to June 30 1956

No. 151331

RETURN THIS STATEMENT WHEN MAKING PAYMENTS

DO NOT DETACH STUBS
READ IMPORTANT INFORMATION ON REVERSE SIDE

RATE PER $100.00 ASSESSED VALUATION

103-0 SUNNYVALE		TOTAL RATE	5.650
SCHL	3.370	ADD	
CCO	1.861	SCVW LD VAL	.211
FLOOD	.097		
FIRE	.322		

DESCRIPTION OF PROPERTY

15.293 AC OF LD BD
N BY SF-SJ RD
E BY PAVLINA
S BY LD OF SISEVICH ET AL
W BY LD OF GLUMAZ

SECTION OR LOT | TOWNSHIP OR BLOCK | RANGE

ASSESSED TO OR OWNED BY

RUEL C & ROSE OLSON
RT 1 BOX 140
SUNNYVALE CALIF

IF YOU HAVE SOLD THIS PROPERTY PLEASE FORWARD THIS BILL TO NEW OWNER

CODE 103-0

Do not pay without reading Property Description carefully.
Tax Collector not Responsible for Erroneous Payments

LAND VALUE	IMPROVEMENT VALUE	TOTAL REAL VALUE	PERSONAL PROPERTY	EXEMPTIONS	TOTAL VALUE	Solvent Credits
7650	3350	11000			11000	

TOTAL TAX MAY BE PAID NOV 1st

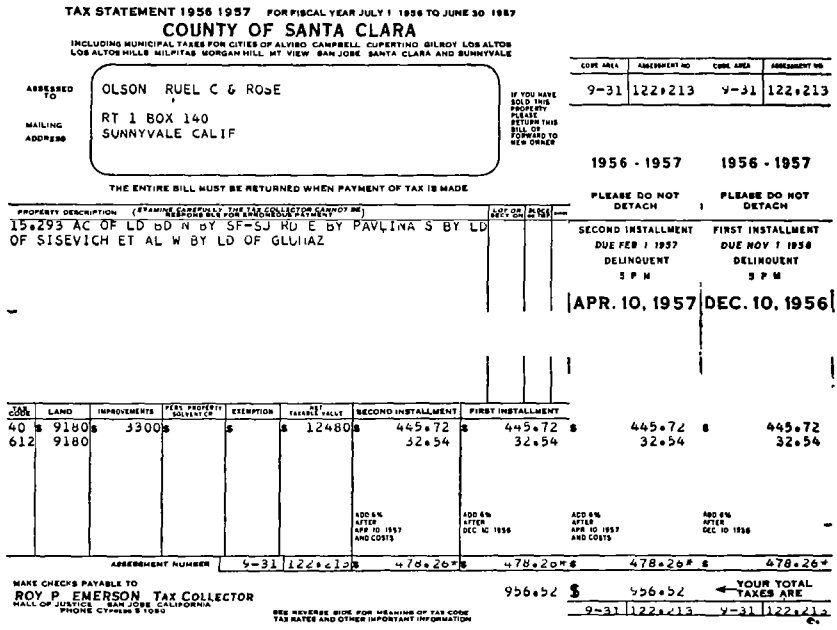
VALUATIONS $	FIRST INSTAL DUE NOV 1 1955 DELINQUENT 5 P M DEC 12 1955 $ ¢	CASHIER'S RECEIPT 1st INSTALLMENT	SECOND INSTAL DUE FEB 1 1956 DELINQUENT 5 P M APRIL 10 1956 $ ¢	CASHIER'S RECEIPT 2nd INSTALLMENT	CASHIER'S RECEIPT TOTAL TAX	DETAIL OF TOTAL TAX $ ¢
11000	310 75		310 75			621 50
7650	31 02 A		31 02 A			62 04
	341 77		341 77			683 54
PAY LAST AMOUNT	6% Pen		6% Pen			Pen
	TOTAL		Costs			Costs
			TOTAL			TOT

CASHIER'S RECEIPT 1st INSTALLMENT

CASHIER'S RECEIPT 2nd INSTALLMENT

PAID
R. P. EMERSON
TAX COLLECTOR
WATER WORKS

CODE LETTER LEGEND
A WATER CONSERVATION
B PACHECO STORM WATER
C SANITATION
D SOIL CONSERVATION
E LIGHTING
F ASSESSMENT & IMPROVEMENTS
G SOLVENT CREDIT
H FLOOD CONTROL



TAX STATEMENT 1956 1957 FOR FISCAL YEAR JULY 1 1956 TO JUNE 30 1957

COUNTY OF SANTA CLARA

INCLUDING MUNICIPAL TAXES FOR CITIES OF ALVISO CAMPBELL CUPERTINO GILROY LOS ALTOS LOS ALTOS HILLS MILPITAS MORGAN HILL MT VIEW SAN JOSE SANTA CLARA AND SUNNYVALE

ASSESSED TO: OLSON RUEL C & ROSE

MAILING ADDRESS: RT 1 BOX 140 SUNNYVALE CALIF

IF YOU HAVE SOLD THIS PROPERTY PLEASE RETURN THIS BILL OR FORWARD TO NEW OWNER

CODE AREA	ASSESSMENT NO	CODE AREA	ASSESSMENT NO
9-31	122.213	9-31	122.213

THE ENTIRE BILL MUST BE RETURNED WHEN PAYMENT OF TAX IS MADE

1956 - 1957 1956 - 1957

PLEASE DO NOT DETACH | PLEASE DO NOT DETACH

PROPERTY DESCRIPTION (EXAMINE CAREFULLY THE TAX COLLECTOR CANNOT BE RESPONSIBLE FOR ERRONEOUS PAYMENT)

15.293 AC OF LD BD N BY SF-SJ RD E BY PAVLINA S BY LD OF SISEVICH ET AL W BY LD OF GLUHAZ

SECOND INSTALLMENT DUE FEB 1 1957 DELINQUENT 5 P M APR. 10, 1957

FIRST INSTALLMENT DUE NOV 1 1956 DELINQUENT 5 P M DEC. 10, 1956

TAX CODE	LAND	IMPROVEMENTS	PERS PROPERTY SOLVENT CR	EXEMPTION	NET TAXABLE VALUE	SECOND INSTALLMENT	FIRST INSTALLMENT
40	$ 9180	$ 3300	$	$	$ 12480	$ 445.72	$ 445.72
612	9180					32.54	32.54
						ADD 6% AFTER APR 10 1957 AND COSTS	ADD 6% AFTER DEC 10 1956
ASSESSMENT NUMBER		9-31 122.213				$ 478.26*	$ 478.26*

MAKE CHECKS PAYABLE TO ROY P EMERSON TAX COLLECTOR HALL OF JUSTICE SAN JOSE CALIFORNIA PHONE CYpress 2-1080

SEE REVERSE SIDE FOR MEANING OF TAX CODE TAX RATES AND OTHER IMPORTANT INFORMATION

956.52 $ 956.52 ← YOUR TOTAL TAXES ARE

9-31 122.213 9-31 122.213

ADD 6% AFTER APR 10 1957 AND COSTS	ADD 6% AFTER DEC 10 1956
$ 478.26*	$ 478.26*

APPENDIX 8

EXCERPTS FROM STATEMENT ON THE CALIFORNIA FARM SITUATION SUBMITTED BY THE CALIFORNIA FARM RESEARCH AND LEGISLATIVE COMMITTEE

740 Hillmar Street, Santa Clara, California

Decline in Farms

The 1954 Agricultural Census reports a drop of 14,000 in number of California farms, a decline from 137,168 in 1950 to 123,074 in 1954, or 10 percent. But general figures do not reveal special areas of distress which require state as well as federal action if grave injustice is to be prevented to skilled farm operators who are being squeezed out of production, their investment and homes sacrificed.

Alongside the uncontrolled and uncoordinated attack on family farm ownership by unplanned urban expansion, we face a continued phenomenal population growth which requires a farm plant protected and equipped to provide basic foods such as milk, eggs, poultry and livestock, as well as the fruits and vegetables, sugar, cotton and rice which we produce for national as well as world markets.

An estimated 20 million people will be living in California by 1970. An ultimate 40 million has been projected for water requirements:

Are these 40 million people going to live on our present 10½ million acres of fertile crop land, of which only 1.6 million acres are prime soil?

Will it be possible for farmers unable to overcome the cost price squeeze of the past four years to resist pressure to sell their land for real estate, go out of farming and compete for city jobs in an already saturated labor market?

If things are allowed to drift in this direction will we become a food importing state, with consequent sharp increases in food living costs, already at an all-time high for the Pacific Coast?

A look at what is happening to dairy, poultry and cattlemen, as spelled out in the 1954 Census of Agriculture, provides a grave warning and suggests what action should be immediately taken.

While the average drop in farm operators for the State was 10 percent, the loss of dairy farms was 15 percent; farms selling chickens, 34 percent; selling eggs, 38 percent; selling turkeys, 21 percent.

With pressure of population on farm land and an increase of the size of farm mortgages per farm, lenders tend to withhold further credit and force farmers to sell at currently inflated values. In many instances the long-range importance of maintaining fertile land in farm production is lost sight of. Counties and cities vie with each other in acquiring immediate tax advantages from urbanization forgetting the annual replenishment of wealth from farm production with accompanying income and jobs from processing, transportation and services required by farming which permeate every phase of rural business.

Need for Planning

A long-range program looking toward conservation of farm land in California to meet the impact of our anticipated 40 million population is long overdue. Once destroyed by urban and industrial construction, fertile top soil is gone forever.

Since 1947, California has had no State Planning Department. Our present State Planning Program is placed in the Department of Finance and concerns itself with re-employment and attraction of industry to California rather than to planning for maintaining skilled farms on adequate and fertile soil. As in the case of counties and cities, a finance department outlook would be expected to turn farm land into non-farm uses because of the immediate price and increased tax incentive.

The situation is of such vital importance to California's future as a balanced farm producing and industrially developing state, that it merits the immediate consideration of the next general session of the State Legislature.

The matter demands careful study by a standing committee of the Legislature and should include:

A survey of farm bankruptcies for the past three years;

An authoritative investigation of farm credit availability at interest rates within the range of a balanced farm budget;

An investigation of unsecured farm debt including installment debt at present discount rates;

Re-establishment of state and county farm debt commissions to assist farmer debtors with voluntary scale downs of interest and extending periods for repayment consistent with conserving sound operations and refinancing them so that they may be expanded to meet intensive farm practices under farm family operation;

Evaluating the experience of agricultural zoning by areas and types of farming in relation to remaining acreage of fertile cropland, irrigation and climate, looking toward a planned reservoir

of dairy and poultry products as well as specialty crops to maintain California's valuable processing industries and the employment as well as the income they provide;

A step by step approach to population growth to achieve a balance between farm and non-farm production and consumption, employment and income, through establishing a functioning, properly staffed and independent State Planning Department.

APPENDIX 9

COOPERATIVE AGREEMENT BY RANCHERS WITHIN AND ADJACENT TO THE CUPERTINO UNION SCHOOL DISTRICT BOUNDARIES FOR THE ESTABLISHMENT OF AND CONTROL OF LAND USE INTO A "GREENBELT" AREA

This Agreement made and entered into this ___ day of January, 1955, in the County of Santa Clara, State of California, by the respective signatories hereto.

WITNESSETH:

WHEREAS, the undersigned are engaged in varied agricultural pursuits within the area encompassed by the Cupertino Union School District and areas immediately adjacent thereto, and

WHEREAS, we and each of us are desirous of establishing an area that will be solely and exclusively used for agricultural pursuits in their various forms and prevent the encroachment thereon of other activities now threatened, which would seriously affect the economic position of the signatories through higher taxation, dilution and impairment of their operation, and

WHEREAS, there is no public authority which can provide a safeguard for agricultural land uses nor prevent encroachments thereto by other types of activities, and

WHEREAS, the parties to this Agreement are informed and believe that their mutual agreement to protect their agricultural lands by the means hereinafter set forth is their only recourse.

NOW THEREFORE, for and in consideration of the mutual promises, covenants and conditions herein contained, it is agreed as follows, to-wit:

FIRST: The signatories hereto agree that from the period commencing on the date of this Agreement and continuing until December 31, 1958, that they will not lease, sell, agree to sell or give options for the sale of any agricultural lands which they own to be used for anything other than agricultural purposes and activities directly connected therewith during the life of this Agreement.

SECOND: That they themselves will not convert their said lands from farm use to residential use, nor will they lease, convey, agree to convey or give options to convey for any such use provided, however, that the owner of the land may develop a portion thereof for his own residential use or for the residential use of members of his immediate family and employees of the said owners, provided that the said residences are reasonably necessary in the conduct of the agricultural operations of the owner.

THIRD: Should any owner at the time of the signing of this Agreement, hold land, a portion of which he may wish to have re-zoned as commercial, he may become a party to this Agreement to the extent of the agricultural lands which he owns and excluding therefrom that portion which he desires to have zoned commercial, but he should indicate the size and location of the areas proposed to be so zoned.

FOURTH: Signatories who own potential industrial holdings and which have already been processed for zoning as industrial areas before the County Planning Commission and the County Board of Supervisors by presentation through the Cupertino-Monta Vista Improvement Association, may exclude such potential industrial holdings from lands which they own and which are to be under the control of this Agreement.

FIFTH: Each of the signatories hereto promise with each other that they will not become petitioners for the annexation of their lands to any existing municipality which may seek to annex their said lands and that each and all of the signatories whether directly affected or not by any proposed annexation will make all legal efforts to prevent such annexation. It is provided, however, that should a City of Cupertino be incorporated in accordance with the laws of this State within the life of this Agreement, that nothing in this Agreemnt shall be construed as opposed to the formation of said City.

SIXTH: It is further agreed:

(1) That no land will be sold during the time of this Agreement for the establishment of new well sites for the purposes of pumping underground waters *out of the district* embraced by the lands of the owners who are signatories hereto, whether the said water is to be pumped by public utilities, private corporations or individuals. This provision is not intended to affect existing wells nor new wells which may be required for agricultural and existing commercial and industrial uses within the District; but it is directed only to waters that are to be drained from the District to be used elsewhere.

(2) That none of the signatories will sell or give rights of way, easements or licenses over their lands for the construction of storm sewer drainage facilities in aid of subdivision developments without the consent of the majority of the signatories hereto. Such consent shall not be given except on the recommendation of the Committee herein established. That pending the granting of said consent, each signatory promises and agrees to resist any effort to secure such rights of way, easements and licenses. It is understood, however, that should such rights of way be secured by condemnation proceedings lawfully taken by a public authority, that the owner of the property affected shall not be held to have breached this Agreement.

SEVENTH: The signatories hereto recognize that high grade developments in the areas having real merit may, from time to time, arise during the life of this Agreement. Accordingly it is mutually agreed that any signatories may, after two (2) years from the date of this Agreement, submit any firm offer on land covered by this Agreement for the development thereof to the committee to be herein provided for, for study and recommendation and should three or more of the said

committee find the proposal to be of sufficient general interest and benefit to the areas of land embraced herein to warrant relieving and releasing the said land from the controls on use thereof prior to the expiration date of this Agreement, they shall call a special election of all of the signatories hereto to determine whether the said property shall be so relieved and released; that the said voting shall be by secret ballot and if 75% or more of the owners of the land or their authorized representatives who are parties to this Agreement and eligible to vote, approve the said releasal, the same shall be released conditioned upon the giving by the applicants of contractual or other assurances that the developments will take place in accordance with the terms presented.

EIGHTH: It is agreed that the enforcement of this Agreement, the carrying out of provisions thereunder, and the administration of funds shall be in a committee composed of five owners or authorized representatives of owners, as hereinafter defined, all of whom must be signatories hereto, to be elected by a majority of all of the signatories hereto. That the term of office of each and every member of said committee shall be for a period of four years. That in the event that this Agreement is extended by mutual agreement of the parties hereto that a new election for committeemen shall be called, at which any or all of the same committeemen may be reelected. It is specifically provided that owners who are signatories may be represented on the committee by an authorized representative, acceptable to a majority of the signatories, provided that the authorization from the owner is in writing, and that the representative so named is actually engaged in agricultural activities as his principal occupation.

NINTH: The committee shall have authority to do any of the following acts as well as any act impliedly or inferentially within the authority of the said acts:

1. To collect funds.
2. Defray necessary expenses.
3. Administer the use of funds.
4. Employ personnel and require services to be performed in connection with the carrying out of the terms of this Agreement.
5. To represent the signatories before public administrative and elective officers in connection with any of the provisions of this Agreement.

TENTH: It is mutually recognized that funds will be needed to carry out this Agreement and accordingly, it is provided and mutually agreed that each of the signatories will pay into the fund to be administered by the committee, an amount equal to 4% of his 1954-1955 or 1955-1956 County Tax bill on included areas, which ever is the lesser, provided that the amount to be so paid shall not exceed Five and $^{0}/_{100}$ ($5.00) Dollars per acre for the period of this Agreement. It is further provided that upon the termination of this Agreement unexpended funds are to be returned to the signatories in proper standing on a prorata basis proportioned to the contribution which the signer made into the fund. It is expressly understood that any signer who

has breached this Agreement in whole or in part, waives any and all claim to reimbursement.

ELEVENTH: This Agreement becomes effective as soon as signed acreage exceeds 640 acres. Additional signatories may apply to become parties to this Agreement at any time by consenting in writing to the terms and conditions herein contained and by paying the amount herein required to be paid based upon the tax bill as herein fixed. The committee shall prepare a list of additional signatories as of each April 30th and October 31st of each year and shall sold semi-annual meetings as soon thereafter as practical for the purposes of voting to accept or reject new signatories and for such other purposes as may require attention. It shall be the committee's duty to notify the County Assessor of the County of Santa Clara of all new acreages signed and accepted and subject to the controls established in this Agreement.

TWELFTH: It shall be the duty of each signatory to report to the committee any unusual increases in their annual County Tax statement reflecting an increased assessed valuation, which appears to be in excess of land use value. The committee, through its authorized representatives, shall, in the event of such unusual increases, meet with the responsible public officers and take such steps as may be required in connection with the same.

THIRTEENTH: This Agreement shall be personally binding upon each of the parties hereto and upon the executors, personal representatives, administrators, heirs and assigns of all the parties hereto until the date of its expiration.

FOURTEENTH: It is expressly understood by all the parties hereto that it would be impractical and impossible to determine a measure of damage for any breach of this Agreement. That accordingly, it is necessary to establish a provision for liquidating damages in the event of the breach thereof by any of the signatories and, accordingly, it is agreed as follows:

1. That for each and every breach of the said Agreement that the person breaching the same shall pay as and for liquidated damages the sum of $1,000.00 per lot or $4,000.00 per acre whichever is the greater. That such damages shall be deposited with the committee and the same shall be disbursed in the following manner.

(a) After paying first from the proceeds any costs incidental to the enforcement of this Agreement and the collection of the said damages, 50% of the net proceeds shall be paid to the AFFECTED SCHOOL DISTRICT and the remaining 50% shall be distributed prorata to each of the signatories on the basis of the acreage placed under the control of this Agreement.

2. The provisions for liquidated damages herein is not intended to foreclose the parties hereto from any other remedies they may have at law, legal or equitable, but is intended to be in addition thereto.

FIFTEENTH: In the event that the legality of this Agreement is challenged in whole or in part, it is expressly declared that it is the intention of the parties hereto that all remaning parts shall remain in full force and effect.

SIXTEENTH: This Agreement is predicated upon the principle that no land shall be assessed on any basis other than for agricultural uses, and that the provisions thereof will be honored and respected by the public officers, whose duties are to assess, to equalize assessments, and to collect taxes. In the event the said public officers are restrained or prohibited by law to honor the provisions of this Agreement, the same shall no longer be binding upon the signatories thereto.

SEVENTEENTH: It is further provided that any signatory, who during the life of this Agreement, is no longer able to carry on agricultural pursuits on his land by reason of legal restraint not brought about by his own conduct, or by facts and circumstances that make such agricultural use impossible, he shall report such fact to the committee, who, upon finding that such agricultural use is no longer possible, shall recommend the release of said land from the terms of the Agreement to the signatories hereto. The signatories may, by a majority vote, authorize the release of the said land from the controls of this Agreement.

IN WITNESS WHEREOF, we have placed our hands on the day and year first above mentioned.

For immediate release

Press Release: Santa Clara County Agricultural Unit No. 1

(Discussed at a Farm Bureau symposium held at Mariani's Restaurant, Santa Clara, California, February 7, 1955, 8.30-10.30 p.m.)

In a step that looks like "greenbelting," but is actually very different, about 50 long-time farmers in the *Cupertino* area entered a unique agreement designed to cut through confusion and save a substantial part of the rich farmlands in their neighborhood.

They have agreed that they will not subdivide during the next four years, and that they will resist annexations vigorously. They are collecting substantial funds to enforce these commitments.

A spokesman for the group summarized:

> "Hasty industrialization, the resulting cheap subdivisions, and the current general confusion about what to put where is ruining one of the most fertile valley floors in the world. An expanding economy cannot maintain itself without abundant food produced at the lowest possible costs. It is ridiculous to put cheap housing on world-famous land in a state with an abundance of other open spaces.
>
> "We cannot grow and harvest crops efficiently if we are always preoccupied over some new hassle involving zoning, rezoning, annexation, or real estate deals in the neighborhood that threaten to make farming impossible.
>
> "Constructive work is no doubt being done at county and state levels, but we cannot wait for the eventual ordinances and laws. As farmers we use a planning interval at least four years long. We can't wait months or years to plan our operations.
>
> "Behind every badly placed subdivision, there is an exfarmer who gave up to the prevailing confusion and salvaged what he could by selling out. In seeking a short-term, localized reduction in

confusion—particularly what our neighbors intend to do—we have entered a simple agreement not to subdivide. We did it without hearings, legislation, delay, * * * Those who were not willing to commit themselves to farming for four years stayed out. There are no dissenters in the group.

"We have elected a committee to enforce the agreement; and to take a positive and aggressive position in saving local farmlands from further inroads. The move should allow us to settle on definite farming plans for the next four years, and get back to our chosen work.

"There is nothing antisocial about producing food on good land, nor is there anything contrary to public policy in wanting a four-year period of stability in which to plan farming operations. Our agreement terminates at the end of 1958, and we will face the situation then with comparable clarity and aggressiveness.

"We certainly favor balanced development, and high-grade development. We are confident that what we have done is a constructive step at the grass-roots level. It should help our entire neighborhood. We see no way in which it can harm any legitimate interest dedicated as we are to the long run welfare of our community.

"Anyone interested in further details will find our executive committee is available."

The recently elected officers are:

Nathanson, N. J., Chairman Lester, Will, Jr., Field Secretary Leonard, Burrel, Recording Secretary Mariani, L. J., Vice Chairman Milovina, I. J., Treasurer	Executive Committee

The other committeemen are:

Butcher, Robert T. Denton, Harold E. Euphrat, E. F. Forge, Otis Johnson, A. L. Mardesich, Joseph Montgomery, John Ravizza, Albert Wilson, Warner	Committee

Mailing address: P. O. Box 582, Cupertino, California.

APPENDIX 10

ORDINANCE No. 14

An ordinance of the City of Cupertino, State of California, amending Ordinance No. 002 recognizing greenbelt agreements, farm zoning, and providing for agricultural zoning of areas that may be annexed.

The city council of the City of Cupertino does ordain as follows:

Section 1. Ordinance No. 002 is hereby amended as follows by adding thereto the following:

"Section 2a. Agricultural lands as herein used are defined to be lands used in agricultural and classified No. 1 as defined on the land map of the County of Santa Clara as of the date of this ordinance.

"Section 2b. All agricultural lands presently within the City Limits of Cupertino and being used for agricultural purposes either within or without a Greenbelt Agreement shall not be rezoned in any case unless the owner of said land shall request rezoning.

"Section 2c. Any agricultural land that may hereafter be brought into the City of Cupertino by annexation shall be brought in under the provisions of Section 2b above.

"Section 2d. Any commercially zoned land adjacent to or part of land used for agricultural purposes that may be brought into the city by annexation shall remain commercial at the option of the owner thereof."

Introduced at a regular meeting of the City Council of the City of Cupertino on the 26th day of March, 1956. Passed at a regular meeting of the City Council of the City of Cupertino on the 26th day of March, by the following vote:

Ayes: Councilmen: Lindenmeyer, Meyerholz, Nathanson, Saich, Wilson.
Noes: (None).

Approved:
Mayor, City of Cupertino

Attest:
City Clerk
Lawrence K. Martin

APPENDIX 11

CONVERSION OF CULTIVABLE LAND TO NONAGRICULTURAL USE IN METROPOLITAN AREAS

Metropolitan area	Total cultivable land (acres)	Converted before 1942 (acres)	Converted 1942-55 (acres)	Total converted (acres)	Percent converted
San Francisco-Oakland	808,236	124,500	91,268	215,768	26 7
San Jose	232,080	20,500	55,940	76,440	32 9
Sacramento	388,500	60,000	52,000	112,000	28.8
Stockton	800,000	----------	4,450	4,450	0.6
Fresno	1,335,000	58,800	31,500	90,300	6 8
Los Angeles	1,330,020	581,580	253,900	835,480	62.4
San Diego	425,960	15,400	34,900	50,300	11.8
San Bernardino-Riverside-Ontario	868,965	141,620	50,695	192,315	22 1
Total, 8 metropolitan areas	6,197,761	1,002,400	574,653	1,577,053	25 4
Rest of State	11,363,673	937,528	244,865	1,182,393	10.4
State total	17,561,434	1,939,928	819,518	2,759,446	15.7

SOURCE: U. S. Soil Conservation Service, "Estimates Relative to Land in Soil Conservation Services." Land Capability Classification System (Classes I-IV)

APPENDIX 12

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—— "Some Limitations and Possibilities of Rural Zoning," address to Mid-Century Conference on Resources for the Future, Washington, D. C., December 2-4, 1953.

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—— "Cities and Farms, Side by Side," address to Southern California Planning Institute, University of California, Los Angeles, June 17-18, 1955.

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ASSEMBLY INTERIM COMMITTEE REPORTS
1955-1957
VOLUME 13 NUMBER 15

REGIONAL AND METROPOLITAN PLANNING IN CALIFORNIA

Report of the Subcommittee on
PLANNING AND ZONING

A Subcommittee of the
ASSEMBLY INTERIM COMMITTEE ON CONSERVATION, PLANNING, AND PUBLIC WORKS

House Resolution No. 239, 1955

Report Prepared by
HAROLD F. WISE & ASSOCIATES
MAX E. ANDERSON, SAMUEL E. WOOD

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May, 1957

Published by the
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OF THE STATE OF CALIFORNIA

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Majority Floor Leader

HON. WILLIAM A. MUNNELL
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ARTHUR A. OHNIMUS
Chief Clerk

COMMITTEE LETTER OF TRANSMITTAL

ASSEMBLY INTERIM COMMITTEE ON
CONSERVATION, PLANNING, AND PUBLIC WORKS
SACRAMENTO, CALIFORNIA, May 1, 1957

HON. L. H. LINCOLN, *Speaker of the Assembly*
Members of the Assembly
Assembly Chamber, Sacramento, California

This report on Regional and Metropolitan Planning in California, submitted pursuant to House Resolution No. 239, 1955, is our second study involving the problem of metropolitan and regional planning. The first study, a background work, prepared for the committee by the Bureau of Public Administration, University of California at Berkeley, *Adapting Government to Metropolitan Needs,* discusses not only regional and metropolitan planning, but also the importance of devising administrative organizations equal to the regional or metropolitan problem area. Both problems must be met before the regions and metropolitan areas of California can appropriately meet the present problems of growth and furnish the services demanded.

Respectfully submitted,

FRANCIS C. LINDSAY, Chairman
Assembly Interim Committee on
Conservation, Planning, and Public Works

2—L-756

SUBCOMMITTEE LETTER OF TRANSMITTAL

ASSEMBLY CHAMBER, STATE CAPITOL
SACRAMENTO, CALIFORNIA, May 1, 1957

HON. FRANCIS C. LINDSAY, *Chairman*
Conservation, Planning, and Public Works
California State Assembly, Sacramento, California

DEAR SIR: For the past two years this subcommittee and its staff has worked with the people in the San Francisco Bay Area and the San Joaquin Valley in an effort to establish the legislative base to permit regional and metropolitan planning.

Present law provisions permitting the affiliation of cities and counties in order to extend the planning function over the full problem area are cumbersome and unworkable where two or more counties are involved.

The legislation submitted with this report simplifies the method of establishing regional planning organizations by permitting two or more counties and their cities to join together as a planning district. The legislation is permissive and the functions of the district are advisory to the local political jurisdictions involved. Until the planning function is extended over the natural areas with mutual problems, local units of government will not be able to face their problems in a comprehensive fashion nor deal effectively with state action departments that are now influencing their physical development.

Respectfully submitted,

BRUCE F. ALLEN, Chairman
FRANK P. BELOTTI
WILLIAM W. HANSEN
VERNON KILPATRICK
CHARLES W. MEYERS
EUGENE G. NISBET
Subcommittee on Planning and Zoning

May 23, 1957

HONORABLE BRUCE ALLEN
Chairman, Subcommittee on Planning and Zoning
of the Committee on Conservation, Planning
and Public Works
State Capitol, Sacramento, California

DEAR MR. ALLEN: I participated in the interim studies of our Subcommittee on Planning and Zoning and agree fully with the importance of simplifying state legislation to permit counties and cities within counties to organize in order to meet their mutual regional planning problems. I fully agree that some planning coordination must be accomplished in the Bay area, but I do not feel the local governmental units involved are willing to endorse the type of planning district proposed in Assembly Bill No. 1647 at this time. Until the major political subdivisions including the city and county of San Francisco are willing to support such a district, it is futile to propose such a plan.

With this reservation, I have signed the subcommittee report.

Very sincerely,
(signed) CHARLES W. MEYERS

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SCOPE OF REPORT

This report, (1) reviews testimony and other evidence of the need for regional planning; (2) describes recent efforts to establish regional planning agencies in several parts of the State; (3) examines the inadequacies of existing law; and (4) submits legislation enabling the creation of planning districts to solve the problems of regional development.

THE FINDINGS

1. The past growth and spread of population has created development problems that overlap many jurisdictions and present trends indicate that such problems will become more acute in the future.

2. Decisions are now being made by cities and counties, special districts, and state and federal agencies which affect regional development. Such decisions, however, are not based on comprehensive studies of an area's problems City and county planning operating in a regional context cannot comprehend all of the factors which impinge upon and influence local development nor can it propose integrated solutions to problems which overlap a number of counties Lacking broad-scale research and coordination at the regional level, local planning efforts tend to be unrealistic and ineffectual. Solutions to regional problems are achieved, if at all, by the piecemeal efforts of a number of governmental units and special authorities with limited jurisdiction.

3 It is generally agreed that the functions which should be performed by regional planning agencies include: (1) preparation of a regional plan; (2) the conduct of regional studies for regional planning purposes and for the purpose of strengthening city and county planning programs, and (3) the promotion of understanding and cooperation in dealing with problems of common concern. In performing the functions the regional planning agency should operate in an advisory capacity to city and county government and to other public and private agencies and groups. Since the decisions affecting the physical development of an area rest ultimately with local legislative bodies, it is essential to have their direct representation on the regional planning board in order that the board may function effectively

4. The testimony received at the hearing, together with evidence of certain efforts in the San Francisco Bay area and the central valley indicates substantial local support for the establishment of regional planning agencies.

5. Two bases exist in state law for the creation of regional planning agencies, the Regional Planning Law and the authority for area planning commissions The Regional Planning Law stands now without effect because it requires the nonexistent State Conservation and Planning Board to divide the State into regional planning districts prior to the establishment of a regional planning commission. Since such

delineations have never been made, it is more appropriate to permit county governments to define regional boundaries by their voluntary association to solve common problems. The Regional Planning Law is also inadequate since it: (1) requires gubernatorial appointment of commission members; (2) does not include city representation on the commissions; and (3) limits the commission membership to county planning commissioners. The authority for area planning commissions is inadequate because the method of appointment would produce oversized commissions in large regions and limits commission membership to local planning commissioners.

The legislation submitted with this report is permissive rather than mandatory in character. It enables the counties to determine the geographic scope of regions for themselves by their voluntary association in planning districts. It sets forth functions for the district which are substantially the same as those which, it is generally agreed, should be performed by a regional planning agency. It provides for local appointments of local legislators to the district planning board. It further provides for a system of representation in which each county area has an equal vote and the representative of all the cities in a county is equivalent to that of the county government. Finally, the proposed legislation provides for a system of financing based on a limited ad valorem tax on taxable property within the district.

RECOMMENDATIONS

1. The legislation, Assembly Bill No. 3860, submitted with this report corrects the deficiencies of the existing law regarding regional planning and should be adopted.

2 Legislation creating the San Francisco Bay Area Regional Planning District, Assembly Bill No. 1647, included with this report should be further studied in the Bay area, and passed at this session if substantial local support is focused for enactment.

PROPOSED LEGISLATION

AMENDED IN ASSEMBLY MAY 18, 1957

CALIFORNIA LEGISLATURE—1957 REGULAR SESSION

ASSEMBLY BILL No. 3860

Introduced by Mr. Bruce F. Allen

January 25, 1957

REFERRED TO COMMITTEE ON CONSERVATION, PLANNING, AND PUBLIC WORKS

An act to ~~amend Section 65072~~ ADD CHAPTER 5, COMMENCING WITH SECTION 66100, TO TITLE 7 *of the Government Code, relating to ~~regional~~* DISTRICT *planning, the financing thereof, the designation of ~~regional~~* DISTRICT *planning areas, the selection of ~~regional~~* DISTRICT *planning ~~commission,~~* BOARDS, *and the powers and duties thereof.*

The people of the State of California do enact as follows:

~~SECTION 1. Section 65072 of the Government Code is amended to read:~~

~~65072. The operation of a regional planning commission, including the employment of personnel, specialists or consultants by contract shall be in accord with a plan for organization and financing mutually agreed upon by the cooperating counties and cities~~

SECTION 1. Chapter 5 is added to Title 7 of the Government Code, to read:

CHAPTER 5. DISTRICT PLANNING LAW

Article 1. Declaration of Policy

66100. In enacting this chapter it is the intent of the Legislature to provide a means for solving problems of physical development which

are not confined to any single county to the end that city and county planning may be strengthened and the development of the State may proceed in an orderly fashion.

Article 2. Definitions

66105 "District" as used in this chapter means a planning district comprising two or more counties.

66106. "Board" as used in this chapter means the district planning board.

66107. "District Plan" as used in this chapter means a comprehensive, long-term general plan for the physical development of the district. The district plan shall consist of a text and a map or maps and shall include at least the following sections:

(a) A concise statement of the principal findings of fact concerning the district, and a concise statement of the major problems and potentialities of the district;

(b) A statement of the major objectives, principles and standards expressed in the plan, and a summary of major proposals;

(c) Recommendations for the most desirable general arrangement of land use within the district, considered in respect to: trends in economic and population growth and development, and any other studies than may appear relevant to the board.

(d) The transportation system recommended for the district, including all facilities for the transportation of people and goods of district importance or district concern.

(e) Recommendations concerning the need for and proposed general location of district facilities and reservations which by the nature of their function, size, extent or for any other causes appear to the district planning board to be appropriate subjects for inclusion in the district plan.

(f) Recommendations concerning those areas which, in the opinion of the district planning board, should be carefully conserved, or which are so especially suited to some particular use as to render it contrary to the best interests of the district community that they be developed for any other use. Such areas may include, without limiting the generality of the foregoing, areas especially suited for industrial, or agricultural purposes and areas best left in an undeveloped or relatively undeveloped state.

(g) Such other recommendations of the district planning board concerning current or future problems as may in its opinion affect the district as a whole and are proper for inclusion in the district plan.

Article 3. Creation of Planning Districts

66140. Two or more entire counties may create a planning district as provided in this chapter, upon resolution of the boards of supervisors in each county.

66141. Upon the appointment and qualification of the members of the district board, the district shall begin to transact business and exercise its powers under this chapter.

66142. Each district shall be a body corporate and politic and a public agency of the State.

Article 4. Modification and Dissolution of District

66160. Any county may withdraw from a planning district upon a majority vote of the board of supervisors and a majority of the city selection committee of said county. Intention of a county to withdraw shall be evidenced by a resolution of the board of supervisors and a notice signed by the chairman of the city selection committee. Certified copies of said resolution and notice shall be forwarded without delay to the Secretary of State. Effective date of withdrawal shall be one year after the receipt of the indicated resolution and notice.

66161. If, because of withdrawals of one or more counties from a planning district, only one county remains, the district shall be dissolved.

66162. Any county contiguous to a planning district may join said district upon the appointment and certification of two members for the district board as provided in Article 5.

Article 5. City Selection Committees

66180. There shall be a separate and distinct city selection committee for each county in the State. The membership of such committees shall consist of the mayor of each city within such county or, where there is no mayor, the chairman or president of the city council.

66181. A majority of the members of each city selection committee shall constitute a quorum.

66182. The City and County of San Francisco is both a city and a county for the purpose of this article.

66183. The city selection committee of each county may meet, on the call of any mayor or where there is no mayor the chairman or president of the city council, in the chambers of the board of supervisors of such county for the purpose of making the first appointment to the district board as prescribed in Section 66201. The committee of each county shall, so long as the county remains a part of a planning district, thereafter meet at 10 o'clock a.m. in the chambers of the board of supervisors of such county on the second Monday in May of each year that it is necessary to make succeeding appointments to the district board. At least two weeks prior to the date of each meeting the county clerk of each county shall give notice of such meeting to each member of the city selection committee of such county. The meeting of the city selection committee of each county shall be conducted in the presence of the county clerk of such county who shall act as the recording officer for the meeting. It shall be the duty of the county clerk to give an appropriate notice signed by the chairman of the committee to the Secretary of State and to the secretary of the district board of each appointment made by the city selection committee.

66184. Each committee shall appoint a chairman from among its members and such other officers as may be necessary.

66185. Members of the committees shall serve without compensation, but may be allowed actual expenses incurred in the discharge of their duties as may be authorized by the board of directors.

Article 6. Governing Body

66200. The district planning board shall be the governing body of the district and shall be selected as provided in this article.

66201. The number of members of the board to which each county or portion of a county is entitled shall be determined as follows:

(a) If the area to be activated consists of two counties, each county shall have three members of the district planning board. One member shall be appointed by the board of supervisors from its own members, one member shall be appointed by the city selection committee from the members of the city councils in the county, and one member shall be appointed by a majority of the board of supervisors and by a majority of the city selection committee from the members of the city and county legislative bodies.

(b) If the area to be activated consists of three or more counties, each county shall have two members of the district planning board. One member shall be appointed by the board of supervisors from its own members and one member shall be appointed by the city selection committee from the members of the city councils in the county.

66202. The members of the district planning board appointed by the city selection committee shall be mayors or members of the city councils of the cities.

66203. The term of office of each member of the district planning board, except a member appointed jointly by a majority of the board of supervisors and a majority of the city selection committee in any county, shall be four years and until the appointment and qualification of his successor.

66204. The term of office of each member of the district planning board appointed by a majority of the board of supervisors, and a majority of the city selection committee in any county shall be four years or until such time as a third county joins the district, appoints and qualifies its members, whichever is shorter.

66205. The power which originally appointed a member whose term has expired shall appoint his successor for a full term of four years except that the term of office of a successor to the member of the board appointed by a majority of the board of supervisors and a majority of the city selection committee shall be as set forth in Section 66204. Any member may be removed for cause by the power appointing him if notice is given and a hearing is held.

66206. No supervisor, mayor, or city councilman shall hold office on the district planning board for a period of more than three months after ceasing to hold the office of supervisor, mayor or city councilman, respectively, and his membership on the board shall thereafter be considered vacant, except that any mayor who continues to hold office as a city councilman, or city councilman who continues to hold office as a mayor, shall not be considered to have ceased to hold office under this section.

66207. Each member of the district planning board appointed by a board of supervisors shall be appointed by a resolution of that board. Each member of the district planning board appointed by a city selection committee shall be appointed by a majority vote of the committee evidenced by a notice signed by the chairman of said committee. Each member of the district planning board appointed jointly by a board of supervisors and a city selection committee shall be appointed by a resolution of the board of supervisors and a majority vote of the city

selection committee. Certified copies of all said resolutions and all said notices shall be forwarded without delay to the Secretary of State.

66208. Any vacancy on the district planning board shall be filled for the unexpired term by appointment by the power which originally appointed the member whose position has become vacant.

66209. No person while serving as a member of a district planning board shall be eligible to be appointed to any salaried office or employment in the service of the district nor shall he become eligible for such appointment within one year after he has ceased to be a member.

66210. Within 30 days after the Secretary of State has received certified copies of the resolutions appointing the city and county members of the district planning board he shall call the first meeting of these members of the board and shall designate an appropriate time within said 30-day period for the meeting, which shall be held in any city in the district as designated by the Secretary of State.

66211. The board is the governing body of the district and shall exercise all of the powers of the district, except as otherwise provided.

66212. A majority of the members of the board constitutes a quorum for the transaction of business and may act for the board.

66213. The board may elect a chairman and other officers as it deems necessary from among its own members.

66214. The board may appoint an executive committee, consisting of the chairman of the board and as many other members of the board as the board deems appropriate and such executive committee may carry on the administrative and executive functions of the board between full meetings.

66215. The board shall meet at least four times in each year and may call additional meetings at its own discretion, or, during periods between meetings, at the discretion of a majority of the executive committee.

66216. Each member of the board shall receive the actual and necessary expenses incurred by him in the performance of his duties, plus a compensation of fifty dollars ($50) for each day attending the meetings of the board, but such compensation shall not exceed one thousand dollars ($1,000) in any one year.

66217. The provisions for the executive committee set forth in this article shall not be construed to limit the board or the executive committee from setting up any other committees or groups which it may see fit.

Article 7. Powers and Duties

66240. The district shall have power:

(a) To have perpetual succession.

(b) To sue and be sued in the name of the district.

(c) To adopt a name and seal and alter them at its pleasure.

(d) To establish and maintain such offices as are judged best to facilitate the accomplishment of the purposes of the district, and to take by grant, purchase, devise, or gift, or to lease or rent, and to hold, use, and enjoy any real or personal property necessary or convenient to the establishment, maintenance or operation of such offices, and to exchange or dispose of such property.

66241. The district shall perform the following four major functions:

(a) The district shall, as a primary function, prepare, maintain, and regularly review and revise, a district plan and shall, after at least two public hearings in different parts of the district and such other public meetings as may appear to it advisable, adopt such plan as the district plan for the district, and shall, after at least two public hearings and such other public meetings as may appear to it advisable, adopt revisions of such plan from time to time when in the judgment of the board such revisions are necessary in the light of changing conditions. Such plan shall be based on comprehensive studies of the physical, economic, social and governmental conditions of the entire district and related areas, and shall aim at the coordinated physical development of the district in a manner best designed to promote the general welfare and prosperity of its people. In preparing, adopting, maintaining, reviewing and revising the district plan, the board shall take account of and seek to harmonize, within the framework of the needs of the district community as a whole, the master or general plan of cities and counties within the district, and the plans and planning activities of state, federal and other public and private agencies, organizations and instrumentalities within the district and adjacent to it. Before adoption of the district plan or of any revisions of the plan, the board shall refer the proposed plan or proposed revisions to each city and county government for review, and shall allow a reasonable time for the formulation of recommendations by city and county governments on the proposed district plan and proposed revisions of the plan. In preparing, adopting, maintaining, reviewing and revising the district plan, the board shall actively seek the cooperation and advice of cities and counties, of state and federal agencies, organizations and instrumentalities, of educational institutions and research organizations, whether public or private, and of civic groups and private persons or organizations.

(b) The district, acting in its own judgment, shall make, publish, or assist in making or publishing, studies or investigations of the resources of the district and of existing or emerging problems of any nature related to the physical and economic growth and development, living conditions, of the district, or any part thereof.

(c) The district shall publish, transmit and explain the district plan, district studies, and any other activities of the board to each of the cities and counties within the district, and similarly shall publish, transmit and explain the district plan, district studies, and any other activities of the board, to all relevant state and federal agencies, organizations and instrumentalities, to educational institutions, to relevant civic and citizen groups of all types, and to private citizens who have evidenced interest in the work of the board In carrying out this function, the board may hold public hearings, prepare printed and visual materials of all sorts, and use any medium of communication judged to be appropriate and effective.

(d) The district shall promote and encourage the growth and development of district understanding and cooperation through sponsorship and participation in public or private meetings for the consideration of district problems, through appropriate publications, or the use of any medium judged to be most appropriate and effective. The district may

further, acting in its own judgment, offer its facilities and services to assist in the solution of problems related to physical development involving two or more governing bodies, planning commissions, agencies, organizations or instrumentalities, public or private; and may otherwise participate in any program or activity intended to seek or find common or cooperative solutions to problems related to physical development or the integration of policies related to physical development and conservation within the district, or in any part thereof.

66242. The district shall from time to time study and review, in the light of changing conditions and the evolving needs of the district: (a) the nature and scope of the district planning function within the area encompassed by the district, and (b) the organization under which the district planning function may be best carried on. The board shall report to the cities and counties within the district, to all relevant state and federal agencies, organizations and instrumentalities, to relevant civic and citizen groups, and to the State Legislature and the appropriate committees thereof, on ways in which such function or organization may be improved, including, without limiting the generality of the foregoing, proposals concerning the structure of the district, cooperation or combination of the district with other governmental agencies in the district, or other means for the effectuation of the purposes of this chapter.

66243. The district shall have power to contract or otherwise participate in, and to accept grants, funds, or services from the Federal Government, its agencies or instrumentalities in connection with any federal program judged by the board to be relevant to its functions; and the board shall similarly have the power to contract or otherwise participate in, and to accept grants, funds, or service from the State, or any agency or instrumentality thereof, or any city, county, civic organization or private person in connection with any program judged by the board to be relevant to its function.

66244. Each district shall have power to contract with any consultant, or to contract for any other types of services judged by the board to be necessary or convenient for carrying out the purposes of the district.

66245. Each board, acting with the advice of the director, shall determine the compensation, number, and general duties of personnel employed by the district.

66246. Each board may contract with any city or county, any state department or any competent person or agency to conduct competitive examinations for ascertaining the fitness of applicants for employment.

66247. Each board may adopt a merit service system for any or all employees of the district, except that the district planning director shall be exempt from such system and shall serve at the pleasure of the board; provided, however, the director shall have, if he so requests, the right to a public hearing prior to any action for his dismissal.

Article 8. The District Planning Director

66260. Each board may appoint a district planning director who shall receive a salary not less than that of any county or city planning director within the district.

66261. The district planning director shall be the chief administrative and planning officer and technical advisor of the board. The director shall, subject to the supervision of the board:

(a) Direct and administer the preparation, maintenance, regular review and revision of the district plan, and administer and execute all of the other functions and duties of the district set forth in this chapter.

(b) Appoint and remove personnel of the district, subject to Article 7.

(c) Serve, or designate personnel to serve, as executive secretary to the board.

(d) Serve, or designate personnel to serve, as secretary to the official representatives and technical advisory committees, including reasonable services in respect to the organization, calling of meetings, distribution of reports, and any other activities which such official representatives or technical advisory committees, or any subcommittees thereof, may wish to undertake in the furtherance of their own functions.

(e) Have access, or designate personnel to have access, to information, reports and data which relate to the functions and duties of the district in the possession of departments, agencies, or instrumentalities of the State, or in the possession of departments, agencies or instrumentalities of cities or counties within the district.

(f) Enter upon, or designate personnel to enter upon, at reasonable times and in such manner as to cause no unnecessary injury, any land in order to make examinations and surveys related to the functions of the district.

(g) Perform such other duties and exercise such other powers as the board may delegate to him.

Article 9. Filing of Local Reports

66280. To facilitate effective and harmonious planning and development of the district, all county and city legislative bodies, and all county, city, or other planning agencies within a district shall file with the board, for its information, all county or city master or general plans, the elements of such master or general plans, and any other plans, zoning ordinances, official maps, building codes, subdivision regulations, or amendments or revisions of any of them, as well as copies of any regular and special reports dealing in whole or in part with planning matters. All agencies, organizations and instrumentalities of the State within the district shall file with the board, for its information, all public plans, maps, reports and other documents which are related to district planning or other activities of the district.

To facilitate further the effective and harmonious planning of a district, the board of any district may request from the Federal Government, its agencies and instrumentalities, and from private organizations, agencies, or individuals, copies of those plans, maps, reports and other documents which are related to district planning or the other activities of the district.

66281. Nothing in this article shall be construed to limit the right of the director to access to information as set forth in subdivision (e) of Section 66261 of this chapter.

Article 10. Coordination of Research

66290. The board may make recommendations to county and city legislative bodies, planning commissions, and all other city or county planning agencies within the district, and to agencies, organizations and instrumentalities of the State and Federal Government (including

the State Legislature and appropriate committees thereof), and private organizations, agencies, or individuals within the district, for the coordination of research and the collection of data, the improvement or standardization of procedures, or any other matter which may be of assistance to district planning, the activities of the district, or the activities of the various agencies, organizations, instrumentalities or individuals concerned.

Article 11. Referrals

66300. County or city legislative bodies, planning commissions, and all other county or city planning agencies within a district, and agencies, organizations and instrumentalities of the State and Federal Government within the district, and private planning consultants acting with the district, may submit proposals for any master or general plan, the elements of any master or general plan, any other plan, map, report, capital improvement program, proposed bond issue, or any other report or document or amendments or revisions thereto, prior to their adoption, to the district planning board for its advice thereon, which advice the board shall give whenever in its opinion it is reasonably possible for it to do so. Such advice shall consist of a report as to the conformance of such proposals to the district plan, the possible effect of such proposals on other portions of the district, and any other matters which in the judgment of the board may be of assistance to the body requesting such advice.

Article 12. Annual Report

66310. In addition to the other reports, studies and documents provided in this chapter, the board shall submit to the legislative bodies and to the planning agencies of all of the counties, cities, and to other governmental agencies, organizations and individuals, public or private, designated by the board, an annual report on or before the first day of March. The annual report shall contain an evaluation of the major problems and opportunities for desirable development facing the district, a report on the status of the district plan, and descriptions of those sections of the district plan which have been amended, revised, added or deleted during the year, and the nature of such amendments, revisions, additions or deletions. The annual report shall also contain summaries of important studies partially or entirely completed by the board during the year, and a brief report of other major activities.

Article 13 Official Representatives

66320 Each of the following agencies, organizations and individuals may designate, from among its own members, one person to be accredited as the official representative of that agency, in matters concerning district planning:

(a) Each county and city planning commission within the district.

(b) Each redevelopment and housing authority or agency within the district.

(c) Any agencies, instrumentalities, or departments which may be designated by the Governor.

(d) Any district or authority, exclusive of school districts, within the district.

(e) One official representative from each county within the district as may be designated by the county superintendent of schools.

(f) Any agencies, instrumentalities or department which may be designated by the President of the United States

(g) Other public or private agencies and organizations as the board may from time to time designate.

The director shall invite each of such agencies, organizations and individuals to select an official representative, and shall accredit the official representatives chosen.

66321. Each official representative shall receive a copy of each report issued by the district, a notice of meeting, agenda, and minutes of meeting of every meeting of the board, and any other information or material which the board may wish to issue

66322. Each official representative shall have, upon the giving of reasonable notice, and subject to reasonable regulation by the board, the right to request the addition of any matter to the agenda of any regular board meeting, and to present the views of those represented at that time. In addition, any official representative may submit written reports of the views of those represented at any time, which reports shall be filed as part of the official records of the district.

66323. Official representatives shall serve at the discretion of the agency, organization or individual designating them, and the director shall remove accreditation, and give new accreditation, upon the written request of such agency, organization or individual.

Article 14. Technical Advisory Committees

66340. Each board may appoint, with the advice of the director, from time to time, technical advisory committees of skilled and experienced persons to study various aspects of matters related to the functions and duties of the district and to report to the board

66341. Technical advisory committees shall, in each case, be selected to include broadly representative points of view as well as skill and experience in those fields in which they are requested to make studies.

Article 15. Financial Provisions

66360. Each district may borrow money and incur indebtedness in anticipation of the revenue for the current year in which the indebtedness is incurred or of the ensuing year. Such indebtedness shall not exceed the total amount of the estimate of the tax income for either the current year or the ensuing year, whichever estimate is selected as the limit by the board.

66361. Before the fifteenth day of June each year each district board shall estimate and determine the amount of money required by

the district for purposes of the district during the ensuing fiscal year and shall apportion this amount to the counties included within the district according to the relative value of all the property in each county within the district as determined by the board. The total amount of money required by the district for district purposes during any one fiscal year shall not exceed one cent ($0 01) on each one hundred dollars ($100) of the assessed valuation of all the property included in the district.

66362. On or before the fifteenth day of June of each year each board shall inform the boards of supervisors of each county within its district of the amount apportioned to the county. Each board of supervisors shall levy an ad valorem tax on the taxable property within the county included within the district sufficient to secure the amount so apportioned to it and such taxes shall be levied and collected together with, and not separately from, the taxes for county purposes and paid to the treasurer of each of the counties to the credit of the district.

66363. Taxes levied by the board of supervisors for the benefit of the district shall be a lien upon all property within such county lying within the district and shall have the same force and effect as other liens for taxes. Their collection may be enforced in the same manner as liens for county taxes are enforced.

66364. The treasurers of the several counties within the district shall pay into the district treasury all funds held by them to the credit of the district.

66365. The district board shall, in carrying out the provisions of this article, comply as nearly as possible with the provisions of Chapter 1 (commencing with Section 29000) of Division 3 of Title 3 of the Government Code.

Article 16. Saving Provision

66380 The failure of any legislative body, commission, agency, organization, instrumentality, individual, or official representative to receive any agenda, notice of meeting, minutes, report, or document or material of any sort provided for in this chapter shall not affect the validity nor impair the lawful effect of any action or activity of any district.

Article 17 Dissolution

66390. The State of California reserves the right to dissolve, combine, alter, modify or amend in any manner the organization and powers of each of the districts established in this chapter, including, without limiting the generality of the foregoing, the association, combination or integration of each district with any other district, agency, body or instrumentality within the district or within any part of the State in a manner which in the judgment of the Legislature may appear best to carry out the purposes of this chapter.

AMENDED IN ASSEMBLY MAY 15, 1957

AMENDED IN ASSEMBLY MAY 1, 1957

AMENDED IN ASSEMBLY APRIL 5, 1957

CALIFORNIA LEGISLATURE—1957 REGULAR SESSION

ASSEMBLY BILL No. 1647

Introduced by Messrs. Bruce F. Allen and O'Connell

January 18, 1957

REFERRED TO COMMITTEE ON MUNICIPAL AND COUNTY GOVERNMENT

An act to add Chapter 2.5 (commencing with Section 65075) to Title 7 of the Government Code, relating to the creation of the San Francisco Bay Area Regional Planning District, setting forth its organization, powers, and duties, and making an appropriation therefor.

The people of the State of California do enact as follows:

SECTION 1. Chapter 2.5 (commencing with Section 65075) is added to Title 7 of the Government Code, to read:

CHAPTER 2.5. SAN FRANCISCO BAY AREA REGIONAL PLANNING DISTRICT

Article 1. Short Title

65075. This chapter may be cited and shall be known as the San Francisco Bay Area Regional Planning Law.

Article 2. Declaration of Policy

65076.1. The Legislature finds and declares that the people of California have a fundamental interest in the orderly development of the metropolitan regions of the State in which large segments of the State's population are concentrated.

65076.2. The Legislature further finds and declares:

(a) That the State has a positive interest in the preparation and maintenance of a long term, general plan for the physical development of each of the State's metropolitan areas that can serve as a guide to state departments and divisions that are charged with constructing state-financed public works within such metropolitan areas.

(b) That continuing growth of the State, and particularly, metropolitan areas within the State, present problems which are not confined to the boundaries of any single county or city.

(c) That the planning activities of counties and cities can be strengthened and more effectively performed when conducted in relation to studies and planning of a metropolitan regional character.

(d) That the San Francisco Bay area, by reason of its numerous governmental jurisdictions, its irregular topography, and its location around a large body of water, presents special regional problems of physical development which can best be dealt with by a regional planning agency suited to that area rather than an agency created under general law.

(e) That the Counties of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma together form a metropolitan region well-adapted to unified consideration as a regional planning area.

(f) That in order to assure, insofar as possible, the orderly and harmonious development of the Bay area, and to provide for the needs of future generations, it is necessary for the people of the metropolitan Bay area community to develop a means of studying, forecasting and planning for the physical growth and development of the nine-county region, which purpose may be best achieved by the establishment of a regional planning agency for the San Francisco Bay area.

Article 3. Definitions

65077.1. "District," as used in this chapter, means the San Francisco Bay Area Regional Planning District.

65077.2. "Board," as used in this chapter, means the San Francisco Bay Area Regional Planning Board.

65077.3. "Official census," as used in this chapter, means any decennial census, special census, or other census executed by or under the supervision of the United States Bureau of the Census, or any succeeding federal agency performing its functions.

65077.4. "Region," as used in this chapter, means the area included in the Counties of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano and Sonoma

65077.5. "Regional Plan," as used in this chapter, means a comprehensive, long-term general plan for the physical development of the region, and any land outside its boundaries which in the board's judgment bears relation to its planning. The regional plan shall consist of a text and a map or maps; and shall include at least the following sections:

(a) A concise statement of the principal findings of fact concerning the region, and a concise statement of the major problems and potentialities of the region:

(b) A statement of the major objectives, principles and standards expressed in the plan, and a summary of major proposals;

(c) Recommendations for the most desirable general arrangement of land use within the region, considered in respect to: trends in economic and population growth and development; the activities carried on within the region; the interrelationship between various activities; the habits, traditions, and living standards of the people within the region; the government of the region; conditions of geology, topography, climate, bodies of water, and other relevant natural or environmental factors; the aesthetic characteristics, both naturally existing and man-created, what affect the physical attractiveness and beauty of the region as a whole; and any other studies that may appear relevant to the board.

(d) The transportation system recommended for the region, including major routes and stations of transit; streets and highways (including bridges) of metropolitan importance; parking, trucking routes and terminals, ports, air terminals, and railroad lines and stations of metropolitan importance; and other facilities for the transportation of people and goods of metropolitan importance or regional concern.

(e) Recommendations concerning the need for and proposed general location of metropolitan facilities and reservations which by the nature of their function, size, extent or for any other causes appear to the regional planning board to be appropriate subjects for inclusion in the regional plan.

(f) Recommendations concerning the space resources of the region, that is, those major areas which, in the opinion of the regional planning board, should be carefully conserved, or which are so especially suited to some particular use as to render it contrary to the best interests of the metropolitan community that they be developed for any other use. Such areas may include, without limiting the generality of the foregoing: areas especially suited for industrial purposes; areas especially suited for recreational purposes; areas especially suited for agricultural purposes; areas especially suited for any combinations of the purposes above-listed; and areas best left in an undeveloped or relatively undeveloped state.

(g) Such other recommendations of the regional planning board concerning current or future problems as may in its opinion affect the region as a whole and are proper for inclusion in the regional plan.

Article 4. Creation of District

65078.1. A regional planning district is hereby created comprising the area lying within the boundaries of the Counties of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma, which shall be called the San Francisco Bay Area Regional Planning District.

65078.2. The district is a body corporate and politic and a public agency of the State.

65078.3. On the effective date of this chapter, the district shall begin to transact business and exercise its powers under this chapter, except in Contra Costa, Napa, and Solano Counties.

~~Whenever the boards of supervisors of the Counties of Contra Costa, Napa, and Solano, by concurrent resolution adopted by each of such boards, declare there is a need for the district to function in the area comprising those counties, the district shall also transact business and exercise its powers in the area lying within the boundaries of Contra Costa, Napa, and Solano Counties.~~

65078.4. The district shall not transact any business or exercise any of its powers under any of this chapter in the Counties of Contra Costa, Napa, or Solano until and unless the boards of supervisors of such counties determine in the manner provided by this article that there is need for the district to function in such counties and so declare by resolution.

65078.5. Before the district may begin to transact business or exercise its powers in Contra Costa County, Napa County, or Solano County

the board of supervisors of such county, on its own motion, or whenever a petition requesting that the district transact business and exercise its powers in such county signed by not less than 10 percent of the qualified electors of such county is presented to such board of supervisors, shall hold a public hearing to determine whether or not there is need for the district to function in such county.

65078.6. Prior to the public hearing, the board of supervisors shall give notice of the time and place of hearing by publication once in a newspaper of general circulation not less than 15 days nor more than 45 days before such hearing.

65078.7. Upon conclusion of the public hearing the board of supervisors may adopt a resolution declaring that there is need for the district to function in such county if from the evidence received at such hearing it finds that it is in the best interest of such county that the district function therein.

65078.8. Upon adoption of the resolution the board of supervisors of such county shall cause a certified copy of it to be filed with the board.

65078.9. From and after the date of the filing of the certified copy of the resolution with the board, the district shall begin to function and may exercise its powers within such county.

Article 5 City Selection Committees

65079.10. There shall be a separate and distinct city selection committee for each county or portion of a county in the district. The membership of such committees shall consist of the mayor of each city within such county or portion of a county within the district, or, where there is no mayor, the chairman or president of the city council.

65079.11. A majority of the members of each city selection committee shall constitute a quorum.

65079.12. The City and County of San Francisco is both a city and a county for the purpose of this article.

65079.13. The city selection committee of each county or portion of a county shall meet on October ___, 19__, at 10 a.m. in the chambers of the board of supervisors of such county for the purpose of making the first appointment to the district board as prescribed in Section 65079.19. The committee of each county shall thereafter meet at 10 a.m. in the chambers of the board of supervisors of such county on the second Monday in May of each year that it is necessary to make succeeding appointments to the district board. At least two weeks prior to the date of each meeting the county clerk of each county shall give notice of such meeting to each member of the city selection committee of such county. The meeting of the city selection committee of each county shall be conducted in the presence of the county clerk of such county who shall act as the recording officer for the meeting. It shall be the duty of the county clerk to give an appropriate notice signed by the chairman of the committee to the Secretary of State and to the secretary of the district board of each appointment made by the city selection committee as prescribed by Section 65079.19.

65079.14. Each committee shall appoint a chairman from among its members and such other officers as may be necessary.

65079.15. Members of the committees shall serve without compensation, but may be allowed actual expenses incurred in the discharge of their duties as may be authorized by the board of directors.

Article 6. Governing Body

65079.16. The San Francisco Bay Area Regional Planning Board shall be the governing body of the district, and shall be selected as provided in this article.

65079.17. The number of members of the board to which each county or portion of a county is entitled shall be determined as follows:

(a) Each county or portion of a county having, within the district, a population of 300,000 or less shall have one (1) member of the Regional Planning Board who shall be appointed by a majority of the board of supervisors and by a majority of the city selection committee of said county from the members of the city and county legislative bodies.

(b) Each county or portion of a county having, within the district, a population of more than 300,000 and not more than 600,000 shall have two (2) members of the Regional Planning Board. One member shall be appointed by the board of supervisors from its own members and one member shall be appointed by the city selection committee from the members of the city councils in the county.

(c) Each county or portion of a county having, within the district, a population of more than 600,000 shall have four (4) members of the Regional Planning Board. Two members shall be appointed by the board of supervisors from its own members and two members shall be appointed by the city selection committee from the members of the city councils in the county.

The population figures as used herein shall be determined by the most recent estimate of population as established by the State Director of Finance.

65079 18. On October ___, 19___, the board of supervisors of each county, or portion of a county in the district shall appoint as members of the Regional Planning Board of said district the number authorized by Section 65079.17. If the county or a portion of the county is not included within the district on or before October ___, 19___, then the board of supervisors of said county shall, within 30 days after the county or portion of said county is included within said district, appoint as members of the Regional Planning Board of said district the number authorized by Section 65079.17.

The members of the Regional Planning Board appointed by boards of supervisors shall be members of said boards of supervisors.

65079.19. On October ___, 19___, the city selection committee of each county or portion of a county within the district shall appoint as members of the Regional Planning Board of said district the number authorized by Section 65079.17 If the county or a portion of the county is not included within the district on or before October ___, 19___, then the city selection committee of said county or portion of a county shall, within 30 days after the said county or portion of a county is included within said district, appoint as members of the Regional Planning Board of said district the number authorized by Section 65079.17.

The members of the Regional Planning Board appointed by the city selection committee shall be mayors or members of the city councils of the cities.

65079.20. After the members of the Regional Planning Board to be appointed by the city selection committees and the county boards of supervisors have been designated, they shall meet and appoint eight citizen-at-large members who will be full members of the Regional Planning Board. These eight citizen-at-large members shall be selected from among persons living within the district who have made outstanding contributions to, or have demonstrated an active interest in, matters of regional concern.

The first meeting of the city and county members will be called by the Secretary of State in the manner specified in Section 65079.26. At the first meeting these members shall elect an acting chairman and an acting secretary and shall work out a procedure to be followed in developing a panel of candidates for and in making appointments to the eight positions of the citizen-at-large members. No other business shall be transacted until the eight citizen-at-large members of the board have been appointed and have assumed office.

65079.21. Each member of the first Regional Planning Board shall hold office until June 1, 19 __, and thereafter the term of office of the member shall be four (4) years and until the appointment and qualification of his successor; provided, that the members of the board appointed for the term beginning June 1, 19___, shall classify themselves by lot within the city and county group and the citizen-at-large group so that approximately one-third ($\frac{1}{3}$) of the members of each group shall hold office for two (2) years, approximately one-third ($\frac{1}{3}$) shall hold office for three (3) years and approximately one-third ($\frac{1}{3}$) shall hold office for four (4) years. The power which originally appointed a member whose term has expired shall appoint his successor for a full term of four (4) years. Any member may be removed for cause by the power appointing him if notice is given and a hearing is held.

65079.22. No supervisor, mayor or city councilman shall hold office on the Regional Planning Board for a period of more than three months after ceasing to hold the office of supervisor, mayor or city councilman, respectively, and his membership on the board shall thereafter be considered vacant, except that any mayor who continues to hold office as a city councilman, or city councilman who continues to hold office as mayor, shall not be considered to have ceased to hold office under this section.

65079.23 Each member of the Regional Planning Board appointed by a board of supervisors shall be appointed by a resolution of that board. Each member of the Regional Planning Board appointed by a city selection committee shall be appointed by a majority vote of the committee evidenced by a notice signed by the chairman of said committee. Each member of the Regional Planning Board appointed jointly by a board of supervisors and a city selection committee shall be appointed by a resolution of the board of supervisors and a majority vote of the city selection committee as evidenced by a notice signed by the chairman of said committee. Each citizen-at-large member of the Regional Planning Board shall be appointed by a majority vote of the city

and county members of the board as evidenced by a notice signed by the acting chairman of said members. Certified copies of all said resolutions and all said notices shall be forwarded without delay to the Secretary of State and to the secretary of the district.

65079.24. Any vacancy on the Regional Planning Board shall be filled for the unexpired term by appointment by the power which originally appointed the member whose position has become vacant.

65079.25. No person while serving as a member of the Regional Planning Board shall be eligible to be appointed to any salaried office or employment in the service of the district nor shall he become eligible for such appointment within one (1) year after he has ceased to be a member.

65079.26. Within thirty (30) days after the Secretary of State has received copies of the resolutions and notices appointing the city and county members of the Regional Planning Board he shall call the first meeting of these members of the board and shall designate an appropriate time within said thirty (30) day period for the meeting, which shall be held in any city in the district as desgnated by the Secretary of State. After the cty and county members of the board have appointed the eight citizen-at-large members in accordance with the provisions set forth in Section 65079.20, and within thirty (30) days after the Secretary of State has received certified copies of the notices of appointment of the citizen-at-large members, he shall call the first meeting of the full membership of the Regional Planning Board and shall designate an appropriate time within said thirty (30) day period for the meeting, which shall be held in any city in the district as desgnated by the Secretary of State.

65079.27. The board is the governing body of the district and shall exercise all of the powers of the district, except as otherwise provided.

65079.28. A majority of the members of the board constitutes a quorum for the transaction of business and may act for the board.

65079.29. The board may elect a chairman and other officers as it deems necessary from among its own members.

65079.30. The board may appoint an executive committee, consisting of the chairman of the board, and not more than eight nor less than four other members of the board, and such executive committee may carry on the administrative and executive functions of the board between full meetings.

65079 31. The board shall meet at least 10 times in each year, and may call additional meetings at its own discretion, or, during periods between meetings, at the discretion of a majority of the executive committee.

65079.32. Each member of the board shall receive the actual and necessary expenses incurred by him in the performance of his duties, plus a compensation of fifty dollars ($50) for each day attending the meetings of the board, but such compensation shall not exceed one thousand dollars ($1,000) in any one year.

65079.33. The provisions for the executive committee set forth in this article shall not be construed to limit the board or the executive committee from setting up any other committees or groups which it may see fit.

Article 7. Powers and Duties

65080.1. The district shall have power:

(a) To have perpetual succession.

(b) To sue and be sued in the name of the district in all actions and proceedings in all courts and tribunals of competent jurisdiction.

(c) To adopt a seal and alter it at its pleasure.

(d) To establish and maintain such offices as are judged best to facilitate the accomplishment of the purposes of the district, and to take by grant, purchase, device, or gift, or to lease or rent, and to hold, use, and enjoy any real or personal property necessary or convenient to the establishment, maintenance or operation of such offices, and to exchange or dispose of such property.

65080.2. The district shall perform the following four major functions:

(a) The district shall, as a primary function, prepare, maintain, and regularly review and revise, a regional plan as defined in Section 65077.5, and shall, after at least two public hearings in different parts of the region and such other public meetings as may appear to it advisable, adopt such plan as the regional plan for the region, and shall, after at least two public hearings and such other public meetings as may appear to it advisable, adopt revisions of such plan from time to time when in the judgment of the board such revisions are necessary in the light of changing conditions. Such plan shall be based on comprehensive studies of the physical, economic, social and governmental conditions of the entire district and related areas, and shall aim at the coordinated physical development of the region in a manner best designed to promote the general welfare and prosperity of its people. In preparing, adopting, maintaining, reviewing and revising the regional plan, the board shall take account of and seek to harmonize, within the framework of the needs of the metropolitan community as a whole, the master or general plans of cities and counties within the region, and the plans and planning activities of state, federal and other public and private agencies, organizations and instrumentalities within the region and adjacent to it. Before adoption of the regional plan or of any revisions of the plan, the board shall refer the proposed plan or proposed revisions to each city and county government for review, and shall allow a reasonable time for the formulation of recommendations by city and county governments on the proposed regional plan and proposed revisions of the plan In preparing, adopting, maintaining, reviewing and revising the regional plan, the board shall actively seek the cooperation and advice of cities and counties, of state and federal agencies, organizations and instrumentalities, of educational institutions and research organizations, whether public or private, and of civic groups and private persons or organizations.

(b) The district, acting in its own judgment, shall make, publish, or assist in making or publishing, studies or investigations of the resources of the region and of existing or emerging problems of any nature related to the physical growth and development, living conditions, beauty, or prosperity of the region, or any part thereof.

(c) The district shall publish, transmit and explain the regional plan, regional studies, and any other activities of the board to each

of the cities and counties within the district, and similarly shall publish, transmit and explain the regional plan, regional studies and any other activities of the board to all relevant state and federal agencies, organizations and instrumentalities, to educational institutions, to relevant civic and citizen groups of all types, and to private citizens who have evidenced interest in the work of the board. In carrying out this function, the board may hold public hearings, prepare printed and visual materials of all sorts, and use any medium of communication judged to be most appropriate and effective.

(d) The district shall promote and encourage the growth and development of regional understanding and cooperation through sponsorship and participation in public or private meetings for the consideration of regional problems, through appropriate publications, or the use of any medium judged to be most appropriate and effective. The district may further, acting in its own judgment, offer its facilities and services to assist in the solution of problems related to physical development involving two or more governing bodies, planning commissions, agencies, organizations or instrumentalities, public or private; and may otherwise participate in any program or activity intended to seek or find common or cooperative solutions to problems related to physical development or the integration of policies related to physical development and conservation within the region, or in any part thereof.

65080.3. The district shall from time to time study and review, in the light of changing conditions and the evolving needs of the region: (a) the nature and scope of the regional planning function in the San Francisco Bay area, and (b) the organization under which the regional planning function may be best carried on. The board shall report to the cities and counties within the region, to all relevant state and federal agencies, organizations and instrumentalities, to relevant civic and citizen groups, and to the State Legislature and the appropriate committees thereof, on ways in which such function or organization may be improved, including, without limiting the generality of the foregoing, proposals concerning the structure of this district, cooperation or combination of this district with other governmental agencies in the Bay area, or other means for the effectuation of the purposes of this chapter.

65080.4. The district shall have power to contract or otherwise participate in, and to accept grants, funds, or services from the Federal Government, its agencies or instrumentalities in connection with any federal program judged by the board to be relevant to its functions; and the board shall similarly have the power to contract or otherwise participate in, and to accept grants, funds, or services from the State, or any agency or instrumentality thereof, or any city, county, civic organization or private person in connection with any program judged by the board to be relevant to its function.

65080.5. The district shall have power to contract with any consultant, or to contract for any other types of services judged by the board to be necessary or convenient for carrying out the purposes of the district.

65080.6. The district shall have power to do all other acts as may, in the judgment of the board, be necessary or appropriate to carry out the provisions of this chapter and the purposes of the district.

65080.7. The board, acting with the advice of the director, shall determine the compensation, number, and general duties of personnel employed by the district.

65080.8. The board may contract with any city or county, any state department, or any competent person or agency to conduct competitive examinations for ascertaining the fitness of applicants for employment.

65080.9. The board may adopt a merit service system for and or all employees of the district, except that the regional planning director shall be exempt from such system and shall serve at the pleasure of the board; provided, however, the director shall have, if he so requests, the right to a public hearing prior to any action for his dismissal.

Article 8. The Regional Planning Director

65081.1. The board shall appoint a regional planning director who shall receive a salary not less than that of any county or city planning director within the region.

65081.2. The regional planning director shall be the chief administrative and planning officer and technical advisor of the board. The director shall, subject to the supervision of the board:

(a) Direct and administer the preparation, maintenance, regular review and revision of the regional plan, and administer and execute all of the other functions and duties of the district set forth in this chapter.

(b) Appoint and remove personnel of the district, subject to Article 7 (commencing at Section 65080.1).

(c) Serve, or designate personnel to serve, as executive secretary to the board.

(d) Serve, or designate personnel to serve, as secretary to the official representatives and technical advisory committees, including reasonable services in respect to the organization, calling of meetings, distribution of reports, and any other activities which such official representatives or technical advisory committees, or any subcommittees thereof, may wish to undertake in the furtherance of their own functions.

(e) Have access, or designate personnel to have access, to information, reports and data which relate to the functions and duties of the district in the possession of departments, agencies, or instrumentalities of the State, or in the possession of departments, agencies or instrumentalities of cities or counties within the district.

(f) Enter upon, or designate personnel to enter, at reasonable times, and in such manner as to cause no unnecessary injury, upon any land in order to make examinations and surveys related to the fuctions of the district.

(g) Perform such other duties and exercise such other powers as the board may delegate to him.

Article 9. Filing of Local Reports

65082.1. To facilitate effective and harmonious planning and development of the region, all county and city legislative bodies, and all county, city or other planning agencies within the district shall file with

the board, for its information, all county or city master or general plans, the elements of such master or general plans, and any other plans, zoning ordinances, official maps, building codes, subdivision regulations, or amendments or revisions of any of them, as well as copies of any regular and special reports dealing in whole or in part with planning matters. All agencies, organizations and instrumentalities of the State within the region shall file with the board, for its information, all public plans, maps, reports and other documents which are related to regional planning or other activities of the district.

65082.2. To facilitate further the effective and harmonious planning of the district, the board may request from the federal government, its agencies and instrumentalities, and from private organizations, agencies, or individuals, copies of those plans, maps, reports and other documents which are related to regional planning or the other activities of the district.

65082.3. Nothing in this article shall be construed to limit the right of the director to access to information as set forth in subdivision (e) of Section 65081.2 of this chapter.

Article 10. Coordination of Research

65083. The board may make recommendations to county and city legislative bodies, planning commissions, and all other city or county planning agencies within the district, and to agencies, organizations and instrumentalities of the State and Federal Government (including the State Legislature and appropriate committees thereof), and private organizations, agencies, or individuals within the district, for the coordination of research and the collection of data, the improvement or standardization of procedures, or any other matter which may be of assistance to regional planning, the activities of the district, or the activities of the various agencies, organizations, instrumentalities or individuals concerned.

Article 11. Referrals

65084. County or city legislative bodies, planning commissions, and all other county or city planning agencies within the district, and agencies, organizations and instrumentalities of the State and Federal Government within the district, and private planning consultants acting within the district, may submit proposals for any master or general plan, the elements of any master or general plan, any other plan, map, report, capital improvement program, proposed bond issue, or any other report or document or amendments or revisions thereto, prior to their adoption, to the regional planning board for its advice thereon, which advice the board shall give whenever in its opinion it is reasonably possible for it to do so. Such advice shall consist of a report as to the conformance of such proposals to the regional plan, the possible effect of such proposals on other portions of the region, and any other matters which in the judgment of the board may be of assistance to the body requesting such advice.

Article 12. Annual Report

65085. In addition to the other reports, studies and documents provided in this chapter, the board shall submit to the legislative bodies and to the planning agencies of all of the counties, cities, and to other governmental agencies and instrumentalities, official representatives, other agencies, organizations and individuals, public or private, designated by the board, and annual report on or before the first day of March. The annual report shall contain an evaluation of the major problems and opportunities for desirable development facing the region, a report on the status of the regional plan, and descriptions of those sections of the regional plan which have been amended, revised, added or deleted during the year, and the nature of such amendments, revisions, additions or deletions. The annual report shall also contain summaries of important studies partially or entirely completed by the board during the year, and a brief report of other major activities.

Article 13. Official Representatives

65086.1. Each of the following agencies, organizations and individuals may designate, from among its own members, one person to be accredited as the official representative of that agency in matters concerning regional planning:

(a) Each county and city planning commission within the district.

(b) Each redevelopment and housing authority or agency within the district.

(c) Any agencies, instrumentalities, or departments which may be designated by the Governor.

(d) Any district or authority, exclusive of school districts, within the district which has annual revenues of one million dollars ($1,000,000) or more, whose facilities are directly used by 150,000 or more persons per year, or which includes territory in more than one county.

(e) One official representative from each county within the district as may be designated by the county superintendent of schools.

(f) Any agencies, instrumentalities or departments, not exceeding 15, which may be designated by the President of the United States.

(g) Other public or private agencies and organizations as the board may from time to time designate.

65086.2. The director shall invite each of such agencies, organizations and individuals to select an official representative, and shall accredit the official representatives chosen.

65086.3. Each official representative shall receive a copy of each report issued by the district, a notice of meeting, agenda, and minutes of meeting of every meeting of the board, and any other information or material which the board may wish to issue.

65086.4. Each official representative shall have, upon the giving of reasonable notice, and subject to reasonable regulation by the board, the right to request the addition of any matter to the agenda of any regular board meeting, and to present the views of those represented at that time. In addition, any official representative may submit written reports of the views of those represented at any time, which reports shall be filed as part of the official records of the district.

65086.5. Official representatives shall serve at the discretion of the agency, organization or individual designating them, and the director shall remove accreditation, and give new accreditation upon the written request of such agency, organization or individual.

Article 14. Technical Advisory Committees

65087.1. The board may appoint, with the advice of the director, from time to time, technical advisory committees of skilled and experienced persons to study various aspects of matters related to the functions and duties of the district and to report to the board.

65087.2. Technical advisory committees shall, in each case, be selected to include broadly representative points-of-view as well as skill and experience in those fields in which they are requested to make studies.

Article 15. Financial Provisions

65088.1. Pursuant to concurrent resolution adopted by the boards of supervisors of the several counties in which the Bay Area Regional Planning District functions, such counties may lend to the district out of available funds an amount not to exceed seventy-five thousand dollars ($75,000) in order to enable the district to perform its functions and meet its obligations. The loan shall be repaid out of the first tax revenue of the district and shall be repaid out of such revenue prior to the payment of any other obligations of the district.

65088.2. The district may borrow money and incur indebtedness in anticipation of the revenue for the current year in which the indebtedness is incurred or of the ensuing year. Such indebtedness shall not exceed the total amount of the estimate of the tax income for either the current year or the ensuing year.

65088.3. Before the fifteenth day of June of each year the board shall estimate and determine the amount of money required by the district for purposes of the district during the ensuing fiscal year and shall apportion this amount to the counties included within the district, one-half according to the relative value of all the property in each county within the district as determined by the board and one-half in the proportion that the population of each county bears to the total population of the district. For the purposes of this section the board shall base its determination of the population of the several counties on the latest official census information available to it. The total amount of money required by the district for district purposes during any one fiscal year shall not exceed two mills ($0.002) on each one hundred dollars ($100) of the assessed valuation of all the property included in the district.

65088.4. On or before the fifteenth day of June of each year, the board shall inform the boards of supervisors of each county of the amount apportioned to the county. Each board of supervisors shall levy an ad valorem tax on the taxable property within the county included within the district sufficient to secure the amount so apportioned to it and such taxes shall be levied and collected together with, and not separately from, the taxes for county purposes and paid to the treasurer of each of the counties to the credit of the district.

65088.5. Taxes levied by the board of supervisors for the benefit of the district shall be a lien upon all property within such county lying within the district and shall have the same force and effect as other liens for taxes. Their collection may be enforced in the same manner as liens for county taxes are enforced.

65088.6. The treasurers of the several counties within the district shall pay into the district treasury all funds held by them to the credit of the district.

65088.7. The district board shall, in carrying out the provisions of this article, comply as nearly as possible with the provisions of Chapter 1 (commencing with Section 29000) of Division 3 of Title 3 of the Government Code.

Article 16. Saving Provision

65088.9. The failure of any legislative body, commission, agency, organization, instrumentality, individual, or official representative to receive any agenda, notice of meeting, minutes, report, or document or material of any sort provided for in this chapter shall not affect the validity nor impair the lawful effect of any action or activity of the district.

Article 17. Dissolution

65089. The State of California reserves the right to dissolve, combine, alter, modify or amend in any manner the organization and powers of the district established in this chapter, including, without limiting the generality of the foregoing, the association, combination or integration of such district with any other district, agency, body or instrumentality within the region in a manner which in the judgment of the Legislature may appear best to carry out the purposes of this chapter.

SEC. 2. This act shall remain in effect until the minety-first day after the final adjournment of the 1961 Regular Session of the Legislature.

FULL REPORT

PART I

REGIONAL INTEGRATION AND THE GROWTH AND DISTRIBUTION OF POPULATION

The Growth of Regional Organizations

Over the Nation there is a growing consciousness of the need for regional integration. In 1953 the American Society of Planning officials reported 42 official regional planning agencies, six quasi-official agencies, and 31 unofficial groups.[1] The Bureau of Public Administration of the University of California estimates that 18 or 20 new regional planning agencies have been established since the A. S. P. O. survey in 1953.[2] The creation of the Council of Metropolitan Regional Organizations in 1954 furnishes additional evidence of the increased recognition of the importance of regional problems. The objectives of the council are "* * * to serve as a national clearing house for metropolitan planning activities, conduct conferences for laymen and professionals interested in the field, initiate and coordinate research on metropolitan area problems and make conclusions available to individual and member agencies, and aid in establishing or strengthening official and private metropolitan organizations.[3] Mr. John C. Bollens has counted at least 75 independent metropolitan "special districts" in operation and engaged in a broad range of activities including air pollution control, port facilities, sewage disposal, flood control, mass transit, hospital facilities, slum clearance, regional planning and many others.[4] They are functioning in 27 different states and are especially common in the states with heavy metropolitan growth such as California, Illinois, Ohio and Texas. "They are principally a post-World War I development and frequently a post-World War II phenomenon. Some are of such recent origin that they have not yet begun to provide service to the public. If the recent trend is a reasonably accurate barometer of the future * * * metropolitan special districts have not attained their peak numerically."[5]

National Growth and Shifts in the Distribution of Population

The accelerating growth of regional planning and other special regional agencies can be traced directly to several fundamental changes that have occurred in the growth and distribution of the Nation's population. These changes include:

[1] American Society of Planning Officials, *Metropolitan-Regional* Planning Agencies (1953).
[2] *Adapting Government to Metropolitan Needs*, Assembly Interim Committee reports, Volume 13, Number 11 (1957)
[3] John C. Bollens, "Metropolitan and Fringe Area Development in 1954" in the *Municipal Year Book, 1955*, p. 39
[4] John C. Bollens, "Metropolitan Special Districts" in the *Municipal Yearbook, 1956*, pp. 47-55.
[5] *Ibid*, p. 49.

1. **A Reversal During the 1940's and 1950's of the Long-term Decline in the Birth Rate.** This upsurge in births has created an enormous potential for further population growth in the Nation. Even if the birth rate should decline from its current high level, the millions of babies born in this and the last decade will cause recurrent upsurges in the birth rate in the future as they, and their offspring in turn, mature and marry.[6]

2. **A Continuing Shift in the Distribution of Population From Rural to Urban Areas.** About four-fifths of the national population in 1860 was in rural territory whereas by 1950 the proportion classified as rural has declined to about two-fifths of the total.[7]

3. **A Concentration of the Population in Metropolitan Areas.** "From 1900 to 1950, the population of the United States nearly doubled in size. During this same period the population areas which were defined as S. M. A.'s (Standard Metropolitan Areas) in 1950 increased far more rapidly; they grew 177.8 percent, or at a rate 80 percent faster than the Nation. * * * As a consequence of this extraordinarily rapid expansion of population in S. M. A.'s, the nonmetropolitan areas lying outside have languished at much lower than average rates of growth. In the entire area outside the S. M. A.'s as defined in 1950, the percent of increase, 1900-50, was less than one-half that of the Nation." [8]

4 **An Accelerating Growth in the Metropolitan Rings Outside of Central Cities.**[9] In the last half century a remarkable reversal has occurred in the pattern of growth within metropolitan areas. Between 1900 and 1910 central cities had growth rates which were higher than the metropolitan rings around them. The first decade and those previous to it comprised the era of compact metropolitan growth. Beginning about 1920, with the advent of the use of the automobile, this trend toward concentration gave way to a more extended type of settlement which has not become an outstanding characteristic of population distribution. "For the past 20 years, both in the 1930-40 decade and in the 1940-50 decade, central cities have grown less rapidly than the population of the Nation, and only about one-third as rapidly as their own rings." [10]

5. **The Spread of Growth Within Metropolitan Rings.** Within the rings of metropolitan areas another great change is in process comparable to the earlier shift from the central cities to their metropolitan rings.

> "Before 1930, urban places in the rings were growing much more rapidly than the rural areas. This growth arose from two sources: the growth of already established cities, and the growth of smaller incorporated places to a population of 2,500 inhabitants, which caused them to be transferred from the rural to the urban

[6] Van Beuren Stanbery, *Better Population Forecasting for Areas and Communities*, U. S. Department of Commerce (Washington Government Printing Office, 1952), p. 8.
[7] U. S. Bureau of the Census, *Statistical Abstract of the United States*, 1956, Table 13, old urban definition used.
[8] Donald J. Bogue, *Population Growth in Standard Metropolitan Areas*, 1900-1950 (Washington Government Printing Office, 1953), p. 9.
[9] *Ibid.*
[10] *Ibid.*, p. 18.

classification. Prior to the depression, both of these processes were operating at a rapid pace. * * * During the past 20 years, the growth of incorporated places into the urban class has slackened noticeably, while the suburbanization of unincorporated territory adjacent to metropolitan centers has been accelerated tremendously. Thus, the great surge of population into the periphery of S. M. A.'s during recent decades has not gone heavily to outlying urban centers, as in 1900-30. Instead, it has gone primarily to the unincorporated and less densely settled parts of the ring."[11]

The Growth and Distribution in California

In California the character of growth in many ways is even more pronounced than in the Nation as a whole. National forecasts of population growth indicate an increase by 1975 of 25.2 to 38.2 percent over the 1955 population level.[12] Warren S. Thompson has calculated an increase for California by 1975 of 26.7 percent to 65.9 percent over the 1955 population level in California.[13] About 81 percent of the total population of California was urban in 1950 compared with an urban proportion of 64 percent in the Nation as a whole.[14] 80.2 percent of California's population was residing in standard metropolitan areas whereas only 56.8 percent of the Nation's population was living in standard metropolitan areas.[15] Contrary to national trends, the proportion of the state population residing in the eight standard metropolitan areas, has not changed significantly since 1930 indicating the accelerating growth of urban populations outside the eight standard metropolitan areas as defined in 1950.[16]

PART II

THE NEED FOR REGIONAL PLANNING

Problems of Regional Growth

Since population growth has not been confined by political boundaries the problems that normally attend expansion assume an interjurisdictional character. This process has been effectively illustrated by Coleman Woodbury in the following terms:

"Until quite recently the direct influences from the location of a medium sized manufacturing plant were felt primarily, if not exclusively, in our locality—usually a municipality within the limits of which the plant was built. Its workers were housed in this locality, many of them within walking distance of the plant. Raw materials and finished products were shipped in and out by rail or water from loading platforms at or near the plant. Power usually was supplied locally. Most of the pay roll was spent among local merchants. Increased taxable capacity from the plant, from the workers' housing, and from commercial land uses supported by their buying power accrued largely to the one municipality.

[11] *Ibid*, p. 19.
[12] Department of Commerce, Bureau of the Census, *Current Population Reports*, Series P-25, No. 123
[13] Warren S. Thompson, *Growth and Changes in California's Population*, Los Angeles: 1955, 324-329, pp. L
[14] U. S. Bureau of the Census, *Statistical Abstract of the United States*, 1956, p. 23.
[15] U. S. Bureau of the Census, *1950 Census of Population.*
[16] Warren S. Thompson, *op. cit.*, pp. 40-42.

This same governmental unit plus allied ones in the same locality (e.g. local school districts or boards) provided schools, water, sewer facilities, streets, fire, police and health protection for the plant itself, as well as for its employees and additional people in secondary or service trades and professions.

"* * * Today, although the variations are even more numerous, a not uncommon situation would differ at almost every significant point from the one just sketched. The plant might well be located in a small suburb or even on unincorporated land in the outlying parts of a metropolitan area. Its workers would be drawn from an area up to an hour's travel time. Many of them would go to and from work in their own cars. At least some part of the shipping of materials and products would be by truck—adding to the complexity and costliness of the highway net both in the metropolitan area and perhaps for hundreds of miles beyond. Power would often come from a grid covering a larger region and sometimes contributed to by both private and public generating plants. Employees' spending would be scattered over an area at least as large as that in which they lived and probably larger. Quite possibly an increasing proportion of it would be going to one or more big, new, outlying shopping centers. Very often one unit of local government would receive all or nearly all of the taxes from the plant while most of the expenditures for additional local government services would fall on other municipalities whose revenues from modest housing and a few additional stores would be far from enough to meet the increased costs. This imbalance of revenues and expenses would concern not only local governments but also state (and federal) agencies trying to achieve fair and effective distribution of aid funds for, say schools and roads. Again, today, the new plant might well create problems in lowering an already falling underground water level or in polluting a stream for miles or even, in some instances, interfering with natural or established wild life preserves or recreational areas."[17]

In the San Francisco Bay area the problems requiring regional solution included: highways and freeways; mass transit; transbay crossing; industrial land use and zoning, air pollution; regional parks and recreation areas; preservation and enhancement of aesthetic values; shoreline development; submerged land reclamation; water supplies; and sewage disposal.[18]

At the First Central Valley Regional Planning Conference held on October 5, 1956, **Robert W. Adams, Supervisor, Stanislaus County,** said:

"I would like to feel that from this meeting will come the development of an organization that will study, consider and keep the various governmental bodies informed on a regional basis of our five most important needs. Number (1) considered here today at this conference is water, (2) highways, (3) recreation, (4) land

[17] *National Municipal League, Model State and Regional Planning Law* (New York: 1955) pp. 3-4

[18] "Regional Planning Needs of the San Francisco Bay Area," sponsored by the Planning Commission Study Group and financed by the Bay Area Council, San Francisco Bay Area Council, 1954, pp. 31-44.

use and (5) air pollution. I believe and sincerely feel that the Central Valley is a natural social, economic and geographic unit. The problems and the forces at work here must be studied and planned as soon as possible on a co-ordinated, long-range, comprehensive basis."[19]

A Definition of Planning

The word planning has been given many meanings. Here it means simply the process of establishing objectives and laying out courses of action for accomplishing them. As such it is an activity common to personal, civic, business and governmental affairs.

Public planning may be as broad as the scope of activities of government. It is distinguished from other types of planning by at least two major characteristics: it involves first a concern for the general health, prosperity and welfare of all the people within the geographical area of operation and secondly, it attempts to solve problems of public concern in a long-range comprehensive and general way.

One task of public or governmental planning is to raise policy issues for consideration by responsible officials or for public discussion. Otherwise a governmental body, through a series of spot decisions on pressing questions, may, so to speak, back into a policy position without seeing clearly what is at stake and without appreciating many of the implications and by-products of its actions.[20]

The process of public planning has been broken down into at least five identifiable steps.[21]

1. The identification of problems, goals, objectives.
2. The inventorying of facts and resources.
3. The analysis of the inventories and the forming of conclusions and decisions based on such analysis.
4. The preparation of plans and programs drawn from conclusions and decisions.
5. The effectuation of plans by means of three mechanisms:
   a. Programming
   b. Regulations
   c. Administrative operations

If governmental boundary lines were flexible and always encompassed an area broader or at least co-extensive with the geographic scope of problems, this process would be adequate for each governmental unit. It is precisely because urban growth has occurred and spread so rapidly and because political boundaries have been relatively inflexible that the problem of regional planning arises.

Regional Planning Now Being Done

"Regional planning is being done today. Many agencies, both public and private, operating in the Bay area, are making decisions that will affect our futures and the future of the Bay area. For example, the decisions being made daily by the State Division

[19] Central Valley Regional Planning Conference Committee *Proceedings* (Stanislaus County, California 1956) p. 47.
[20] National Municipal League, *Model State and Regional Planning Law* (New York: 1954) p. 1.
[21] Carl Feiss, "Urban Redevelopment and Urban Planning" in *Planning 1950*, American Society of Planning Officials, p. 22.

of Highways, the Rapid Transit Commission, the San Francisco Bay Ports Commission, the EBMUD (East Bay Municipal Utilities District), the Regional Parks District and many others are all based on somebody's plan for the future of the Bay area. In many instances these plans conflict with one another, and with local plans, so the over-all effect is one which contains needless conflict, duplication, and inefficiency. The question is not whether or not regional planning should be done but, rather, one of whether the regional planning we do is to be done well or to be done poorly." [22]

In reference to the same situation, **V. B. Stanbery, Economic and Regional Planning Consultant,** said. "I just want to point out that regional planning and attempts at coordination of plans are going on all the time in the Bay area. But it is very inadequate and inefficient kind of regional planning and coordination. In effect, the purpose of the proposed regional planning agency is to do a better job of regional planning than is now being done."

"Types of regional planning and coordination of physical plans now going on in the Bay area are:

"1. Occasional meetings of representatives of local planning agencies to discuss and coordinate their plans for physical improvements. Representatives of state and federal agencies dealing with physical improvements and resource developments also meet from time to time with representatives of local planning commission in the Bay area to harmonize and coordinate their plans and proposals.

"2. Unofficial subregional planning associations have been organized in various sections of the Bay area such as the East Bay Metropolitan Planning council and the Tri-County Planning council. These unofficial planning associations meet occasionally to discuss plans of city and county planning commissions in their areas and to attempt to reconcile and harmonize proposed improvements.

"These attempts at regional planning and coordination obviously are inadequate for the needs of the Bay area as they are not based on comprehensive studies of the area's problems." [23]

Basic Deficiencies of City and County Planning

A basic difficulty with city and county planning today lies in the fact that it can neither comprehend all the factors that impinge upon and influence local development nor can it propose fully integrated solutions to problems which overlap a number of counties. Lacking broad-scale research and coordination at the regional level, local planning efforts tend to be unrealistic and ineffectual. Solutions to regional problems are achieved, if at all, by the piecemeal efforts of a number of governmental units or by special authorities with limited jurisdiction.

[22] "Statement on Regional Planning, City of Berkeley" Adopted by the Planning Commission, August 8, 1956, adopted by the City Council November 27, 1956 p 2
[23] San Francisco hearing, December 7, 1956

In a recent report on the "Regional Planning Needs of the San Francisco Bay area" it was stated that:

> "City and county planning commissions are seriously handicapped by lack of basic regional studies of the Bay area. Attempts to relate the plans of a particular city or county to development of the region are vague and ineffective because essential analyses are not available. Nearly every planning director and consultant who contributed to this report mentioned the urgent need for comprehensive economic and population studies and forecasts for the area to provide a rational basis for estimates and plans for his particular subdivision.
>
> "Studies showing the interrelationships of functional areas and communities with the Bay area also are lacking. So are studies of physical facilities that should be planned for the region as a unit. In the absence of such analyses, local planning agencies are unable to plan for development of their localities in proper relation to one another and to regional growth." [24]

At the First Central Valley Regional Planning Conference **Robert W. Adams, Supervisor, Stanislaus County,** said, "With the multitude of public agencies, federal, state, county and city operating today, many times in an overlapping system of complex governmental structure, coordination and cooperation is necessary. A lack of joint programming in overlapping jurisdictions can only serve to cost the taxpayers more money than through a coordinated effort." [25]

Woodbridge Marshall, Secretary, County of Santa Clara Planning Commission and Senior Planner, County of Santa Clara Planning Department, illustrated the increased costs associated with lack of regional coordination. "In our county we are just at the threshold of residential expansion into the foothills. Our planning staff has spent considerable time and effort on research into improved subdivision standards for hill areas. We understand that so has considerable energy been spent on this same problem by the City of San Mateo, by the City of Oakland, by the City of Richmond, and by the County of Marin, to mention only a few. Our hills are no different from theirs, or any others in the Bay region, but with no coordination we are here duplicating the efforts expended by many other public agencies, and because of the limited nature of our budget, probably no one of us has been able to do a completely satisfactory job. Expand this example manyfold, and we submit that each of us in his separate agency is powerless to justify budgetary expenditures for research on regional matters which it is imperative to have in order for each of us to do the proper planning job. We mentioned population research, land use research, economic research, and research into the special development problems, so that our planning department can bring forth sensible local studies and proposals.

"In like manner our planning commission is unable to find anywhere a common meeting place where understanding can be approached for policy determination on our many overlapping development problems.

[24] *Regional Planning Needs of the San Francisco Bay Area,* pp. 28-29.
[25] *Proceedings,* p. 47

Our commission recognizes, for instance, that the provision of recreation facilities around a water conservation lake in our county is to make available a facility of region-wide need and service, just as Golden Gate Park in San Francisco or Tilden Park in the East Bay fulfills a region-wide need. Our commission cannot intelligently approach policy recommendation on such matters except in the light of region-wide understanding.[26]

R. B. Gilmore, Councilman, City of Sunnyvale, indicated the economies that could be achieved through the regional planning of various improvements: "A regional planning agency could help the individual cities through its organization of the region's efforts to provide adequate highway systems, transit systems, water supplies, air pollution control and other area-wide problems. At the present, each city tends to approach the state agency or state legislature on an individual basis. By working together to bring an integrated program, the available funds which will always be limited in comparison to need in the foreseeable future, could be used most effectively and if related to a priority system of improvements, could bring about the most benefit for the money expended. Also, the individual cities and counties could present to the State an integrated program rather than the present situation where frequently many discordant voices each strive for as much as they can individually get." [27]

The lack of planning at the regional level has prevented the effective functioning of city and county government at every point in the local planning process. Without a regional perspective local goals and objectives are difficult to establish. Local inventories and analyses of facts and resources are insufficient to identify the critical interrelationships of the city or county to the region as a whole. Without adequate research and coordination at the regional level realistic plans for local development are difficult to prepare. Without planning for regional facilities and region-wide efforts to develop uniform ordinances more difficulty is encountered in effectuating local plans; uncoordinated planning for major regional facilities may have disruptive effects on local community values and a needless varity of local restrictions confuses developers and the general public and lessens support for planning programs.

In sum, city and county government independently is incapable of developing effective programs for local as well as regional development. **Paul Opperman, Director of Planning, City and County of San Francisco,** stated the over-all regional needs at the San Francisco hearing:

> "1. We need a unitary statement on population growth, industry and employment needs and prospects.
>
> "2. We need a comprehensive land use plan and regional development program stated in general magnitudes by time periods.
>
> "3. We need a regional water control and development plan coordinated with a regional land use plan.
>
> "4. We need a comprehensive transportation plan for coordinated development of all forms of present and emerging transportation, including highways, transit, airways, railways and waterways.

[26] *San Francisco Hearing.* Record 4, pp. 21-22.
[27] Appendix 1, p. 60.

"5. We need an analysis of how to achieve governmental efficiency and fiscal economy through regional cooperation of the nine counties and 75 cities and a great many special districts."

Functions of a Regional Planning Agency

Duties. The cities and counties and other groups supporting regional planning are in general agreement that the functions of a planning agency at the regional level should include preparation of a regional plan and the undertaking of regional studies. Other functions recommended include planning assistance to small communities and the promotion of regional cooperation.

The following statements indicate the range of duties advocated:

The Bay Area Planning Commissioner's Study Committee—Duties of the Proposed Regional Planning Board

"1. *Regional Plan:* The board would prepare, adopt, and maintain a regional plan for the physical development of the Bay area based upon the master plans of the city and county governments of the area and upon studies of region-wide needs. The regional plan would provide a framework intended to serve as a guide for local plans and planning programs and for state and federal agencies and special districts. It would be advisory only.

"2. *Regional Studies:* The board would make regional population, economic, traffic, and other studies for regional planning purposes and for the purpose of assisting and strengthening city and county planning programs.

"3. *Regional Cooperation:* The board would promote and encourage understanding of the need for regional cooperation and would join with city, county, regional, state and federal agencies, and with private groups, in the development of effective procedures for dealing with regional development problems that are of concern to all." [28]

County of Santa Clara Planning Commission and Planning Department

"* * * The County of Santa Clara Planning Commission and Planning Department recognizes an imperative need for a region-wide service agency directed primarily to the following functions:

"1. Conduct of research on a region-wide scope as a service to the planning and legislative bodies of the Bay region.

"2. Conduct of a focal information service so that the planning and legislative bodies of the Bay region may trade information and relate their development issues one to another.

"3. Conduct of studies for a regional plan for the Bay area as a service for the planning and legislative bodies of the Bay region to the end that local discrimination may be related to and coordinated within a reasonable region-wide framework." [29]

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[28] Appendix 2, p. 62

[29] Statement of Mr. Woodbridge Marshall, Secretary, County of Santa Clara Planning Commission and Senior Planner, County Santa Clara Planning Department, San Francisco hearing Rec. 4, p. 18.

City of Berkeley

"Regional planning has been defined as 'a continuous, long-term planning process for the physical development of the Bay area as a unified region.' More specifically regional planning would undertake three major jobs:

"1. Preparing and reviewing a long-range plan for the Bay region based on city and county master plans insofar as possible.
"2. Gathering, analyzing, and disseminating factual information about the physical growth and development of the Bay area.
"3. Assisting city and county governments in their local planning activities by enabling voluntary coordination of their master plans." [30]

Central Valley City and County Planners—A Proposed Regional Planning Action Program

"1. Continuing inventory, research and survey.
"2. Continuing analysis of data; projection of trends.
"3. Preparation of comprehensive, long-term general plans.
"4. Regional coordination with public and private agencies involved in physical improvements and other problems of a regional nature.
"5. Planning assistance to small communities.
"6. Support for local planning and aid in developing sound development regulations, standards and procedures.
"7. Developing support for and understanding of regional planning." [31]

Relationships to Local State and Federal Governments

Testimony at the San Francisco hearing was unanimous that the regional planning function should be advisory only. In the words of the Berkeley City Planning Commission, "There is no desire and no need, to make any of the recommendations of a regional planning agency binding on any person, agency, or political body. A regional planning agency is needed to give information and advice only; when this information and advice are of value it will be utilized; if ever it is prejudiced or incomplete, it will be ignored" [32] The acceptance or rejection of regional plans, principles and standards should rest with those who have the legal authority and financial ability to carry them out.

The function of regional planning is conceived as a compliment to local planning. One cannot substitute for the other and each level of planning is necessary for the effective performance of the other. **Robert W. Adams, Supervisor, Stanislaus County,** explained the relationship in the following terms: "Regional planning should provide us with a broad, over-all picture of the physical development. Many of us are so involved with local problems and developments that we fail to understand what is going on around us. We can all do a better job if we understand the over-all picture." However, "* * * Regional planning is not and cannot be substituted for local city and county

[30] *Statement on Regional Planning*, City of Berkeley adopted by the Planning Commission, August 8, 1956 Submitted as an attachment to the statement of Claude B Hutchison, Mayor of Berkeley, San Francisco hearing, December 7, 1956
[31] Appendix 5, p 77
[32] *Statement on Regional Planning*, City of Berkeley, *op cit* p 1.

planning. Regional planning and local planning is of a different scale. There are many decisions of local importance that can only be made by local people * * *." [33]

Frank Skillman, Member of Supervising Committee of the Bay Area Planning Commissioners' Study Committee, testified that the relationship between a regional planning agency and local planning agencies, "* * * should not be mono-directed only from regional down, but rather a reciprocating partnership with mutual recognition and respect of the other's responsibilities and limitations. The building and maintenance of this two-way bridge of communication from regional to local and from local to regional is imperative. Upon the strength and adequacy of this structure rests the opportunity for regional planning to move ahead into its rightful position, that of guiding the physical development of the area. Of equal importance to a regional planning program would be the establishment of similar associations with state, federal and other planning agencies, gearing them into the entire planning complement." [34]

Benefits of a Regional Planning Agency

The values and benefits of a regional or metropolitan approach to development problems are manifold. **Paul Opperman, Director of Planning, City and County of San Francisco,** enumerated seven advantages to the Bay area:

"1. Economy in public expenditure, avoidance of duplication and waste in the provision of public improvements will result.

"2. Private development will be provided with a firm guide to expedite and stimulate private development of an appropriate, stable and marketable character will result.

"3. The unique values of climate, topography and visual attractiveness can be protected, preserved and enhanced.

"4. A balance between appropriate centralization of metropolitan functions and up-building of present and future areas of development can be efficiently achieved.

"5. Commercial centers, industrial districts, port developments, recreation, educational facilities, water supply, highway transportation, transit, airways, railways, and military defense and security all have their place in the regional plan of the Bay area. Through official regional planning, conflicts can be reconciled, and regional cooperation for mutual benefit can supplant delays, frustrations, and excessive costs of separate programs of political jurisdictions.

"6. The Bay area can speak with one voice, and work as a unit with the State Government on the one hand and with the Federal Government on the other in matters affecting regional relationships with these higher jurisdictions if there is an official regional planning commission." [35]

[33] San Francisco hearing, Rec. 3, pp. 10 and 11.
[34] San Francisco hearing, Rec. 8, p 41.
[35] San Francisco hearing

PART III

RECENT EFFORTS TO ESTABLISH REGIONAL PLANNING

A number of conferences on regional planning have been held in recent years in various parts of the State. Three were described in testimony given at the San Francisco hearing: The San Francisco Bay area, the central valley, and metropolitan Bakersfield.

San Francisco Bay Area

On January 25, 1952, 180 city and county planning commissioners from all over the San Francisco Bay area convened to consider common problems of region-wide concern. Out of this meeting grew the Bay Area Planning Commissioner's Study Committee which was instructed:

> "To define and clarify the nature and scope of regional planning in the Bay area, and to recommend the type of agency which could most effectively perform the function of regional planning in the Bay area."

The study committee divided its work into two parts and authorized the preparation of the following two reports:

Part I: *Regional Planning Needs of the San Francisco Bay Area,* which was published by the Bay Area Council in 1954, and

Part II: *A Regional Planning Agency for the San Francisco Bay Area. A Report and Statutory Proposal* * * *"

"The report on Part I of "* * * the study was distributed to all members of the Bay area city and county planning commissions and was approved at a second large meeting of commissioners held in 1954." The second report, financed through voluntary contributions of planning commissions throughout the Bay area, was distributed to all commission members for their consideration.[36] On March 8, 1957, another conference of Bay area planning commissioners was called for review of the proposed legislation and for questions and comment. City and county representation present were polled to determine what action had been taken on the proposed legislation.

"In summary, five of the counties (with 2½ million population) had a favorable response either by the commissions or the boards of supervisors. The other four counties were not represented at the meeting or had not taken action. Of the region's 72 cities, 18 had taken favorable action of some sort, mostly by planning commissions, and none with qualifications. Outside of San Francisco, these totaled approximately 900,000 people. Two cities were opposed to the proposed legislation. Fifty-one cities were not present at the meeting or had not taken any action.[37]

[36] *A Regional Planning Agency for the San Francisco Bay Area,* prepared for the Bay Area Planning Commissioners Study Committee at the request of a conference of city and county officials

[37] *Minutes of the Second Bay Area Planning Commissioner's Conference on Regional Planning,* held March 8, 1957.

At the March 8th meeting, the planning commissioners present requested that the officers of the three subregional planning councils continue in their efforts to urge local consideration of regional planning and to summarize the results of this consideration.[38]

With these instructions, the subregional planning councils urged that each city and county take definite action and by May 16th, the Planning Commissions of 26 cities, containing 43 percent of the population within the Bay area cities, had taken favorable action. Of these 26 cities, 17 city councils had also taken favorable action. Four county planning commissioners had taken favorable action and three boards of supervisors had endorsed the legislation. In spite of this broad support from cities and counties throughout the Bay area, three city councils and four boards of supervisors had taken an adverse position. In the case of San Francisco, the board took an adverse position and overruled the favorable position taken by its Planning Commission. A complete picture of local action on regional planning is contained in Appendix 3.

Central Valley

Rapid population increases in the central valley have also produced problems beyond the scope of a single civil government to solve. In an attempt to partially fulfill a pressing need for regional planning a committee was formed in the central valley consisting of public officials, professional planners, representatives of public utilities, the fields of real estate, banking, engineering, architecture, farm organizations and many other interested citizens.

The committee established as its objective the promotion of local initiative and coordination of local planning efforts with state and federal plans in order best meet the challenge of rapid growth in the central valley.

In carrying out this objective a preliminary report was made entitled "Regional Planning in the Central Valley of California." On October 5, 1956, the regional planning committee sponsored the first Central Valley Regional Planning Conference at Modesto. Two hundred seventy-five citizens and public officials attended the conference. These people were predominantly from the 18 counties of the central valley watershed.

> "The conference had as its primary objective, the stimulation of interest in coordination of planning efforts within the Central Valley. As a result, participants on the panels dealt specifically with regional problems of water and land conservation, agriculture, highway development, recreation and park development, and air pollution control as well as with problems of organization, finance and planning philosophy.
>
> "The conference focused attention on the problems, needs, solutions and planning principles underlying the ultimate development of the valley. A major goal was the encouragement of local initiative in the coordination and planning of physical improvement projects on a regional basis."[39]

[38] See Appendix 3, p 64.

[39] The Central Valley Regional Planning Conference Committee, *In Proceedings, the first Central Valley Regional Planning Conference,* December, 1956.

The conference committee intends to hold another meeting sometime this year. But it has emphasized that the committee itself "is not a substitute for a legally authorized governmental agency with sufficient budget to carry out those functions which the Legislature may authorize a regional planning agency to perform." [40]

Metropolitan Bakersfield [41]

The Bakersfield metropolitan area is unique among metropolitan areas of California because it contains only one incorporated community yet the metropolitan area outside the central City of Bakersfield has a population three times as great as that of the central city. Bakersfield has a population of 50,000 and the metropolitan total is 150,000.

The planning commissions of both the City of Bakersfield and the County of Kern have passed resolutions urging creation of a metropolitan agency charged with an advanced planning function. The city council of Bakersfield has budgeted funds sufficient to cover the city's share of a metropolitan planning program and the concept of planning for the entire metropolitan area has been supported by such service and civic groups as the Greater Bakersfield Council for Action and the Greater Bakersfield Chamber of Commerce. On December 1, 1956, the chamber sponsored a metropolitan Bakersfield "Community Needs Conference." Predominant among the recommendations furnished by the assembled group of 240 businessmen, civic leaders, and governmental representatives were:

> "1. Greater coordination between county and city governments;
> "2. The need for metropolitan planning; and
> "3. The need for developing a study of metropolitan governmental functions and services." [42]
>
> "That there be created, at once, a metropolitan area planning commission charged with the responsibility of preparing and maintaining a long-range plan for the future physical development of the metropolitan Bakersfield area." [43]

Despite this substantial interest and backing adequate local legislative support for metropolitan planning has been slow in developing. There appears to be a fear that the creation of a "super agency" would result in a lessening of legislative prerogative The director of the Bakersfield City Planning Department has testified, however, that "rather than a reduction of the legislative prerogative the work of the metropolitan planning agency would provide a firm base to legislators for the immediate action decisions which they must make from day to day." [44]

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[40] Statement of Paul V Burmingham, Chairman Central Valley Regional Conference Committee, *San Francisco hearing*, 1956
[41] Statement of Carlos R. Cavanaugh (Director of Planning, City of Bakersfield), *San Francisco hearing*
[42] *Ibid*
[43] *Ibid.*
[44] *Ibid.*

PART IV

INADEQUACIES OF EXISTING LAW

The Statutes of 1951 authorized a State Conservation and Planning Board [45] and directed the board to divide the State into regional planning districts for the purpose of providing state-coordinated regional planning.[46]

In each district the law requires the establishment of a regional planning commission whose members are appointed by the Governor. Nominees are selected by the board of supervisors of each county or portion of county within the district from the membership of the county planning commission If the regional planning district consists of one county, the county planning commission shall be ex officio the regional planning commission. If the district consists of all or part of two counties the nominees are selected by each county and one from either of the two. If the district consists of all or part of three counties, two nominees are selected by each county and five are appointed from the six. If the district consists of all or part of four or more counties one nominee is selected from each and the Governor selects an additional member from one of the counties when there is an even number of counties. Such commissions are required to prepare, adopt, and submit to the county and city planning commissions in their respective regions, plans, features of plans, and findings in matters pertaining to regional and state welfare and to hold at least one public hearing before adopting all or part of a master plan or any substantial amendment to it. The operation of a regional planning commission is required to be in accord with a plan for organization and financing mutually agreed upon by the cooperating counties and cities.

Several difficulties prevent the practical operation of the above provisions. In the first place the Planning and Conservation Board has not been established and funds have never been appropriated. While the duties of the board were set forth, no provision was made for its appointment. Secondly, in 1956, Article 1.5 was added to Chapter 1, Title 7, creating a local planning advisory committee and assigning some of the duties of the board to the Department of Finance. Chapter 2, with its directive to the board to divide the State into regional planning districts remained substantially unchanged [47] and stands now without effect because the board does not exist. Thus, local jurisdiction seeking a legal basis for regional planning have no recourse to that portion of existing statutes specifically designed to provide such a basis. The law requires that regional planning commissions be established in districts delineated by the Planning and Conservation Board which does not exist, has no money for operation, lacks statutory provision for its appointment, and has had several of its main duties transferred to another agency.

The only possible basis in state law enabling the creation of regional planning commissions is found under the authority for area planning commissions.[48] An area planning commission may be created by resolu-

[45] Article 2, Chapter 1, Title 7, *Government Code.*
[46] Section 65060, Chapter 2.
[47] Section 65070, requiring each regional planning commission to render an annual report on matters and in such form as prescribed by the board, was repealed.
[48] Article 1, Chapter 3, Title 7.

tion of the governing bodies of contiguous cities and *counties.*[49] "With the approval of their legislative bodies, the chief executives of the cities and counties affected shall appoint the commission from the city and county planning commissions so as to give as near as possible equal representation to each city and county.[50] The operation of an area planning commission" * * * "shall be in accord with a plan for organization and financing mutually agreed upon by the cooperating counties and cities." [51]

Local Versus State Control of Commission Membership

The existing Regional Planning Law provides for gubernatorial appointment of regional planning commission from nominees selected by boards of supervisors.[52] However, considerable testimony was presented at the San Francisco hearing opposing any state involvement in the matter. **Robert W. Adams, Supervisor, Stanislaus County,** recommended that the Regional Planning Law be amended " * * * to provide that local government, cities and counties, appoint local legislative officers and representatives, local citizens, in a proper ratio in a regional planning commission or board which is established, and also that all powers of appointment and approval rest with the local governing unit." [53]

In reference to the same procedure, **Richard Carpenter, League of California Cities,** stated the league's viewpoint in the following statement,

> "It is our feeling that this is not the most desirable method of appointment. * * * as long as it" (a commission) "is of local character, whether an area be regional or smaller, it seems to us that the appointment should be made by the people in that area rather than by the Governor." [54]

In the report and statutory proposal for a regional planning agency for the San Francisco Bay area it is stated that:

> "The proposal assumes that the needs of state agencies for a regional plan can best be served by a locally-prepared and locally-controlled regional plan. This may not be satisfactory from the point of view of the State. However, from the local and Bay area point of view, what seems to be called for is more effective coordination of state agencies at the state-wide level by the Governor and Legislature, rather than state control of the membership of the proposed Regional Planning Board. But regardless of how the relationships between state and local governments may evolve, an advisory regional planning agency, governed locally, is needed and could accomplish a great deal at the present time." [55]

Such testimony indicates strong-support for local control. Regional planning is regarded as a matter primarily of city and county concern. In order for regional planning to be effective, therefore, control of commission membership must rest entirely with local government. This

[49] Section 65091.
[50] Section 65092.
[51] Section 65094.
[52] Section 65062.
[53] San Francisco hearing.
[54] *Ibid.*
[55] *A Regional Planning Agency for the San Francisco Bay Area, op. cit.*

principle is not operative in the Regional Planning Law, but it is contained in the procedure for establishing area planning commissions.

Representation Should Include Cities as Well as Counties

The Regional Planning Law provides for the nomination of members to a regional planning commission by boards of supervisors whereas the authority for area planning commissions gives "as near as possible equal representation to each city and county." [56] Testimony at the San Francisco hearing indicated that the most desirable pattern of representation more closely approximated that provided for in area planning commissions However, for very large regions such as the central Valley or the San Francisco Bay area, the size of the commission or board would become unwieldy if representation is given every city as well as county, as provided under the authority for area planning commissions.

Richard Carpenter stated the position of the League of California Cities as follows:

> "We feel that there should be a method to have equal city representation on any regional planning board or commission. The manner of selecting that board could very well follow the pattern that has been established for the San Francisco Bay Area Pollution Control District. The pattern followed there is one that was suggested by the counties within the San Francisco Bay area, and by the cities, where the cities get together within a county and nominate one person to represent the cities within that county and the board of supervisors select their representative." [57]

The Bay Area Air Pollution Control District was established in 1955 by action of the California Legislature [58] Of the nine Bay area counties included in the district, six are now "activated." In each of the remaining three nonparticipating counties the district's functions can be activated whenever the board of supervisors adopts a resolution declaring the need. The district governing board consists of two representatives from each county area within the activated portions of the district. One member of each pair is a county supervisor, chosen by the county board of supervisors. The other representative is a city mayor or councilman chosen by a "city selection committee" made up of the mayors of all the cities within the county.

The Bay Area Air Pollution Control District is used as a prototype for the regional planning agency proposed in the Bay area, except that in the latter case differences in population size of the county areas are taken into account [59] The concept of city and county representation is further supported by the work done on regional planning legislation by a representative group of regional planners in the central valley. In a preliminary report which sets forth the major principles and recommendations on the subject the group states:

> "Each county in a regional planning area shall be represented by at least one person chosen by the board of supervisors. The

[56] Section 65092
[57] San Francisco hearing
[58] *Calif. Stats*, 1955, Ch. 1797
[59] *A Regional Planning Agency for the San Francisco Bay Area, op cit.*, pp. 20-21.

board of supervisors, should select additional representatives so that the total membership on the planning board is not less than five. If a lesser number of additional representatives are to be chosen than there are counties in the area, the additional members should be chosen by the counties with the greater assessed valuation.

"The cities within any county or portion of a county included within a regional planning area shall be represented on the regional planning board. If only one city is involved, the selection shall be made by the mayor with the consent of the city council. If there is more than one city involved, the mayors of all such cities shall meet and select a representative." [60]

The evidence available to the subcommittee indicates clearly that the systems of representation embodied in present law are inadequate for planning on an intercounty level. Neither the strictly county representation of the Regional Planning Law nor the possibly cumbersome system of equal representation for each city and county in the area planning law are desired. What is needed, apparently, is a system of representation which equates each county government with the total of all city governments within each county area.[61]

Other Questions of Regional Planning Board Composition

Both the regional and area planning laws require that commissions established pursuant thereto be composed of members of local planning commissions. Evidence available to the subcommittee indicates, however, that such requirements are not always consistent with the desires of local government and do not produce the most effective organizational type for coordinated planning on an intercounty level.

Members of the steering committee of the Central Valley Regional Planners considered this question but failed to reach specific conclusions. In a preliminary report on the subject they have stated the alternatives as follows:

"Membership on regional planning boards may be confined to elected representatives of the various political jurisdictions included within the area or it may be broadened to allow appointment of planning commissioners, public employees and interested citizens as well as elected officials. Arguments in favor of this broadened concept include the already heavy work load of elected officials and the desirability of increasing citizen participation in governmental matters." [62]

Robert W. Adams, Supervisor, Stanislaus County, recommended that the " * * * Regional Planning Law be amended to provide that local government, cities and counties appoint local legislative officers

[60] *Preliminary Report on Regional Planning Legislation,* Central Valley Regional Planners Steering Committee, January 23, 1957, p. 4

[61] One exception in the evidence available to the subcommittee is found in the proposal of the Central Valley Regional Planners This group proposes two representatives from each county except in the case where the total membership of the regional planning board would result in less than five members In the latter event the board of supervisors would select additional members to provide a total of five

[62] Appendix 6, p. 78.

and representatives, local citizens, in a proper ratio in a regional planning commission or board which is established. * * * "[63]

On the other hand in the San Francisco Bay area the proposed regional planning law provides that the governing body of the district be composed of city and county legislators, selected in a manner previously described, and a group of citizens at large selected by the city and county members of the board. The latter group would represent a better than two-thirds majority of the board of 26 members.

> "The reason for providing direct and strong representation for city and county legislative bodies should be self-evident. The agencies which can advance or hinder any regional planning effort are the legislaive bodies in the cities and counties of the Bay area. They control, and properly so, we believe, local physical development policies, zoning laws, and the great majority of public capital improvement projects. By their mutual assistance and cooperation, they can see that the regional plan is carried out. If they are in charge of the preparation of the plan, they will understand it and will be able to provide the leadership that will be needed if it is to be carried out effectively."[64]

PART V

ANALYSIS OF PROPOSED LEGISLATION

The main purpose of the legislation submitted with this report is to provide a legal and locally acceptable basis for establishing regional planning policies.

No distinction is made between types of regions. The nature of the planning process is such that it is equally applicable to regions whose main problems are those of conservation and utilization of natural resources, to regions which are predominantly metropolitan in character, and whose main problems are those related to urban development, and to regions with a combination of problems related to both urban and natural resources development. However, a distinction is made between intergovernmental planning problems of county-wide or less-than-county scope and planning problems which are intercounty or beyond the scope of any one county to solve. The proposal specifically deals with only the latter group and such of the former as may be involved in any case with the latter. The intent of the Legislature is clear on these points:

"In enacting this chapter it is the intent of the Legislature to provide a means for solving problems of physical development which are not confined to any single county to the end that city and county planning may be strengthened and the development of the State may proceed in an orderly fashion."[65]

The Legislation Is Permissive Not Mandatory

The proposed legislation permits two or more entire and contiguous counties to create a planning district, any contiguous county to join such a district and any county which is a member of a district to

[63] San Francisco hearing.
[64] *A Regional Planning Agency for the San Francisco Bay Area, op. cit.*, p. 8.
[65] Section 66100.

withdraw.[66] The proposal is therefore permissive in character in contrast with the mandatory nature of the existing Regional Planning Law. The existing law requires the establishment of a regional planning commission for each regional planning district, as delineated by the State Conservation and Planning Board.[67] Such delineations have never been made and it is unlikely that they ever will be made without comprehensive planning on a state level geared to answering the question of how the State as a whole should develop. Out of state-wide planning studies solid definitions of regional boundaries could emerge which would be related to future as well as existing regional land use patterns and problems. Without a definition of regional boundary lines, a county cannot be directed to establish a regional planning commission when it does not know with which other counties it should combine to establish such a commission.

In the proposed legislation the definition of what constitutes a region is left to the counties. Those counties will act who recognize the existence of common problems and who feel that planning on an intercounty basis is the best way of solving them. Of course, only a few counties within a region of many counties, for example, may see the need, but the few should be enabled to set up an agency with proper financing while waiting and pointing the way for the others. It does little good to require a combination of counties to do "regional" planning if the counties do not recognize any common problems or the utility of regional planning in solving them. The desires of the county itself should be the determining factor, particularly if, as in the accompanying legislative proposal, the planning agency is to have an advisory function and the legal instruments for effectuating the "regional" plan are created at the county and municipal level. A permissive and "district" planning law is, therefore, more appropriate at this time than a mandatory and "regional" law.

Local Representation Is Direct

The proposal provides for a district planning board to act as the governing body in each district.[68] In regard to the question of who should be members of the board, the subcommittee considered the two alternatives of direct and indirect representation. In the former, alternative members of the district board consists of members of local legislative bodies. In indirect representation citizens at large, planning commissioners or other appointed officials and elected officials as well may serve on the board. The subcommittee has rejected indirect representation on the grounds that planning on an intercounty level involves fundamental policy questions of vital importance which should not be delegated to nonelected individuals. Direct representation of local legislative bodies, on the other hand, will give strength to the district planning board and will insure, as far as possible, local, state, and federal adoption of the board's recommendations. The principle of direct representation is incorporated in the regional planning agency proposal for the San Francisco Bay area and is now the basis for the organization of the Bay Area Air Pollution Control District. The

[66] Sections 66140, 66162, and 66160
[67] Section 65062, Chapter 2, Title 7, Government Code.
[68] Section 66200.

principle is sound in concept and workable in practice and should be adopted in other parts of the State. The proposal submitted with this report calls for the appointments to the district planning board to be made by elected officials of cities and counties; the State is not involved in any way. Representation of all cities within a county is equal to the representation of the county government. City representatives are appointed by a city selection committee in each county. The city selection committee consists of the mayor of each city within a county, or where there is no mayor, the chairman or president of the city council. County representatives are appointed by the boards of supervisors.

Representation of Each County Area Is Equal Not Proportional

Whether the law is permissive or mandatory also determines whether proportional representation on the planning board is feasible. In a mandatory law, such as the Bay area proposal, the number of counties is fixed and representation would change only slowly with population. In a permissive law, under which two or more counties may establish a planning district, no such stability could be guaranteed. The addition or subtraction of a county to the district would change the relative proportions of population to be represented and would thereby cause unreasonable instability on the board. Since the board is advisory in character and would have no powers to construct or operate regional facilities nor any power to compel acceptance of its recommendations equal representation is the most desirable solution. The power to accept, reject or ignore district recommendations would rest with local legislative bodies.

Powers and Duties

Each district is required to perform four major functions:[69]

(1) Prepare, maintain, and regularly review and revise a district plan;
(2) Make, publish or assist in making or publishing studies or investigations of the resources of the district and of existing or emerging problems of any nature related to the physical and economic growth and development, living conditions, beauty, or prosperity of the district or any part thereof;
(3) Publish, transmit and explain the district plan, district studies and any other activities of the board;
(4) Promote and encourage the growth and development of district understanding and cooperation in the solution of problems within the district.

In addition to the four major functions, each district is instructed to study and review from time to time: (a) the nature and scope of the district planning function within the area encompassed by the district; and (b) the organization under which the district planning function may be best carried on. This provision is particularly important since in some situations the districts established may be less than regional in scope.

[69] Section 66241.

No provision is made which requires the conformance of local plans and projects to the district plan. However, provision is made for the voluntary referral of any development proposals to the district planning board for its advice regarding the conformance of such proposals to the district plan.[70]

Official Representatives and Technical Committees

Broad representation of interests in an area is achieved in the provision allowing the designation of official representatives from the various agencies and organizations interested in and affected by the functions of the board.[71] Such representatives would be kept fully informed of the activities of the board and would be given an opportunity to request the addition of any matter to the agenda of any regular board meeting and to present their views.[72] Each board may also appoint technical advisory committees to study various matters related to the functions and duties of the district and to report to the board.[73]

Financial Provisions

Considerable testimony was received at the San Francisco hearing to the effect that a regional planning agency must have a continuous source of income in order to operate effectively. Dependence on the vagaries of voluntary contributions prevents the efficient scheduling of planning work over several years and subjects the operations of the district to constant political pressure. Consequently, each district board is instructed to estimate and determine annually the amount of money needed for district purposes during the ensuing year and to apportion the amount to the counties included within the district according to the relative value of all property in each county.[74] Each board of supervisors within a district is directed to levy an ad valorem tax on the taxable property within the county sufficient to secure the amount apportioned to it.[75] A limit of 1 cent on each $100 of assessed valuation of all property included in the district is placed on the money requirements of the board. While it is impossible to determine at this time the amount of money that will be required by each district, since the number and combination of counties that will establish planning districts will depend on the choices of the counties themselves, the monetary limit is believed to be reasonable and one that would provide sufficient revenues for any district that may be established. The 1-cent limit is recommended in the regional planning agency proposal of the San Francisco Bay area[76] and also as a feasible alternative by the Central Valley City and County Planners.[77]

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[70] Section 66300
[71] Section 66320
[72] Sections 66321 and 66322.
[73] Section 66340
[74] Section 66361.
[75] Section 66362.
[76] *A Regional Planning Agency for the San Francisco Bay Area, op cit.*, p 33
[77] See Appendix 6, p. 82.

APPENDICES

APPENDIX 1

STATEMENT ON NEED FOR REGIONAL PLANNING

R. B. Gilmore, Councilman, City of Sunnyvale

Regional planning is strongly advocated for the following reasons based on experience in this city of the region:

1 In preparing our general plan for development, we cannot collect sufficient data to fully evaluate our own future within the economic region. Under the present circumstances, there are too many occasions when the framework within which the city will grow simply has been planned in a vacuum. A regional planning agency collecting information for the region as a whole as well as its many parts and developing a general plan for the region, can provide the very necessary framework within which the city can do the most effective job of planning for itself. Without common assistance from regional planning for all of the urban and rural units in this economic area, individual cities are bound to make different guesses as to the region's future and to develop different plans which may be in conflict with each other. Thus, a regional planning agency can strengthen the local planning program as well as reduce the "unnecessary" conflicts between adjoining or nearby jurisdictions.

2 Every city has areas and facilities within it which serve more than the immediate city involved; areas and facilities which are either subregional or regional in importance. These include freeways and major arterials, regional shopping centers, major industrial areas, perhaps a transit route, a regional park, or a regional water supply system. The city, when faced with making a decision on these matters, frequently has considerable difficulty because its jurisdiction is more limited than the area or facility in question. Because of this, the city is frequently not in a position to really determine where such a facility can best be located. Under the present circumstances, such facilities frequently become a bargaining point for conflict between cities or may end up poorly located because the city does not have enough information to make a wise decision as to where a regional facility should be located. Here, again, a regional agency can be of great assistance in strengthening the local planning program in answering questions of this nature.

3 At present, there are many state and county agencies active throughout the region which have development program effecting the cities It is practically impossible for a small city, such as ours, to be sure, when such an agency approaches the city, whether its program has been well thought out on a comprehensive basis

and from a regional standpoint, or whether it represents the limited technical viewpoint of the agency's specialists In either case, at present the state agencies can, to some extent, "steam roll" their propositions through a city This type of problem could be helped by a regional agency acting both to develop a regional plan into which the different state, county and local agencies could fit their development programs where such adjustments will *not* hinder the State and may substantially *help* the city. For example, the location of a highway may be substantially improved in its effect on the city by moving it a few hundred feet from one side to another, so that appropriate planning units may be created without adversely affecting either the cost or main purpose of the highway to move traffic between metropolitan centers However, the revised location may not be the most direct as seen from the highway planner's point of view Here again regional planning can strengthen the cities' planning program and development.

4. A regional planning agency could help the individual cities through its organization of the region's efforts to provide adequate highway systems, transit systems, water supplies, air pollution control and other area-wide problems. At the present, each city tends to approach the state agency or state legislature on an individual basis. By working together to bring an integrated program, the available funds which will always be limited in comparison to need in the foreseeable future, could be used most effectively and if related to a priority system of improvements, could bring about the most benefit for the money expended. Also, the individual cities and counties could present to the State an integrated program rather than the present situation where frequently many discordant voices each strive for as much as they can individually get.

5. A regional planning agency could promote uniform ordinances and regulations for the different cities and counties. This would help communities such as Sunnyvale because the separate ordinances which grow up in each city have to be endlessly explained to different developers, businessmen, attorneys and other people living and working throughout the area. It is understood that because of the wide variations in desires of cities and conditions within cities that there will be differences between the regulations of different jurisdictions. However, there are many needless differences which could be eliminated to the advantage of all.

6. There have been many cases in the development of the Santa Clara Valley where an objective outside agency, capable of studying the problems that arise between adjoining or nearby cities or between the cities and the county, could have provided an effective answer. Current problems are providing a source for interminable antagonisms as the conflict runs its course and produces a solution which is ineffective for the jurisdictions involved frequently leaving smoldering embers which easily burst into further flame.

7. A regional planning agency, by developing a general plan for the region, can point up many of the problems which the individual jurisdictions may be dimly aware of, but which are not brought into focus because none of the jurisdictions has the time or inclination to study them, being naturally preoccupied by their own individual problems. At joint meetings between cities and between counties and cities and sewer districts, some of these problems are occasionally pointed up but there are no agencies to take the initiative on these matters There is a need for an agency to point up where the region has fallen short, where something needs to be done or where an opportunity exists and to take the leadership so that the region may develop as a well-rounded unit. These problems include regional parks, development by the baylands, water development, the transit system, etc. Here again, a regional planning agency could contribute to the cities' leadership in obtaining the developments which are necessary if cities are to provide all the types of facilities and activities necessary for "California living" and which attracts so many of our residents, but which cannot be provided by any one of our present jurisdictions.
8. There is duplication of effort and misdirected effort in the collection of planning data bearing on the effect of regional development upon local planning problems. A properly staffed regional agency would more than pay for itself by centralizing the responsibility for this phase of our planning program.

In summary, we advocate a regional planning agency so that we may get an effective and economic planning program for the San Francisco Bay region It is long overdue.

Respectfully submitted,

R. B. GILMORE
Councilman, City of Sunnyvale

APPENDIX 2

SUMMARY OF 1956 BAY AREA REGIONAL PLANNING PROPOSAL

Prepared by the Regional Planning Subcommittee of the San Francisco Bay Area Planning Director's Committee for the November 30, 1956, meeting of Bay Area City and County Planning Commissioners.

BACKGROUND

1. **Local Governments Control Physical Development.** A strong tradition of local planning now exists in the Bay area. City and county governments know what the physical planning job is and are determined to do it well.

2. **The Need for Regional Planning Is Now Widely Recognized.** City, county, and state officials, civic and private groups, and—most important of all—Bay area citizens in general, recognize the need for some kind of regional planning program to augment the local planning programs of city and county governments. The people of the Bay area want a new attempt to be made to establish an effective regional planning agency.

3. **Failure of Earlier Efforts Understood.** Since 1900 we have witnessed five failures in efforts to establish regional planning. Proposals by private groups and the State Government have been unsuccessful. The next attempt should be made by city and county governments working together.

4. **Proposal Must Strengthen City and County Governments.** Any proposed regional planning agency must be controlled by the people of the Bay area through their city and county legislative bodies. Regional planning must respect local master plans. The agency must be advisory.

5. **Success Depends on Local Initiative and Understanding.** The present proposal assumes that it is unlikely that the State Legislature will act unless the city and county legislative bodies are in agreement on what should be done. Local understanding and support for the proposal must come first.

A. DUTIES OF THE PROPOSED REGIONAL PLANNING BOARD

1. **Regional Plan.** The board would prepare, adopt, and maintain a regional plan for the physical development of the Bay area based upon the master plans of the city and county governments of the area and upon studies of region-wide needs. The regional plan would provide a framework intended to serve as a guide for local plans and planning programs and for state and federal agencies and special districts. It would be advisory only.

2. **Regional Studies.** The board would make regional population, economic, traffic, and other studies for regional planning purposes and for the purpose of assisting and strengthening city and county planning programs.

3. **Regional Cooperation.** The board would promote and encourage understanding of the need for regional cooperation and would join with city, county, regional, state and federal agencies, and with private groups, in the development of effective procedures for dealing with regional development problems that are of concern to all.

B. ORGANIZATION OF THE REGIONAL PLANNING BOARD

1. **Governing Board.** The board would consist of 26 members, including 18 city councilmen and county supervisors and eight citizens-at-large.

2. **Staff and Financing.** The proposal calls for the establishment of a regional planning district that would be able to raise its own funds for necessary professional staff services, similar to the provisions of the Bay Area Air Pollution Control Act.

3. **Official Representatives and Technical Committees.** Each city and county planning commission, state and federal agency, special district, and private and civic group interested in regional development activities would designate an official representative who would be kept fully informed of all board activities and who would act as the official spokesman for his group. The board would also appoint special technical advisory committees as needed.

C. ADVISORY NATURE OF REGIONAL PLANNING BOARD

1. **Voluntary Referral.** The proposal assumes that most city and county governments, state agencies, and a large majority of other public and private groups actively concerned with regional development matters will, after the board has prepared and published the regional plan, voluntarily seek the views of the board on projects of region-wide importance. The proposal is based on the belief that the Regional Planning Board will provide leadership in the public discussion of regional development problems, that the logic of the proposed solutions to such problems as expressed in the regional plan will have great influence.

2. **Continuing Reappraisal of the Regional Planning Function.** The proposal requires the board to review the effectiveness of its work periodically, and to make recommendations for improvements in its organization to city and county governments and the State Legislature.

SCOPE OF PROPOSAL

1. **Local Plans and Regional Needs.** The present proposal calls for building up the regional plan on the basis of city and county master plans. It also calls for attention to be focused on the over-all needs of the region that are not provided for by local plans so that such region-wide needs can be studied and provided for in the regional plan. It must be recognized that to do such a complex task well will take time, and that the local and regional adjustments that inevitably will have to be made will require cooperation and leadership of a high order.

2. **Local Government Control Versus State Control.** The proposal assumes that the needs of state agencies for a regional plan can best be served by a locally-prepared and locally-controlled regional plan. This may not be satisfactory from the point of view of the State. However, from the local and Bay area point of view, what seems to be called for is more effective coordination of state agencies at the state-wide level by the Governor and Legislature, rather than state control of the membership of the proposed Regional Planning Board. But regardless of how the relationships between state and local governments may evolve, an advisory regional planning agency, governed locally, is needed, and could accomplish a great deal at the present time.

APPENDIX 3

LOCAL ACTION ON REGIONAL PLANNING

Proposed San Francisco Bay Area Regional Planning District

May 16, 1957

	Favorable action		*Unfavorable action*	
	Planning Commission	*Council or Board of Supervisors*	*Planning Commission*	*Council or Board of Supervisors*
(a) Cities				
1.	Berkeley	Berkeley	1. ——	Livermore
2.	Hayward	Hayward	2. San Pablo	San Pablo
3.	Oakland	——	3. Dixon	Dixon
4.	San Leandro	San Leandro		
5	Concord	——		
6.	Martinez	Martinez		
7.	Richmond	——		
8.	Larkspur	Larkspur		
9.	Mill Valley	Mill Valley		
10.	Sausalito	Sausalito		
11.	Milpitas	Milpitas		
12.	Sunnyvale	Sunnyvale		
13.	Palo Alto	——		
14.	Los Altos	——		
15.	San Bruno	San Bruno		
16.	San Mateo	——		
17.	South San Francisco	——		
18.	San Rafael	San Rafael		
19.	El Cerrito	El Cerrito		
20.	Walnut Creek	——		
21.	Belvedere	Belvedere		
22.	Corte Madera	Corte Madera		
23	Fairfax	Fairfax		
24.	San Anselmo	San Anselmo		
25.	Vallejo	——		
26.	Burlingame	Burlingame		
(b) Counties				
1.	Alameda	——	1. Contra Costa	Contra Costa
2.	Santa Clara	Santa Clara	2. ——	Napa
3.	Marin	Marin	3. ——	Solano
4.	San Mateo	San Mateo	4. ——	San Francisco
5.	San Francisco	——		

POPULATION SUMMARY

Seventy-two cities	*Number*	*Percent*	*Population*	*Percent*
Favorable action, planning commission	26	36	1,049,200	43
Favorable action, city council	17	24	342,400	14
Unfavorable action, city council	3	4	29,600	1
No action taken	46	39	1,363,600	56
Totals	72	100	2,442,400	100
Nine counties				
Favorable action, planning commission [1]	4	44	1,834,700	56
Favorable action, board of supervisors	3	33	964,700	30
Unfavorable action, board of supervisors	4	44	1,291,990	40
No action taken	1	11	136,200	4
Totals	9	100	3,254,000	100

[1] San Francisco not included, Board of Supervisors overruling Planning Commission

Summary by

JAMES A. BARNES, Secretary
East Bay Metropolitan Planning Council

APPENDIX 4

BUREAU OF PUBLIC ADMINISTRATION
UNIVERSITY OF CALIFORNIA, BERKELEY
MILTON CHERIN, Acting Director

THE PROBLEM OF ORGANIZING FOR REGIONAL PLANNING AND OTHER AREA-WIDE FUNCTIONS IN THE SAN FRANCISCO BAY AREA

Prepared by Stanley Scott

For presentation at a public hearing of the Subcommittee on Planning and Zoning of the Assembly Interim Committee on Conservation, Planning, and Public Works, to be held in San Francisco, December 7, 1956.

December 3, 1956

Until recently the San Francisco Bay area had no regional unit of government of any kind, in contrast to many of the other large metropolitan areas in the United States and elsewhere. There are several subregional districts, it is true, such as the East Bay Municipal Utility District, the new Alameda-Contra Costa Transit District, and the Golden Gate Bridge and Highway District, but none of these include a majority of the Bay area's population or assessed valuation. The Bay Area Air Pollution Control District, created in 1955, is the only local governmental agency with regional coverage.[1]

I. AREA-WIDE ADMINISTRATION NOW BEING DISCUSSED

Serious discussions are now being held concerning the possibility of establishing two new functions on an area-wide basis, in addition to air pollution control. These proposed new functions are regional planning and metropolitan rapid transit. In the future, as the Bay area continues to grow, still other functions may also require regional coordination. Thus one governmental function—air pollution control—is already being administered by a regional district, and it is possible that at least one or two, and maybe several other functions of government will sooner or later be administered on a regional basis in the San Francisco Bay area.

In large metropolitan centers such as Chicago, New York, and London, the need for metropolitan government has been met, in part, by the creation of separate and independent agencies, each carrying out its own function with limited consideration for the other public agencies and functions found in the same area. When several such overlapping agencies have been established, the need for coordination among them becomes great. Also the cities and counties in many metropolitan areas have experienced serious difficulties in working with independent regional authorities. These difficulties have been magnified as the number of separate metropolitan authorities has increased. Can the San Francisco Bay area avoid some of these governmental problems in the future? Can the Bay area meet its needs for regional cooperation and management without complicating an already complex local governmental pattern?

[1] The San Francisco Bay Regional Water Pollution Control Board is not a local agency, but instead is one of nine regional boards which are, in fact, state agencies established to insure decentralized administration of the state-wide water pollution control program. The five members of each regional board are appointed by the Governor.

II. ALTERNATIVES: ONE DISTRICT OR A UNIFORM DISTRICT PATTERN

There are at least two possibilities. *First*, one area-wide district could be established, and this district could, at the proper time, assume each new function requiring regional treatment. One large metropolitan district would thus take care of all the Bay area's needs for regional coordination and service. *Second*, if the first possibility should not prove feasible and several regional districts are established, a parallel structure could be utilized. If the districts can be made to resemble each other closely, their consolidation at some future date will be facilitated.

Uniformity would have another important value—it would help keep the regional governmental pattern simpler and more comprehensible. Excessive variety in overlapping governmental organizations creates confusion. The adoption of a parallel structure for all the districts would make it much easier both for the man-on-the-street and for local officials to understand and become familiar with the district's operations. Similarly, the districts could cooperate with each other better and could coordinate their activities more closely if they were alike in basic organization.

A single district, if properly constituted, could handle all local public activities requiring coordination or policy decisions on a regional basis It is true, of course, that there are significant differences among the three functions under primary consideration in this memorandum: (1) regional planning as discussed here is an advisory function; (2) metropolitan rapid transit involves the construction (or acquisition) and operation of a major public facility; (3) the primary elements of regional air pollution control are scientific research and the exercise of the police power.

These differences among the functions do not mean, however, that a separate district is essential for each Nor do the differences mean that if separate districts *are* established, there is any need for radical variations in basic district organization A city council normally looks after police protection, fire protection, sanitation, local planning, street construction and maintenance, and often manages local utilities, such as water supply or transit systems, as well as many other varied functions. A county board of supervisors provides for county roads, social welfare and public health administration, county planning, inspection of weights and measures, county libraries, and a large number of other diverse services and controls. Similarly a single, well-organized metropolitan district could take on any regional functions and needs not now being provided for by the existing local governments.

III. THE BAY AREA AIR POLLUTION CONTROL DISTRICT AS A PROTOTYPE

In searching for an organizational pattern suitable for regional planning, metropolitan rapid transit, and such other functions as may, in the future, require regional coordination, we can look first at the only existing area-wide district—the Bay Area Air Pollution Control District.

Description of Air Pollution Control District

The Bay Area Air Pollution Control District was established in 1955 by action of the California Legislature [1] The district includes all the nine counties of the San Francisco Bay area, but at present is "activated" in only six counties.[2] The district can be activated in one of the nonparticipating counties—Napa, Solano, and Sonoma—whenever the board of supervisors adopts a resolution declaring that there is need for the district to function within the county.

The district governing board consists of two representatives from each county area within the "activated" portions of the district. One member of each pair is a county supervisor, chosen by the county board of supervisors. The other representative is a city mayor or councilman chosen by a "city selection committee" made up of the mayors of all the cities within the county.

The district's governing board thus constitutes, in effect, a "federation" of the participating cities and counties, six of the board members representing the counties, and six representing the cities. If the district should be activated in one or more of the three counties not now participating, the district board would be expanded accordingly to a possible maximum of 18 members.

The governing board is required to create a Bay Area Air Pollution Advisory Council to advise and consult with the board in developing the district's program. The advisory council consists of the chairman of the district board, who serves in an ex officio capacity, and 20 members who preferably are skilled and experienced in the field of air pollution control, including at least one representative of colleges or universities in the State, and at least one representative of each of the following groups within the district: health agencies, agriculture, industry, community planning, transportation, registered professional engineers, general contractors, architects, and organized labor.

The district's primary function is to conduct an air pollution study program, and to adopt rules and regulations controlling the release of contaminants into the atmosphere. The district has been given a limited grant of police power in the field of air pollution control. This grant of power to the district does not prohibit the enactment and enforcement of stricter control provisions by the individual cities and counties.

The district may require its member counties to levy a property tax for the support of district activities. Each year the district board must determine its budget for the ensuing year and apportion the total amount among the member counties, one-half according to the relative value of the real estate in each county, and one-half in proportion to the population of each county. The total amount required for district purposes during any one fiscal year cannot exceed $0 01 per $100 assessed valuation of all the property within the district.

Major Features of the Air Pollution Control District

The air pollution control district embodies certain organizational features, the pros and cons of which should be studied when consideration is being given to the establishment of any new regional districts:

[1] Cal Stats, 1955, Ch 1797.
[2] The district is activated in Alameda, Contra Costa, Marin, San Francisco, San Mateo, and Santa Clara Counties

(1) The district is headed by a policy-making board representing the cities and counties of the Bay area, thus giving the local governments a voice in the administration of district affairs. This is an important principle because the cities and counties have a vital interest in any local public function, and their direct participation should help to insure coordination of public policy throughout the area. The air pollution control district is, in effect, a federation of the participating cities and counties. It provides an official agency through which representatives of the local governments can arrive at policy decisions and take appropriate action.

(2) Each member of the district board is an elected policy-making official in his own city or county.

(3) The district board as now constituted equates each county government with the sum total of all the city governments within the county area. This is done by providing two members from each county area—one representing the county government and the other representing the cities.

(4) Representation on the board is by "area," or by jurisdiction, not by population (see discussion below).

(5) The district as established by law includes all the nine Bay area counties, but has been *activated* in only six counties. It cannot conduct business, apportion assessments or include representatives from any of the other three counties until authorized to do so by the county board of supervisors. Thus the district as originally created encompassed the area of probable ultimate need, but at present operates only in those portions of the area now desiring its services.

(6) Representation of experts and interest groups is provided for on the 21-man advisory council which the district board is required to create and consult.

Possible Modifications of the Air Pollution Control District Pattern

The air pollution control district is an interesting and significant experiment directed toward the joint solution of mutual problems by the communities of the Bay area The district represents a real forward step and embodies certain useful features, but its organizational pattern may not, as it now stands, be the final answer to all the Bay area's needs. At any rate it is appropriate at least to consider the possibility of certain modifications, a few of which are sketched below. These possible modifications are presented for purposes of discussion, and do not in any way constitute recommendations by the author or the Bureau of Public Administration.

Modifications in Representation. The representation of different parts of the district does not reflect differences in population or assessed valuation. First, each county area has the same representation —two directors. San Francisco City and County, for example, with a population of 767,000 and an assessed valuation of nearly 1.3 billion dollars, has the same voice as the residents of Marin County, with a population of 115,000 and an assessed valuation of 145 million dollars. If the district were to be activated in Napa County, the Napa County area with its 58,000 people and 58 million dollars assessed valuation would have a vote equal to that of San Francisco.

Second, all the cities within any one county are on an equal footing in the "city selection committee." In Alameda County, for example, Pleasanton, with a population of 3,000 and an assessed valuation of 2 million dollars, has the same voting power as Oakland, with a population of 400,000 and an assessed valuation of 438 million dollars. In Contra Costa County, Richmond with its 75,000 people and 109 million dollars assessed valuation is equated with Hercules, which has 344 residents and an assessed valuation of 2.5 million dollars.

This kind of representation by "area," or by jurisdiction, has been widely employed in the United States and is considered necessary and desirable by many people for certain purposes. But provision for adequate representation according to population is also an important element in our system of government and must not be overlooked.

There are several possible modifications of the district board's voting rules and appointment procedure that might be considered in an attempt to meet the criticisms outlined above.

(1) The vote of each district director could be weighted in strict proportion to the population or assessed valuation (or both) of the area he represents (see Table 1).

TABLE 1

VOTING POWER DISTRIBUTED AMONG COUNTY AREAS ACCORDING TO POPULATION OR ASSESSED VALUATION

County area	*Column 1* *Population*	*Column 2* *% distribution of voting power if based on population*	*Column 3* *Assessed valuation*	*Column 4* *% distribution of voting power if based on assessed valuation*
Alameda	851,400	26 58	$1,079,617,000	23 39
Contra Costa	350,300	10 94	613,192,000	13.28
Marin	115,200	3 60	145,469,000	3 15
Napa	57,600	1.80	58,065,000	1 26
San Francisco	766,500	23.93	1,264,198,000	27.39
San Mateo	360,000	11 24	519 741,000	11 26
Santa Clara	461,700	14 41	623,922,000	13.52
Solano	109,100	3.41	124,867,000	2.70
Sonoma	131,500	4.11	187,276,000	4 05
Total	3,203,300	100.00	$4,616,347,000	100 00

(2) Some combination of equal vote allocation (the present district system) and proportional weighting could be employed. There are any number of ways to do this, one of which is illustrated in Table 2. Half the votes are distributed in proportion to the population of the area represented (column 1), and the other half are distributed equally among all areas (column 2). Column 3 shows the number of votes assigned to each individual board member, and column 4 the total vote assigned to the two members from each county area. Column 5 shows the percentage distribution of voting power apportioned in this way. Thus, for example, the two board members from Santa Clara County would have a total of 74 votes to cast: the representative of the cities would have 37 votes, and the representatives of the county board of supervisors, 37 votes.

TABLE 2

VOTING POWER DISTRIBUTED ONE-HALF ACCORDING TO POPULATION AND ONE-HALF EQUALLY AMONG THE COUNTY AREAS *

County area	*Column 1 144 votes distributed in proportion to population*	*Column 2 144 votes distributed equally among the county areas*	*Column 3 Total votes assigned to each board member*	*Column 4 Total votes assigned to the two board members from each county*	*Column 5 Percent distribution of voting power*
Alameda	38	16	54	108	18 75
Contra Costa	16	16	32	64	11 11
Marin	5	16	21	42	7 29
Napa	3	16	19	38	6 60
San Francisco	34	16	50	100	17.36
San Mateo	16	16	32	64	11 11
Santa Clara	21	16	37	74	12.85
Solano	5	16	21	42	7 29
Sonoma	6	16	22	44	7 64
Total	144	144	288	576	100.00

* The number of votes assigned to each board member is determined by apportioning 144 votes among the nine counties according to population and 144 votes equally among the counties (16 to each county area) The number 144 is used because it is large enough to minimize the problem of fractional votes, and because it is divisible by nine

(3) Instead of weighting the vote of the district directors, additional directors could be appointed from the more populous areas according to an agreed upon formula. See the organization charts on pages 72 and 73 for examples. Table 3 compares the voting power distributions among county areas which result from the use of six different allocation formulas.

(4) The vote of each mayor on the city selection committee could be weighted by a method similar to those referred to in paragraphs (1) and (2) above.

(5) The chairman of the district governing board could be chosen by direct election from the district at large. Direct election of the chairman would provide at least one officer representing the district as a whole, and would also help remedy the problem of representation discussed above. The chairman could be given responsiblity for developing a program for the district and bringing recommendations to the board. The chairman might be given authority to appoint the chief administrative officer of the district, with the advice and consent of the board.

Modifications in Area of Operation. Another possible modification of the district pattern concerns its area of operation. A provision could be added allowing portions of a county to activate the district even when other portions of the same county do not wish to participate. Only those portions of the county in which the district has been activated would be subject to taxation or eligible to receive district services. A city council could, for example, be permitted to take the initiative in activating the district within the city's area. Situations may also arise in which it would be desirable to activate the district in noncontiguous areas.

TABLE 3

VOTING POWER DISTRIBUTION BY SEVERAL DIFFERENT FORMULAS

	Percent Distribution According to					
County area	*Population (from Table 1)*	*Assessed valuation (from Table 1)*	*One-half by population and one-half equally among county areas (from Table 2)*	*Bay Area Rapid Transit Dist. proposal by Alameda County Mayors' Conference (see p. 73)*	*Bay Area Regional Planning Dist. as proposed by study group (see p. 74)*	*Equal distribution among county areas —Bay Area Air Pollution Control Dist. (see p. 72)*
Alameda	26.6	23.4	18.8	22 2	15.4	11 1
Contra Costa	10.9	13 3	11.1	11.1	7.7	11 1
Marin	3.6	3.2	7.3	5.6	3.8	11.1
Napa	1.8	1.3	6.6	5.6	3.8	11 1
San Francisco	23 9	27 4	17 4	22.2	15.4	11.1
San Mateo	11.2	11.3	11.1	11 1	7.7	11.1
Santa Clara	14 4	13.5	12 9	11.1	7.7	11.1
Solano	3.4	2.7	7.3	5.6	3.8	11.1
Sonoma	4.1	4.1	7.6	5.6	3.8	11.1
Directors-at-Large (Bay Area Regional Planning Dist. Proposal)	--	--	--	--	30.8	--

NOTE Because the figures have been rounded, the columns do not total exactly 100 percent.

IV. SOME ORGANIZATIONAL PATTERNS FOR METROPOLITAN DISTRICTS

The above discussion has centered on the Bay Area Air Pollution Control District as a prototype for other metropolitan districts. Several possible modifications of the air pollution control district pattern have been reviewed briefly There are, of course, many other ways of organizing governmental functions on a regional basis For ease in making comparisons, a few of the organizational alternatives are presented here in chart form. Among those included are: (1) the Bay Area Air Pollution Control District; (2) a proposal for a Bay Area Rapid Transit District; (3) a proposal for a Bay Area Regional Planning District; (4) the Regional Planning Commission of Cleveland and Cuyahoga County; (5) the Detroit Metropolitan Area Regional Planning Commission; (6) the Metropolitan Planning Commission of the Atlanta area, and (7) the East Bay Municipal Utility District.

The organizational patterns reviewed here do not exhaust the possible variations. There are many other schemes which could be employed in the Bay area. The seven variations outlined here are presented in the hope that they will stimulate further study and discussion.

A. *Organization of the Bay Area Air Pollution Control District* [1] *(Established in 1955)*

DISTRICT BOARD	
Number	Consisting of
9	One supervisor appointed by each county board of supervisors
9	One mayor or councilman from each county, appointed by the city selection committee
18	Total membership

ADVISORY COUNCIL	
Number	Consisting of
20	Members appointed by the District Board
1	Chairman of the District Board
21	Total membership

Air Pollution Control Officer

District Staff

[1] As it would appear if the district were activated in all the nine counties

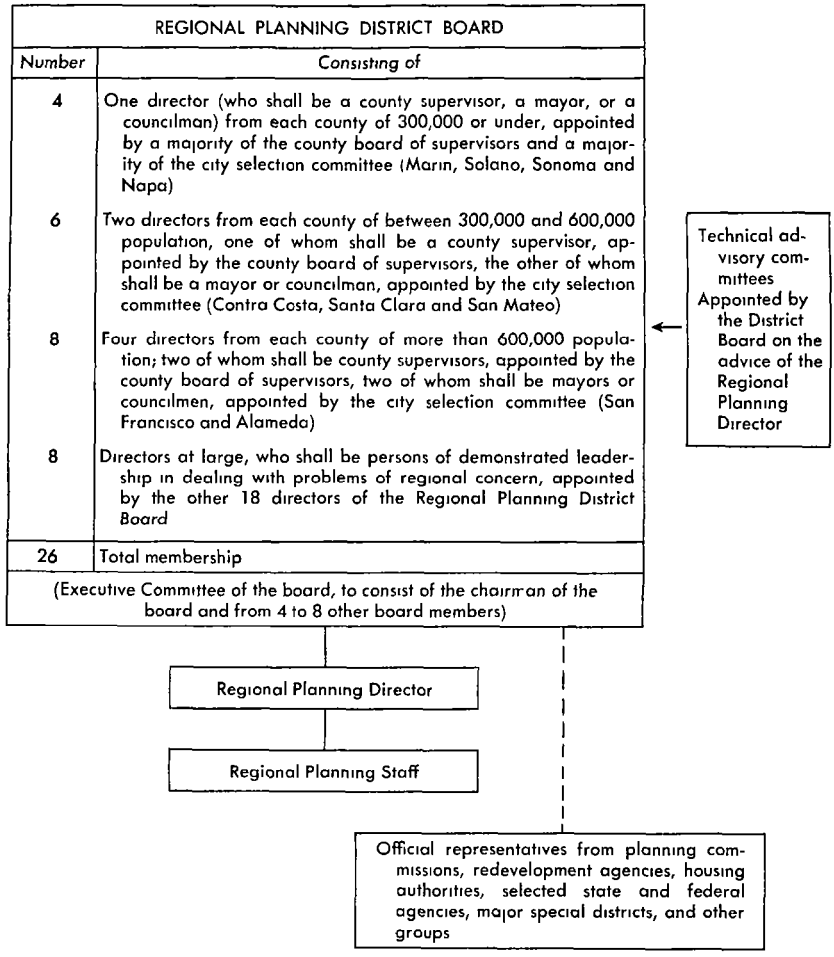
B. *Organization of a Bay Area Rapid Transit District, as Proposed by the Alameda County Mayors' Conference* [1]

RAPID TRANSIT DISTRICT BOARD	
Number	Consisting of
4	One director from each county of 300,000 or under, appointed by a majority of the county board of supervisors and a majority of the city selection committee (Marin, Solano, Sonoma and Napa)
6	Two directors from each county of between 300,000 and 600,000, one appointed by the county board of supervisors, the other by the city selection committee (Contra Costa, Santa Clara and San Mateo)
8	Four directors from each county of 600,000 or over, two appointed by the county board of supervisors, and two by the city selection committee (San Francisco and Alameda)
18	Total membership

Transit District Staff

[1] Assuming the district covers nine counties, and using State Department of Finance estimates of the county populations as of 1956.

C. *Organization of a Bay Area Regional Planning District* [1]



[1] Prepared by a special committee reporting to the Bay Area Planning Commissioners' Study Committee

D. Organization of the Regional Planning Commission of Cleveland and Cuyahoga County (Established in 1937)

REGIONAL PLANNING COMMISSION	
Number	Consisting of
3	County commissioners
1	The county engineer
1	The county administrator
5	Citizens appointed by the county
2	Representatives of the City of Cleveland
44	One representative from each of the 44 other participating municipalities
56	Total membership
(The president of the commission chooses an 18-man Executive Committee which has all the powers of the full Commission, but whose actions are subject to veto by the full Commission)	

Regional Planning Director

Regional Planning Staff

E. Organization of the Detroit Metropolitan Area Regional Planning Commission (Established in 1948)

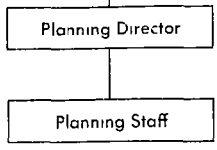
DETROIT METROPOLITAN AREA REGIONAL PLANNING COMMISSION	
Number	Consisting of
25	Members selected by the Governor from among local governmental officials
25	Members selected by the Governor from among community leaders according to prescribed rules
50	Total membership
(A 13-man Executive Committee is elected annually by the Commission The Executive Committee carries on the agency's work between the Commission's monthly meetings)	

Executive Director

Regional Planning Staff

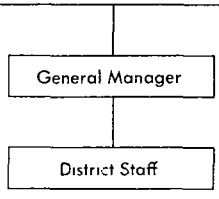
F. Organization of the Metropolitan Planning Commission (City of Atlanta, and Fulton and DeKalb Counties, Georgia; Established in 1947)

METROPOLITAN PLANNING COMMISSION	
Number	Consisting of
4	Members appointed by the Mayor of Atlanta
3	Members appointed by the Fulton County Board of Commissioners (Supervisors)
3	Members appointed by the DeKalb County Board of Commissioners
4	Members ex officio = Mayors of Atlanta and Decatur, chairmen of Fulton and DeKalb Boards of Commissioners
14	Total membership



G. Organization of the East Bay Municipal Utility District (Established in 1923)

EAST BAY MUNICIPAL UTILITY DISTRICT	
Number	Consisting of
5	One director from each of five wards Each director must be a resident of the ward which he represents, but all are voted upon in the district at large -Each ward includes approximately 85,000 registered voters
5	Total membership



APPENDIX 5

A PROPOSED REGIONAL PLANNING ACTION PROGRAM

The following seven-point outline is a proposed work program for planning agencies and firms in the central valley interested in furthering the concepts and practice of regional planning. The scope, emphasis and timing of planning programs for local areas can be related to those parts of the outline which are of a preliminary, secondary of continuing nature. If generally accepted throughout the valley, this proposed program could provide the basis for a vastly improved system of communication on common and related planning problems.

1. **Continuing Inventory, Research and Survey.** Gathering and exchange of information relating to the physical, social and economic factors in central valley growth. Improved statistical and reference organization for planning on a standardized basis, i.e., census tracts, definitions and symbology, scales for maps, plans and aerial photography, electronic tabulation and documentation.

2. **Continuing Analysis of Data; Projection of Trends.** Accurate identification of critical problems facing the central valley. Evaluation of all assumptions underlying estimates of future population growth. Analysis of research data, population and economic trends. Anticipatory recommendations on growth, development and remedial action. Study of local attitudes and preferences. Integration of data into the planning process.

3. **Preparation of Comprehensive, Long-term General Plans.** Preparation and integration of general and precise plans for total land and circulation use, based on population projections and economic studies for specified periods of development.

4. **Regional Planning Coordination.** Coordination at appropriate stages with agencies in every branch of government and community life (federal, state, county, city, special district, private) involved in the planning, scheduling, financing and construction of physical improvements of a regional nature. Integration of regional resources planning with local urban planning. Improvement of city-county, urban-rural relationships.

5. **Planning Assistance to Small Communities.** Aid in implementation of federal urban planning assistance grants to municipalities of under 25,000 population, via official state agency of planning. Planning assistance to unincorporated urban centers in metropolitan areas. Development of local awareness and initiative in the formulation and financing of planning programs of a comprehensive nature. Aid in containment of urban sprawl and fringe area problems.

6. **Effectuation of Plans at the Level of Local Government.** Support of comprehensive planning before local advisory and legislative bodies, in order to build understanding of city and county planning from solid local experience. Aid in implementation of plans and programs for orderly development by, adequate building codes and enforcement, standard zoning definitions and formats; improved subdivision ordinances, precise plans; capital improvement programs; urban renewal and high minimum standards for all aspects of land development.

7. **Planning Communication.** Organization of conferences, educational programs and citizens groups to support the aims of regional planning. Issuance of planning policies via mass communication media. Utilization of federal "demonstration grants" in reporting and testing methods for improving communities.

APPENDIX 6

PRELIMINARY REPORT ON REGIONAL PLANNING LEGISLATION

CENTRAL VALLEY REGIONAL PLANNERS, STEERING COMMITTEE
January 23, 1957

To: All Central Valley City and County Planners

From: Steering Committee (appointed at meeting of Central Valley Planners in Modesto on October 5, 1956)

I. GENERAL

The steering committee has held two meetings since October 5, 1956 (Fresno and Sacramento). At the Sacramento meeting, a subcommittee was formed to prepare a detailed statement covering regional planning. This report includes several alternatives. Complete agreement by the committee was not obtained (see attached copy).

II. REPORT CRITIQUE

Dr. Samuel Wood, Research Director for the Assembly Interim Committee on Planning, Conservation, and Public Works, has requested that the central valley planners prepare a statement on regional planning which will aid the Assembly Interim Committee in forming new legislation or additions to present legislation. Any comments, changes, etc., regarding the attached statement will aid the Assembly Interim Committee in forming legislation which is representative of the thinking of the planners in the central valley. Your "critique," or further ideas should be sent to Dr. Samuel E. Wood, c/o Hal Wise Associates, 1125 10th Street, Sacramento 14, California, on or before January 31, 1957.

Steering Committee

Bob Grunwald
Abraam Krushkhov
Charles Cavanaugh
James Noble
Richard Salter
Chris Maher
Vernon Cotter
Wing Fee Chan
George Brenner
Elton Andrews
Dan Cherrier
Roy Potter

Subcommittee

Elton Andrews
Earl Fraser
Sam Wood
Bob Grunwald
Richard Salter
Wing Fee Chan
William Siegel
Ross Miller

ROY POTTER, Chairman, Steering Committee

Principles of Organization

1. Each regional planning area should consist of major geographic areas having physical, economic or social unity. Every attempt should be made to prevent the fragmentation of regions into areas too small for comprehensive regional planning.
2. The establishment of regional planning agencies should provide a means of integrating and coordinating local plans into regional plans, and a workable number of regional agencies and plans to facilitate coordination and integration at the state level.
3. Regional planning is not a substitute for local or state-wide planning A primary benefit would be the greater voice given to local jurisdictions in the formulation of plans for physical developments within the region.
4. The regional planning function is advisory only.
5. Representation on the regional planning boards should be responsible and representative of the included jurisdictions.

Establishment of Areas

1. **Geographic Boundaries.** The primary consideration in the determination of a regional planning boundary should be the physical, social and economic unity of the area. In addition to this primary consideration there are several practical aspects that must be considered. These are (1) simplicity of representation, (2) effectuation of plans through legislative action and (3) the integrity of the local and metropolitan planning function. Alternative proposals for the establishment of regional planning areas are suggested for discussion at this time.

   a. Regional planning areas established without regard for city, county or metropolitan planning district boundaries.
      (1) This approach has the advantage of providing regional planning areas strictly on the basis of their physical, economic and social unity. It would be best for the development of comprehensive regional plans.
      (2) Politically representative planning boards would be difficult to achieve for this type of region. One legislative representative could conceivably be called upon to represent parts of two or more regional planning areas.
      (3) Areas established on this basis could divide counties or metropolitan planning districts that have a primary planning responsibility.

   b. Regional planning areas established with primary regard for physical, social or economic unity, but not dividing counties except along supervisorial district boundaries or along county or city limit lines within metropolitan planning districts.
      (1) To a modified degree this method adheres to the unified area approach.
      (2) Representation on the regional planning board is not complicated by one local legislator representing portions of more than one regional area.
      (3) Areas established on this basis could still divide counties and metropolitan planning districts.

c. Regional planning areas established in such a manner that no county or metropolitan planning district is divided between regions.
   (1) This approach would seriously impair the unity of the regions. Several counties clearly include portions of more than one region.
   (2) No complications in representation would be involved.
   (3) No county or metropolitan planning district would be divided. Another area of decision involves the specific role of the metropolitan planning district in the delineation of regional boundaries. In addition to the alternatives mentioned above, two other alternatives with regard to metropolitan planning districts exist. In the first case they may be excluded from all regional planning areas and considered a similar planning level. On-the-other-hand it may be determined that all metropolitan planning districts must be a part of one or more regional areas. In either case, if a metropolitan planning district is itself a regional area, or if a county includes all of a regional area, it should be so considered and the planning responsibility of the metropolitan district or county not superseded.

2. **Responsibility**
   a. Responsibility for the designation of regional planning area boundaries should lie with the state planning agency.
   b. The needs and desires of the political jurisdictions to be included in each regional planning area should be given prime consideration and final determinations should be made only after public hearings and discussions have been conducted in the area of concern.
   c. The entire state should be divided into regional planning areas even though the regional planning function may not be activated immediately in some of the regions.

3. **Activation**
   a. Activation of the regional planning function and establishment of the regional planning board should be on the initiative of the designated region.
      (1) The regional planning function may be activated within a designated region, or a portion thereof, by resolution of the boards of supervisors of two or more contiguous counties with territory in the designated region
      (2) Upon the petition of 10 percent of the registered voters in any county or portion thereof included within the designated region, such activation resolution should be adopted by the board of supervisors or submitted to the electorate for vote.
   b. The regional planning function may be activated in additional counties or portions thereof within the designated region by resolution of the board of supervisors of such county. Upon the petition of 10 percent of the registered voters of the county, or portion

thereof included within the designated region, such an activation resolution should be adopted by the board of supervisors or submitted to the electorate for vote.

Representation

1. Membership on regional planning boards may be confined to elected representatives of the various political jurisdictions included within the area or it may be broadened to allow appointment of planning commissioners, public employees and interested citizens as well as elected officials. Arguments in favor of this broader concept include the already heavy work load of elected officials and the desirability of increasing citizen participation in governmental matters.

2. Each county in a regional planning area shall be represented by at least one person chosen by the board of supervisors. The board of supervisors should select additional representatives so that the total membership on the planning board is not less than five. If a lesser number of additional representatives are to be chosen than there are counties in the area, the additional members shall be chosen by the counties with the greater assessed valuation.

3. The cities within any county or portion of a county included within a regional planning area shall be represented on the regional planning board. If only one city is involved, the selection shall be made by the mayor with the consent of the city council. If there is more than one city involved, the mayors of all such cities shall meet and select a representative.

4. In any case where a metropolitan planning district or a portion thereof is included within a regional planning area, the members of the district planning board or those members representing that portion of the district included in the regional planning area shall be automatically members of the regional planning board. Additional members of the regional planning board shall be selected from the counties and cities lying outside the metropolitan planning district in the usual manner. However, if a county is already represented on the district board, no additional county representative shall be selected for the regional board.

5. As the regional planning areas will have no governmental status, the only means for the effectuation of regional plans through adoption and regulatory measures will be action of the constituent jurisdictions.

6. For purposes of efficiency and in consideration of the time required of the members of the regional planning board, the regional planning board may wish to appoint one or more advisory committees or commissions to aid it in its work. It is suggested that all such committees or commissions include in its membership and be chaired by at least one member of the regional planning board.

Financing

1. If effective regional planning is to be accomplished, it will be necessary for regional planning boards to have funds available for the employment of technical staffs and the conduct of planning surveys and studies.

2. Financial support for the regional planning function should come from the constituent jurisdictions and should be assured at the time the function is activated within the designated region or portion thereof.

3. Two alternative methods of providing financial support have been proposed. The first method would be flexible and would simply provide that financing should be in accord with a plan mutually agreed upon by the cities and counties included within the region. The second method would be more definitive as outlined below.

a. Before the beginning of each fiscal year the regional planning board should estimate the amount of money required during the ensuing fiscal year and should apportion this amount to the counties included within the region, one-half according to the relative value of the real estate of each county or portion thereof within the region and one-half in the proportion that the population of each county or portion thereof bears to the total population of the region. The total amount of money required by the regional planning board during any one fiscal year should not exceed one cent per $100 assessed value of all property included within the region.

b. Before the beginning of each fiscal year the regional planning board should inform the board of supervisors of each county that has territory included within the region of the amount apportioned to that county. Each board of supervisors should levy an ad valorem tax on the taxable real property within the county included within the planning region, sufficient to secure the amount so apportioned to it and such taxes should be levied and collected together with taxes for county purposes and paid to the treasurer of the county to the credit of the regional planning board.

4. Regional planning boards should be empowered to receive grants and financial aid in the same manner as local planning jurisdictions.

Operations

1. The primary function of the regional planning board should be the preparation and adoption of a comprehensive plan for the region.

2. This plan should be coordinated with and include the plans of all local jurisdictions within the region.

3. The regional planning board and the regional plan should provide the focal point for the coordination and integration of local plans with those of state and federal operating agencies.

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WATER PROJECT USES OF ATOMIC ENERGY

Report of the Subcommittee on

WATER PROJECT USES FOR ATOMIC POWER

A Subcommittee of the

ASSEMBLY INTERIM COMMITTEE ON CONSERVATION, PLANNING, AND PUBLIC WORKS

House Resolution No. 88, 1957

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LETTER OF TRANSMITTAL

HON. L. H. LINCOLN
Speaker of the Assembly; and
MEMBERS OF THE ASSEMBLY
Assembly Chamber, Sacramento, California

GENTLEMEN: Herewith is submitted the report of the Subcommittee on Water Project Uses for Atomic Power of the Assembly Interim Committee on Conservation, Planning, and Public Works.

This report is submitted in accordance with the directive contained in House Resolution No. 88 of the 1957 General Session.

The subcommittee has unanimously concluded that the development of atomic power for peaceful uses will have important and far reaching effects upon the solution of California's water problems. For this reason, it is imperative that the Legislature continue its study of this subject as a basis for major decisions on water development to the end that all the people of California may be benefited.

The subcommittee wishes to express its sincere appreciation to the California Department of Water Resources, the University of California and the United States Atomic Energy Commission for the information and cooperation they provided. The subcommittee also wishes to express its appreciation to the Legislative Auditor's office for staff assistance in the preparation of this report

Respectfully submitted,

JACK BEAVER, Chairman
LLOYD LOWREY
ALLEN MILLER
WILLIAM BIDDICK, JR.
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FRANCIS LINDSAY
PATRICK D. MCGEE

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WATER PROJECT USES OF ATOMIC ENERGY

INTRODUCTION

House Resolution No. 88, approved by the Assembly on January 25, 1957, directed the establishment of the Subcommittee on Water Project Uses for Atomic Power of the Assembly Committee on Conservation, Planning and Public Works, and authorized and directed the committee to ascertain, study and analyze all facts relating to the desirability of having a full-scale investigation by a legislative committee, by the University of California, or otherwise, of the possibility that atomic energy can be used to furnish a feasible and economical means for producing the electric power needed to transfer surplus water from the northern part to the southern part of California.

The committee directed a staff study of the available facts, and on March 29, 1957, a staff statement which incorporated suggestions for problem areas to be explored with the Department of Water Resources, the University of California, and the Atomic Energy Commission, was reviewed and approved by the committee. Subsequent thereto, discussions were held with these agencies which culminated in a public hearing in Sacramento on May 15, 1957, at which the views of these agencies were expressed.

CONCLUSIONS

As a result of its study and analysis of the facts and testimony available to it, the committee has reached the following conclusions:

1. The recent developments in the peacetime use of atomic energy may have far-reaching effects upon the solutions to California's water problems.

2. The present state of development of atomic reactors as a source of energy is such as to justify their immediate consideration for use in the Feather River Project.

3. The probable development of atomic energy as a major future source of energy seems assured. When it will become economically competitive with conventional energy sources depends in large part on the rising cost of fossil fuels. In California these costs are rising rapidly and may continue to rise.

4. Present estimates of the Atomic Energy Commission that atomic energy will become competitive with conventional sources by 1965 are predicated on private development. Consequently, with the historically lower cost of public financing and extended amortization, atomic power may not only be economically feasible but may also be the cheapest source by the time power is needed for pumping in the Feather River Project.

5. Atomic reactors provide an excellent source of large blocks of low cost heat which may presage development of practical saline water conversion methods.

6. It is extremely important to study projected costs for conversion of saline water in order to make reasonable comparisons of the feasibility of supplying California's areas of water deficiency by transportation of water on the one hand, or by conversion of saline water on the other.

7. The Atomic Energy Commission is prepared to assist the State of California in applying atomic energy to the solution of its water problems by providing research and development with regard to specific California Water Plan applications. It will also assist in training and consultative capacities.

8. While current work on the Feather River Project, as now conceived, must proceed with all reasonable diligence, research should be carried on regarding the possible use of atomic energy for the pump lifts of that project, and regarding the possibility of large-scale saline conversion as an alternative or supplement to transportation of water from Northern to Southern California.

RECOMMENDATIONS

Based on the above conclusions the committee makes the following recommendations:

1. That the Department of Water Resources immediately recruit and train the necessary staff to study and evaluate the use of atomic energy as an alternate source of the power needed in the transportation phases of the Feather River Project.

2. That the Assembly Interim Committee on Conservation, Planning and Public Works be directed by appropriate resolution of the Assembly to organize and direct a subcommittee thereof to study the problem of the future cost and availability of fossil fuel for conventional power as a source of the energy requirements of the Feather River Project.

3. That this same subcommittee be directed to assemble and analyze the known facts on the problems of saline water conversion, particularly as they may be related and correlated to the use of atomic energy as the source of energy required in the various methods of such conversion.

4. That this same subcommittee be directed to monitor the progress being made by the Department of Water Resources and other interested agencies in evaluating the application of atomic energy to California's water problems, and developments in the general field of peaceful use of atomic energy as such may relate to California's water problems, and to report to the Legislature at appropriate intervals on the progress being made.

THE PROBLEM

While recognizing that many problems must be solved before atomic energy may be found to be feasible for pumping Feather River Project water, the subcommittee has been impressed by the rapidity of current developments and certain rather optimistic forecasts. In this connection, Mr. W. Kenneth Davis, Director of the AEC's Division of Reactor Development has stated:

> *"* * * large power reactors, construction of which is begun in the next one or two years, will, after completion and initial operation, show total power costs somewhat above those prevailing in any area of the United States which can utilize a plant of equal size. But*

the cost will probably be about the same as that from conventional plants in some fuel-short areas of the world which need large blocks of power. Another two or three years should see construction begun on plants which will prove to be really competitive in relatively high fuel-cost areas of the United—and fairly generally in other areas of the world. The following five years or so should lead to nuclear power plants being started on a generally competitive basis with all except extremely cheap fuels in any area.[1]

It would appear from the above that 1965 may be the target year that atomic energy will become competitive with other forms of energy. This approximates the date that design decisions on certain major pumping installations for the Feather River Project must be made by the State, assuming that the State's project is integrated with the Federal San Luis Unit of the CVP. The presently proposed integration of the San Luis Unit with the Feather River Project contemplates joint State and Federal use of the Tracy Pumping Plant and Delta-Mendota Canal until about 1965, at which time the water demand will exceed the capacity of these facilities and will require the State to have started construction of its own facilities in 1962 or 1963.

Assuming integration of the State's project with the federal San Luis Unit of the CVP, the State's pumping load will be in the order of 2,257,000 kw. at the six various pumping plants scattered from the Delta to the Tehachapi Mountains as shown on Table I, attached.[2] This large energy load will start building up with the first pumping plant installations in the Delta and San Joaquin Valley in 1965 and will reach the full energy requirement at the Tehachapi Mountains in 1995. Energy requirements will continue at the 2,257,000 kw. rate throughout whatever period the project will be in operation. The annual energy requirement of 8,897,700,000 kwh. shown on Table II [2] for these pumping plants becomes staggering over a period of 100 or more years.

By the year 1965, when initial pumping installations are placed in operation by the State, atomic energy may be competitive with other sources of energy available. By the year 1995, when the last pumping capacity is installed at the Tehachapi Mountains, atomic energy may be cheaper than other sources of energy. Present indications are that the energy base of the United States may begin to shift about 1975. Most of the increases in energy requirements prior to 1975 are expected to be met from increased use of coal, oil and gas. However, by that time, some of these resources may be approaching exhaustion or may require conservation for purposes other than energy. While the presently available forecasts become uncertain beyond 1975, it seems reasonable that beginning in that year, atomic energy in some form must make up the energy deficit resulting from both expanding energy needs and dwindling sources of fossil fuels. It thus appears that the pumping loads for the Feather River Project, which will achieve significant size starting in 1975, may well be based on future availability of atomic energy rather than on present sources of energy which may be in limited supply and at increased cost.

[1] Department of State Bulletin, October 15, 1956, page 598

[2] All data and assumptions are based on the proposed high-line route which has been used by the subcommittee to reduce the problem to the basic considerations of pumping energy.

Present indications are that two different concepts can be used in designing and constructing the Feather River Project pumping plants One is the use of energy transmitted to the pumping plant by high voltage transmission lines, as contemplated in the State's report on Financing and Constructing the Feather River Project, dated February, 1955. The other is the use of atomic reactors to develop steam to drive the pumps at the lift, or some other atomic method of directly driving the pumps without intervening electric generation or transmission facilities. In the first instance the introduction of atomic power into the energy base of the region would result in no appreciable change in project plans or operations Its real effect would be to reduce overall energy costs in the region The electric energy for initial operation of pumping plants I, II, and III probably would be off-peak energy transmitted to the pumping site at a rate which would be a composite of all costs for generating energy within reasonable transmission distance of the pumping plants However, as demands for water increase in future years, these three pumping plants may shift to continuous operation. In 1965 the necessary electric energy for initial operation of these three pumping plants may be purchased from off-peak energy available in the area. As loads build up, however, these three pumping plants well might shift over to an atomic electric generating plant located in the delta or San Luis area.

If, in the second instance, the State should construct atomic reactors with direct drive to the pumps at Plants IV, V, and VI in the Tehachapi Mountains, the cost of energy in the region as a whole would have no effect upon the operation of these pumping plants. If direct drive were feasible and the cost of atomic energy were less than the energy base of the region, it may possibly provide a cheaper way of pumping. *In addition, direct drive would permit reducing the pump. reactor and canal capacities by approximately one-half, since these facilities could then operate on a high load factor basis.*

The presently proposed solution to the problem of water for areas of deficiency is to furnish large amounts of water to Southern California at the lowest possible cost. The subcommittee recognizes that low costs for energy are vital to the ability of the Feather River Project to lift large amounts of water over the Tehachapi Mountains. Atomic energy offers a new form of low cost energy—this is its main attraction. However, an alternative method of securing fresh water in Southern California is by sea water conversion or reclaiming waste water. In this field also, large amounts of low cost energy are required. Thus, increasing feasibility of low cost atomic energy for pumping water correspondingly increases the feasibility of conversion

It appears that useful guidance could be offered the State if some basis were available for comparison of theoretical energy requirements for lifting water over the Tehachapi Mountains with the theoretical energy requirements to convert various concentrations of saline or waste waters. This would provide a guide for determination of future directions in state water development planning which would be based upon the fundamentals of the water problem and would place energy in its proper position as a means to an end, assuming the necessary research and development to achieve minimum energy costs and develop appropriate technology.

ASSISTANCE FROM ATOMIC ENERGY COMMISSION

The federal program for the development of atomic power for peaceful purposes, with special emphasis on the kind and the extent of the assistance which California might expect to receive through the Atomic Energy Commission if it engaged in an atomic reactor development project, was explained to the committee by Mr. Delmar Morris of Washington D. C., Assistant Director of the Division of Reactor Development of the Atomic Energy Commission, as follows:

"I would like to say in the beginning that our agency is very much interested in your proposed application of nuclear energy for pumping in your farsighted water development program.

"*We would like to say at the outset that we feel it is imperative in connection with the planning for a project of such magnitude as your proposed water development program to thoroughly study the impact and the ramifications atomic energy may have on such a program.* (Emphasis added.)

"Our long-range objective is to develop economically competitive nuclear power in this country. This goal is difficult to achieve because we have adequate supplies of relatively cheap fuel, as well as large, efficient and economical coventional generating plants. In developing economic nuclear power, we must, therefore, seek levels of efficiency beyond those which would suffice in most other areas of the world. We are not under the same pressure as Britain and many other countries and we are free, so far as our economy is concerned, to follow a plan which, as in the fable of the tortoise and the hare, may appear too slow in the early part of the race, but will certainly win out in the end. The government, with industry participating, is now engaged in an intensive exploration of a wide range of different reactor concepts. We know that in the final analysis all of them will not prove to be of equal merit although as of now all appear to have interesting possibilities, else they would not be included in our research program.

"The principal objective of our domestic program is to find out which type or types of reactors hold the most promise of being capable of producing competitive or more than competitive power, and in addition, have the important characteristics of simplicity, reliability, safety and low capital cost. Our power reactor development program can be considered as going through three development phases which follow one another in logical sequence. The first is exploratory, dealing with basic research and development in such fields as metallurgy, physics, chemistry and heat transfer. The second phase is the reactor experiment. In this phase a relatively small reactor is built and operated to prove the technical feasibility of the concept. Information is gained concerning such items as reactor and systems stability, control characteristics, corrosion rates and mechanical component behavior. The third phase is the prototype phase In this stage of the development large-scale reactors are built primarily for the purpose of demonstrating the economics of a certain system. While the prototype may not be ecnomical itself, it will point the way toward improvements which will, in turn, lead to truly economical power. In addition, the

prototype will give experience in the operation of a nuclear power plant which must meet certain commitments as to delivery of power on demand. Perhaps the fourth stage, that of full-scale commercial utilization should be included, but this might more logically be considered as an ultimate objective rather than as a development phase.

"The commission has assumed the responsibility of providing the basic technology for power reactor development. This work is complicated and costly and the results are often uncertain. The design and construction of the prototype or demonstration reactors is another matter. Here the emphasis is on economics and reduction of costs, and we know of no better way to achieve this end than to bring to bear the normal business incentives. Hence, we have encouraged both the reactor designers and builders and the utility companies to accept the primary responsibility in the construction of these prototype reactors. We have insisted on limited and well defined amounts of assistance by the AEC. This is not because we wish to reduce our costs necessarily, but because we believe this leads to real progress and cost reduction. It also seems clear that the need for different sizes of reactors in different locations can most likely be satisfied by more than one type of reactor.

"*Now, I would like to review briefly some of the types of assistance which the AEC may make available to California, especially in pursuit of this matter. In the first place, we have taken steps within recent years to declassify a large body of technical information that has accumulated. We have instituted a program which will permit any organization that has serious interest in this matter to obtain appropriate clearances so that they may have access to the classified technical literature. We have some 40,000 technical reports that are available to such organizations. We put out catalogs and abstracts and make it as convenient as possible, but my point is that there is a very large body of technical information that is readily available to any organization that has a serious interest. We don't distill this and digest it perhaps to the point that some organizations would like and which, of course, involves judgment and evaluations which we feel an organization that has the interest should make for itself. Each organization has an interest and an ultimate application, and at some point must make its own review of the information coming out of our program and make its own evaluations* (Emphasis added.)

"In addition to making reports available, we frequently sponsor symposiums, forum meetings, to explain our program to those who are interested and to give them as much detailed technical information as they are interested in receiving on certain of our reactor experiments. In addition, the Atomic Energy Commission has been sponsoring some training programs We have two schools that give very intensive courses in reactor technology, one at Oak Ridge and one at Aragon National Laboratory, and we have arrangements with several universities in the country who are offering nuclear engineering courses. These are supported financially by AEC and they are under the jurisdiction of some of the most competent people in our program. We are always available to consult with people

who have a serious interest in applications of atomic energy or to arrange for consultation and advice with the technical staff of our contractors.

"We have under way now, and have had for some time, a program involving financial assistance to organizations which are willing to sponsor a full-scale nuclear power plant. I am not able to predict how long this present policy will continue, but at the moment we have an invitation out to any organization who wants to participate. To those who may be interested in building a nuclear power plant, we have offered financial assistance in covering the cost of the research and development associated with such a plant. We are making nuclear fuel available for all private reactors at very reasonable charges. And in this power demonstration program, as we call it, we are waiving our usual charges for the use of material. We are making heavy water available for those types of reactors that use that. We are prepared to buy back any fissional material that is produced at reasonable prices; we are prepared to provide some chemical processing services, that is, processing of the spent fuel. The fuel, you understand, in these reactors is not completely burned up. It is removed when it reaches the point where it is more profitable to have it reprocessed.

"I think perhaps most significant in connection with this consideration, AEC assistance to the State of California, is the fact that we are carrying out a very large research and development program and in planning our program and deciding where we will place emphasis, what type reactor we will concentrate on and so forth, we will be influenced to a great degree by any of your specific problems and applications that you might come up with. After all, we're trying to be responsive to the interests of those who are most likely to utilize atomic energy for civilian power purposes. To give you some idea of the magnitude of our program, we are spending approximately $100,000,000 this fiscal year on research and development related to civilian power uses. We are spending considerably more than that in developing reactors for military uses; and a great deal of such information is also of value in connection with the uses of reactors for civilian power."

NECESSITY FOR CONTINUED LEGISLATIVE STUDY

The urgency and necessity for a continuation of legislative interest in and study of this problem is to be found in the testimony given to the committee by Mr. Donald Stewart of Washington, D. C., Chief of the Evaluation Section of the Civilian Power Branch of the Division of Reactor Development of the Atomic Energy Commission:

"In general, plants in service from 1957 to 1959 are experimental, and cost may range from 20 to 50 mills per kilowatt hour. The years from 1960 to 1964 will see the operation of what we consider to be the first generation of the industrial nuclear power plants. The cost range predicted here is from 10 to 13 mills per kilowatt hour with capital cost ranging from $300 to $400 per kilowatt We could compare these to a so-called conventional plant, by that we mean fossil fuel plant, where these conventional power

costs run from 4½ to 10 mills and the capital investment involved is from $115 to $180 per kilowatt. The second generation plant which will represent improvements in materials, design, and especially the fuel burn-up will come into service in 1965 to 1967 period. In these we anticipate costs of around 9 to 11 mills per kilowatt hour. By 1960 we will have about 800,000 kilowatts of electricity from nuclear plants, which represents only one-half of 1 percent of the total power in the United States. By 1970 it is estimated we'll have 22½ million kilowatts of nuclear power which will be up to about 6 percent of the total power in the United States, and in 1975 we will have a total of 88 million kilowatts which will be around 17 percent of the total power in the United States.

"Now a factor which will accelerate this or decelerate it is the rate of increase of the fossil fuel costs. These have been rising steadily—the cost of coal, the cost of oil, and the cost of natural gas. Of these three, coal is expected to remain the most uniform and large coal producing areas are likely to be the last ones to convert to nuclear power. We noted yesterday that the price of California crude oil has gone from $1.85 a barrel in 1955 when the Feather River Report was prepared, to $2.90 a barrel in 1957. There has certainly been a rapid increase in fossil fuel prices in California. (Emphasis added.)

"There are several things these curves do not show very well about the nuclear power costs and that is what are these figures made up of. They differ from conventional plants considerably due to the large capital investment required for a nuclear reactor In this respect, nuclear plants are similar to hydro plants in that they require a large capital investment but should end up with relatively low operating costs In this general area, where we are still studying and predicting, capital costs make up from 70 to 80 percent of the total power costs The commercial fixed charges cover the cost of money, the authorization of the plant, the taxes and insurance and so forth. These fixed charges are figured in this chart at a rate of 15 percent per year Consequently, these costs would be drastically reduced if different financing were used. For example, the capital contribution to a plant here would cost on the order of $300 per kilowatt with around six mills per kilowatt hour. This figure is 15 percent of annual fixed charges Should the fixed charges be reduced to the order of 5 percent by different methods of financing, the fixed charges would be reduced to around two mills per kilowatt hour "

Question: "At what period would it drop to around two mills per kilowatt hour?"

Stewart: "Oh, this would drop immediately It's just a question of the financing on the plant and the return. It's more important here than in a conventional plant due to the fact that so much more of the percentage of your money has gone into the capital cost."

Question: "Would it drop two mills or would it drop to two mills?"

Stewart: "It would drop four mills from the six units just quoted you to two mills. I was comparing a 15 percent fixed charge to a 5 percent fixed charge. This 15 percent fixed charge that we used here is close to the utility, public utility, private utility financing which includes amortization of the capital, interest on the money, taxes, insurance, and paying off the investment.

"Let me talk a little bit about fuel charges. Fuel charges right now are relatively high and this is due, I think, to the cost of fabrication of the fuel elements of which all are on a job-like individual basis, and limitation on burn-ups. Fuel costs could run anywhere from four mills; some of our currently designed plants are predicting fuel costs on the order of four mills per kilowatt hour to down to as low as zero mills if breeders turn out very successfully. Probably a realistic figure to use in the next 10 years, I think, should be 2½ to three mills fuel costs. And of course, in addition there is an operating cost which is likely to run under one mill per kilowatt hour."

Question: "What's the cost of fossil fuel today, about three mills?"

Stewart: "Well, it varies a lot in different areas, the 1955 report here says that the incremental production cost for P. G. & E. was three mills. This originally includes no capital write-off—just the cost of producing electricity. Out of that, I'd say 90 percent would be just the fuel cost. With the new price of oil ($2.90), it would be considerably higher.

"Our conclusions might be that it is important to study the effect of atomic energy on a particular application. It is very hard to generalize and it would take a specific study to understand exactly what your requirements are and whether or not atomic energy could fulfill them. Certainly it should be considered in at least four ways: One is the use of atomic energy to provide the electricity for pumping, fitting it into a grid, same as in the original proposal; the second, as I believe one of the gentlemen from California mentioned, would be to provide steam for a direct drive to the pumping, locating the atomic plant right in the pumping station (it might have some advantages and it might have some drawbacks); the third thing that probably should be looked at is the use of low-temperature heat for saline water conversion. Fuel costs in low temperature reactors can be quite low We have calculated that it is possible to get fuel costs on the order of 10 to 15 cents per million BTU's, and heat at these low temperatures can be used effectively for distillation. In the production of electricity or power, of course, it is almost mandatory that you get high steam pressures and high temperatures so that you can get high thermal efficiency This restriction does not apply to evaporation of salt water. Other factors that should be considered are the freedom of location you have in atomic energy plants. Nuclear fuel shipments are almost negligible weight-wise and quantity-wise, so the plant can be located wherever it would best fit into your power requirements, rather than based on any other consideration."

On the basis of the very low cost of low temperature heat generated by atomic reactors and the known heat requirements for saline water conversion using such low temperature heat, Mr. Stewart indicated that it might be possible to calculate the cost of conversion in large quantities at a range of 24 cents to 40 cents per thousand gallons, or from $80 to $125 per acre foot. Mr. Stewart urged upon the committee the full understanding of the fact that these are theoretical calculations not based on engineering estimates, but that with the known facts of the low cost of atomic heat and the practical methods of saline water conversion which are currently in use on a small scale, the development of saline water conversion plants using atomic reactor heat is a practical possibility at the present time.

Mr. Harvey O Banks, Director of the Department of Water Resources, told the committee that his department is alert to the implications of the development of atomic energy for its work in connection with California water resources development and would expect to consider such implications among the alternatives which must be considered before reaching a decision on the best plan for California water development. In reliance upon the published estimates of atomic power cost trends of the Atomic Energy Commisson, Mr. Banks indicated that the department's role at the present time should be to keep itself informed of atomic developments, since apparently atomic power would not become competitive with conventional sources until after the initial phases of the Feather River Project were completed.

However, in view of the explanation of Mr. Stewart's estimates that publicly financed construction might result in competitive costs now, the committee believes that the engineering studies of these alternatives should be commenced by the Department of Water Resources immediately. The first step in such studies would be the recruiting and training of personnel in atomic reactor technology, utilizing the training facilities offered by the Atomic Energy Commission. The committee strongly urges that this initial step be taken by the department at once.

Representatives of the University of California informed the committee that the peaceful uses of atomic energy are involved in 206 separate studies or research projects currently under way by the university; *that basic research is the best and most appropriate contribution to be made by the university in the area of atomic energy application to water problems;* and that the results of its work become apparent in the technological advances made by others in practical applications to specific problems.

SUMMARY

In conclusion, the committee believes that it is necessary for the Legislature to continue to secure information on the developments occurring in the atomic energy field which may have immediate and far-reaching effects on the decisions which the Legislature will have to make as it approaches solutions to California's water problems. The committee was impressed by the fact that apparently very little consideration has as yet been given anywhere to the future availability and cost of conventional fuel in California generally, and specifically as it may relate to the tremendous power requirements of the Feather River Project. An initial survey and analysis of the information available on

this subject should be undertaken by a legislative committee without delay. *Likewise, such a committee should undertake further study and evaluation of saline water conversion.* Particular emphasis in such a study should be placed on exploring the feasibility of the use of atomic energy for such conversion in view of the theoretical cost figures supplied to the committee by Mr. Stewart of the Atomic Energy Commission.

QUESTIONS AND ANSWERS [3]

1. Q. Is there general agreement that the peaceful use of atomic energy will become increasingly important to the economic life of California?
   A. Yes.
2. Q. Does this fact have specific significance in relationship to California's water problems?
   A. It can have a tremendous significance.
3. Q. Will the cost of conventional power, which uses fossil fuel, increase in cost in future years in California?
   A. It is most likely, although this is a matter that must be studied by a legislative interim committee before a definite answer can be given.
4. Q. Could the application of atomic energy as a power source reduce the capital costs of the California water plan?
   A. Yes, provided it would permit continuous operations in pumping plants and aqueducts rather than the off-peak operations presently planned.
5. Q. Does it appear that developments in the field of atomic energy may make this source of power available for the proposed pump lifts of the Feather River Project?
   A. Yes.
6. Q. How much energy is needed for the complete operation of the Feather River Project?
   A. A total initial capacity of 2,257,000 kilowatts and an annual consumption of 8,897,700,000 kilowatt hours.
7. Q. Might atomic power be cheaper than conventional power by the time it is needed for pump lifts on the Feather River Project?
   A. It appears possible.
8. Q. Will use of atomic power in the transportation of water over the Tehachapis result in less over-all cost than other sources of power in the long run?
   A. This possibility appears substantial and must be explored.
9. Q. Would public construction and utilization of atomic reactors be less expensive than if they were constructed and operated by private utilities?
   A. Yes, because a government-owned plant will not pay property or income taxes, it will not produce a profit to be distributed among stockholders, it will be amortized at a lesser interest rate and it will be paid off over a longer period of time than would customarily apply with regard to a private utility.
10. Q. Will public construction and utilization of atomic reactors for purposes such as the Feather River Project put private power utilities out of business?

[3] SOURCE: Subcommittee report, testimony before committee, and research data in technical documents reviewed by committee staff.

A. Certainly not. Power derived from such reactors will supplement private power production.

11. Q. Can atomic energy be used to provide power for the conversion of saline and waste waters?
A. Yes, although this matter must be studied by a legislative interim committee before all facts may be made available.

12. Q. How might atomic energy be useful in the conversion of saline or waste water?
A. One method of saline water conversion utilizes large amounts of low temperature heat. Atomic reactors can produce this heat at very low cost.

13. Q. Does it appear possible that atomic energy could be utilized to provide supplemental water to Southern California through its application to saline or waste water conversion?
A. Yes.

14. Q. Will conversion of saline or waste waters into usable pure water reduce the need for transportation of water from Northern to Southern California?
A. Certainly, if economically and technically feasible within 20 years.

15. Q. Is atomic energy currently being used in the transportation of water or for saline conversion any place in the United States?
A. No, except in experimental and theoretical applications.

16. Q. Are we certain that atomic energy can be used for the production of power sufficient to operate large machinery?
A. Yes, the Navy already has in operation the submarine *Nautilus* which is powered by atomic energy.

17. Q. Is information on atomic energy so confidential or classified for security purposes as to make it unavailable for uses in connection with California's water problems?
A. No. The Atomic Energy Commission can and will make the necessary information available.

18. Q. What assistance can California expect from the Atomic Energy Commission at the present time?
A. The Atomic Energy Commission is prepared to provide the research and development for a reactor project and, in addition, would be available for consultation on the technical problems involved and to train the necessary personnel in reactor technology.

19. Q. If atomic energy is used in the Feather River Project or in saline conversion, will there be any danger from radiation to persons living in the proximity of the atomic reactors?
A. Absolutely not. Reactor construction and control methods preclude any danger to near-by residents and reduces to a minimum possible danger to employees.

20. Q. In view of the astonishing developments in the field of atomic energy, should the Department of Water Resources establish continuing research and engineering studies on possible atomic energy uses for the California plan?
A. Yes.

It is with a view to securing immediate and appropriate attention to the information given to this committee during the course of its present study that the committee offers and recommends the following resolution:

HOUSE RESOLUTION No. 234

Relative to directing the Assembly Interim Committee on Conservation, Planning, and Public Works to create a Subcommittee on Water Project Power.

Resolved by the Assembly of the State of California, as follows:

1. The Assembly Interim Committee on Conservation, Planning, and Public Works is authorized and directed to appoint a Subcommittee on Water Project Power to ascertain, study, and analyze all facts relating to: (a) the problem of the future cost and availability of fossil fuel for conventional power as a source of the energy requirements of the Feather River Project; (b) problems of saline water conversion, particularly as they may be related to the use of atomic energy; (c) the progress of the Department of Water Resources in preparing itself to evaluate the problems of application of atomic energy to California Water Problems; and (d) developments in the general field of peaceful use of atomic energy as these may relate to California water problems; and including but not limited to the operation, effect, administration, enforcement and needed revision of any and all laws in any way bearing upon or relating to the subject of this resolution, and to report thereon to the full committee, including in the reports its recommendations for appropriate legislation.

2. The sum of thirteen thousand dollars ($13,000), or so much thereof as may be necessary, is hereby made available from the Contingent Fund of the Assembly for the expenses of the Assembly Interim Committee on Conservation, Planning, and Public Works for the use of its Subcommittee on Water Project Power, appointed pursuant to this resolution, and its members and for any charges, expenses or claims it may incur under this resolution, to be paid from the said Contingent Fund and disbursed, after certification by the chairman of the committee, upon warrants drawn by the State Controller upon the State Treasurer.

TABLES

TABLE I

FEATHER RIVER PROJECT INTEGRATED WITH FEDERAL SAN LUIS UNIT OF CVP

Schedule of Kilowatt Capacity of Pumping Plants

Year	*Pumping Plant I (Delta)*	*Pumping Plant II (San Luis)*	*Pumping Plant III (Buena Vista)*	*Pumping Plants IV, V, and VI (Tehachapi Mountains)*
1965	19,000	25,000	9,000	____
1970	38,000	86,000	13.000	____
1975	60,000	125,000	20,000	____
1980	130,000	329,000	58,000	685,000
1985	150,000	389,000	80,000	1,067,000
1990	170,000	429,000	103.000	1,447,000
1995	190,000	439,000	104,000	1,524,000

TABLE II

FEATHER RIVER PROJECT INTEGRATED WITH FEDERAL SAN LUIS UNIT OF CVP

Electric Energy Requirement for Pumping (Revised)

Energy in Millions of Kilowatt Hours

Year	*Pumping Plant I (Delta)*	*Pumping Plant II (San Luis)*	*Pumping Plant III (Buena Vista)*	*Pumping Plants IV, V, and VI (Tehachapi Mountains)*	*Total*
1965	61.8	57.8	10.0	____	172.0
1970	147.4	143.5	20.0	____	388.6
1975	259.6	253.6	39.8	____	666.0
1980	658.9	664.3	213.7	2,899.4	4,577 5
1985	786.9	810.3	321.6	4,512 0	6,572 0
1990	910.9	936 3	411.5	6,121 2	8,521.1
1995	936.9	946.3	429.5	6,443 8	8,897.7

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1955-1957
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Final Report of the

SUBCOMMITTEE ON IMPACT OF ENEMY ATTACK ON ECONOMY AND CONSTITUTIONAL GOVERNMENT OF THE STATE OF CALIFORNIA

A Subcommittee of the
ASSEMBLY INTERIM COMMITTEE ON CONSERVATION, PLANNING, AND PUBLIC WORKS

House Resolution No. 53, 1956
Prepared for the Subcommittee by James P. Keene, Jr.

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June, 1957

Published by the
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Chief Clerk of the Assembly

COMMITTEE LETTER OF TRANSMITTAL

ASSEMBLY INTERIM COMMITTEE ON
CONSERVATION, PLANNING, AND PUBLIC WORKS
SACRAMENTO, CALIFORNIA, June 1, 1957

HON. L. H. LINCOLN,
Speaker of the Assembly
Members of the Assembly
Assembly Chamber, Sacramento, California

This final report of the Subcommittee on Impact of Enemy Attack on Economy and Constitutional Government of the State of California, with the legislation submitted herein, is indicative of the determination of the State of California to be prepared in case of major atomic disaster. While additional studies may be necessary in the coming interim, it is my belief that the legislation be developed by this subcommittee and the cooperating agencies and groups is an important step forward and deserves the support of the Legislature and the people of this State.

Respectfully submitted,

FRANCIS C. LINDSAY, Chairman
Assembly Interim Committee on
Conservation, Planning, and Public Works

SUBCOMMITTEE LETTER OF TRANSMITTAL

ASSEMBLY CHAMBER, STATE CAPITOL
SACRAMENTO, CALIFORNIA, June 12, 1957

HON. FRANCIS C. LINDSAY, *Chairman*
Conservation, Planning, and Public Works Committee
California State Assembly
Sacramento, California

DEAR SIR: This is the final report of your Subcommittee on Impact of Enemy Attack on Economy and Constitutional Government of the State of California, prepared in accordance with House Resolution No. 53 on the First Extraordinary Session 1956.

The subcommittee has deliberately withheld the submission of this final report to the closing day of the 1957 Session to permit, through conferences of state and local agencies and the Bar Association, the development of legislation that these agencies and groups could support. This legislation, now having passed the Assembly and Senate, or having failed of passage, is submitted with this report. It is the firm conviction of the subcommittee that, as a result of its work and the cooperation of affected agencies and groups, California will be in a better position to sustain its governmental forms and social institutions following an atomic disaster.

> **Assembly Constitutional Amendment No. 65**—A resolution to propose to the people of the State of California an amendment to the Constitution of the State of California, by adding Sections 38 and 39 to Article IV thereof, relating to the preservation of state and local government in the event of a major war-caused disaster.
>
> The question being: Shall the Assembly concur in the following Senate amendment to Assembly Constitutional Amendment No. 65?
>
> On motion of Mr. Kilpatrick, Assembly Constitutional Amendment No. 65 was ordered to the inactive file, and the subject matter referred to the Committee on Rules for assignment for interim study.
>
> **Request for Unanimous Consent**
>
> Mr. Kilpatrick asked for, and was granted, unanimous consent that he be permitted to insert an explanation relative to Assembly Constitutional Amendment No. 65 in a report which is being printed.

This report outlines the process whereby constitutional amendments were developed for the consideration of the Legislature. Assembly Constitutional Amendment No. 65 submitted with the report, is the product of such cooperative action. This measure preserves and provides for the operation of state and local governments following war-caused disaster. It is the beilef of this subcommittee that this measure, which passed both the Assembly and the Senate, would have been of substantial benefit in the preservation of state and local government as

drawn, except for the fact that it was sent to the inactive file by its author at the request of the Los Angeles Bar Association. It was their feeling that, while the measure was good as far as it went, it was incomplete.

All of the measures clearing the Assembly committees have been passed by the Assembly and Senate without a dissenting vote except for Assembly Bill No. 2778 which was tabled in Senate Committee on Finance.

Two of the measures developed by the subcommittee, Assembly Bill No. 2780 and Assembly Bill No. 3162, have both passed the Assembly and Senate and have been approved by the Governor.

Assembly Bill No. 2780 merely provides for the destruction of certain records when they are obsolete by the Controller with the concurrence of the Director of Finance after they are five (5) years old;

Assembly Bill No. 3162 provides for the appointment by the Governor of a commission to conduct elections in the event voting records are destroyed.

Assembly Bill No. 2773 provides that, in case of catastrophe, it will not be necessary to prove that the maker of a will was living at the time the will was destroyed.

Assembly Bill No. 2777 has an appropriation of $50,000 for microfilming and safekeeping of records.

Assembly Bill No. 2778, providing for depositories outside the capital city, had an appropriation of $18,799. This measure was tabled in Senate Committee on Finance.

Assembly Bill No. 2781 has been amended in both houses and by free conference; and is now an important permissive measure providing for the method of establishing stand-by officers in order to preserve local government in case of war-caused disaster.

The work of this subcommittee has been of such a pioneering character that other states and the Federal Government have been much interested in our progress. Due to the fact that this legislation is regarded as incomplete, further interim subcommittee studies are to be made with the hope that Assembly Constitutional Amendment No. 65 will be revived and that the Legislature will be given sufficient additional powers to cope with vacancies due to war-caused disasters in other constitutional offices, as provided for legislative offices. Constitutional amendments cannot go on the ballot until November general election of 1958. Therefore, enactment in the Budget Session of 1958 will have the same effect as if enacted during the 1957 general session.

Respectfully submitted,

VERNON KILPATRICK, Chairman
JACK A. BEAVER
ALLEN MILLER
Subcommittee on Impact of Enemy Attack on Economy and Constitutional Government of the State of California

"Our great need today is so to organize and concert our preparations that if an attack came, the Country would hold firm and carry on. The maintenance of effective civil government is at the heart of the probem. . . .

". . . insofar as we really make adequate preparations, we have created a strong *deterrent* to war. This aspect is familiar in maintaining large Armed Forces in being—we trust that by so doing we may avert a war. So, too, surely, with shoring up our government and administration, our industry and finance, our community life; in preparing to withstand a blow, we make it less attractive to strike . . .

"So long as one is urged merely to prepare for one's own survival in an event one never looks squarely in the face, self-consciousness and disbelief discourage compliance. If we could be brought to realize that there are things we can do now in every community actually to deter a war by making our internal strength notoriously adequate—*that* appeal should inspire willing exertions."

CHARLES W. FAIRMAN
Government Under Law in Time of Crisis

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INTRODUCTION

By the terms of House Resolution No. 53 of the First Extraordinary Legislative Session of 1956, this subcommittee was authorized to ascertain, study and analyze all facts relating to civil defense in the orderly, efficient and effective continuation of the processes of government at the state and local levels and the orderly, efficient and effective continuation of the activities of industry, business and professional services in the event of enemy attack and any other matters relating to enemy attack and the steps that must be taken to cope with effects and to continue the functioning of our society in as normal a manner as possible, including but not limited to the operation, effect, administration, enforcement, or needed revision of any and all laws in any way bearing upon or relating to the subject of the authorizing resolution.

The subcommittee issued a preliminary report, based on hearings held in Los Angeles December 5 and 6, 1956, and meetings and correspondence with numerous officials of state, county and local governments, members of the Bar and judiciary, and a study of relevant, available documents. Following this report, the subcommittee continued its studies and held a second hearing in Sacramento on March 1, 1957.

Testifying before the committee were the following: James W. Beebe, representing the Los Angeles Bar Association; Frederick Dutton, representing the Attorney General's Office; Dr. William N. Davis, Jr., representing Frank M. Jordan, Secretary of State; Stanley B. Fowler, representing Ronald A. Button, State Treasurer; A. Ruric Todd and Paul Barnes, representing Robert C. Kirkwood, State Controller; Stanley Pierson, representing the California Disaster Office; Sherburne W. Morse, representing the Federal Civil Defense Administration; M. D. Tarshes, Sacramento County Manager; William W. Ward, Jr., Director of Contra Costa County Civil Defense Office; Dr. Mitchel Kaufman, Executive Vice President of the Western States Atomic Storage Vaults; H. E. Hemmings, representing Harry M. Mangrel, President of Federal Reserve Bank of San Francisco; Walter E. Bruns, Executive Vice President of Bank of America at San Francisco; John Edwards Caswell, Assistant Administrative Analyst, representing the Legislative Auditor, A. Alan Post; Charles V. Dick, representing W. C. Jacobsen, Director of State Department of Agriculture; Maurice McCaffrey and Donald H. Roney, representing William A. Burkett, Director of Department of Employment; Marvin L. Blanchard, Organization and Cost Control Division, representing John M. Peirce, Director of Department of Finance; Harold M. Dorman, Assistant Division Chief, Department of Motor Vehicles, representing Paul Mason, Director; John B. Matheny, attorney, representing Frank B. Durkee, Director of Department of Public Works; Max K. Jamison, representing the Los Angeles Bar Association, and Lawrence G. Allyn, representing Ralph N. Kleps of the Legislative Counsel.

To set the stage for an adequate evaluation of the findings and conclusions of the subcommittee in this report, it is essential to repeat in brief form the findings and conclusions of the subcommittee in its preliminary report.

In that report, the subcommittee said:[1]

> It is clear to this subcommittee that when we face up to the real problems of possible nuclear attack, programs of defense or programs which deal only with the saving of lives are not enough. Nor is reliance on martial law, nor broad delegations of power to one official, nor the American genuis for creating de facto forms of self-government enough. Our democratic society owes it to all the people who comprise it and all the children who will be born into it, to face the hard facts of the possible future without flinching, and to do what we can now to bring us through whatever that future may bring with our precious institutions intact.
>
> With sufficient study and planning it is * * * within our power to devise * * * an emergency system of law that will conform to our traditions of democratic, constitutional government, which will minimize injustice, and which will enable us to cope with the terribly difficult problems of the post-attack era in an orderly, efficient and democratic manner.

In its preliminary report, the subcommittee mapped out four broad problem areas:

1. **Problems of Succession to Elective Office.** Methods must be devised to assure that the Governor's position is legally filled, even though the entire present line of succession is wiped out; the same is true for both houses of the State Legislature, for boards of supervisors, and for mayors and city councils. Likewise, provisions must be made for enabling the Legislature, in whatever form it exists after an attack, to do business immediately. The foregoing, in fact, is essential to implement operation of the present California Disaster Act, which now provides with reasonable adequacy for the necessary shifts and rearrangement of function and seat of operations of state agencies.

2. **Problems of Record Storage.** A state-wide study should be made to determine what records are vital to the orderly continuance of our economy, and plans should be made and implemented to store these records in microfilm form in one or more bombproof locations throughout the State. The necessary changes in our present laws should be made to assure the legal acceptability of such records in the event of an emergency when other records are destroyed.

3. **Problems of the Judiciary.** Provision should be planned now for the operation of our judicial system under conditions of a post-nuclear attack situation. This will necessitate many changes of both law and procedure from our present practices. Courts will have to be given broader powers than they now possess. Procedures must be simplified and provision made for rapid recruitment and appointment of court personnel to fill in the gaps and process the anticipated case load.

[1] Subcommittee on Impact of Enemy Attack on Economy and Constitutional Government of the State of California, *Preliminary Report,* January, 1957, pp 7-9.

4. **Problems of Relationships Between Persons, the State, and Corporations.** Legislation still will be needed in a number of fields substituting new procedures, rules, and principles to govern private relationships during the period of disruption. Arrangements must be facilitated regarding contracts, leases, mortgages, wills, trusts, etc., to meet contingencies arising out of nuclear attack. Many of these could be effected under existing law, while others would have to wait authorization under new statutes. Additionally, a basic plan must be devised to compensate individuals for injury, death, and the damage and disruption of property by nuclear attack. This should be primarily a responsibility of the Federal Government.

It is worthy of note that between the first and second hearings of this committee, evidence came forth of a substantially new trend of thinking on the part of Congress with regard to the problems of civil defense and post war government. Since January of 1956, the U. S. House of Representatives Subcommittee on Military Operations of the Committee on Government Operations, headed by Congressman Chet Holifield (D) California, has been engaged in a study of the civil defense program of the United States. On January 7th of this year, Congressman Holifield and others introduced a bill to completely revise our present system of civil defense administration (H. R. 2125). In contrast to our present system, which places primary responsibility for civil defense on state and local governments, this new bill places the responsibility for civil defense squarely on the Federal Government.

In its "Declaration of Policy" H. R. 2125 says, "The Congress hereby declares that civil defense is an integral part of national defense and a direct responsibility of the Federal Government in keeping with its constitutional duties to provide for the common defense and to protect the states against invasion. * * * In affirming the Federal responsibility for civil defense, the Congress recognizes that the states and their political subdivisions have an important supporting role and should be assisted and encouraged to perform appropriate civil defense tasks consistent with the national plan of civil defense provided for in this act."

In general, H. R. 2125 establishes a new Department of Civil Defense in the Federal Government, with its chief officer having cabinet status. The secretary of this new department is charged with the responsibility of formulating a national survival plan and carrying it into effect. Title V of the bill, which deals with the emergency situations created by expected or actual enemy attack, opens with a declaration of Congressional policy, making it clear that the Congress intends to retain strong civilian direction of civil defense in any emergency. The possibility of martial law is recognized, but its use is to be limited in time and place and to be resorted to only for urgent and immediate military requirements. The military role is conceived to be one of full cooperation and assistance to civil authorities consistent with military missions.

During an emergency, which may be declared by the President or the Congress, the secretary is authorized to carry out the civil defense operations required by the national plan of civil defense, but is relieved from certain legal restrictions on procurement, employment of

personnel, and the like. Also, the secretary would be authorized to requisition supplies, to coordinate and direct civil defense operations, **and, if necessary, to assume control and operation of any state or local government. The duly elected or appointed chief executive of the state or local government would decide when a breakdown of civil government under his jurisdiction required the federal authority to take over.**

It is manifest from the above, that while in this line of thinking the Congress recognizes the primary responsibility as a federal one, and is prepared to carry out that responsibility even to the extent of assuming control and operations of state and local governmental units, it would be highly desirable if this authority never had cause to be invoked, and that state and local government continued to function sufficiently well to survive uninterrupted. In any situation of emergency, such as a nuclear attack upon this Country, the problems and demands on the secretary and his department would be enormous; the problems involved in his having to assume operating control of state and local governments are scarcely less than if the military were called upon to do so, a development which all agree is both impractical and undesirable.

Therefore, this subcommittee feels that the work it is engaged in is important not only to the State and the people of California, but to the people of the Nation as a whole. The lines of attack we have been taking appear to fit quite well with the line of reasoning involved in the substance of H. R 2125.

The subjects embraced by the scope of this subcommittee's work are vast and complex. Obviously, for example, the reorganization of our judicial system to operate in time of nuclear emergency is one which demands very extensive study and consultation by the bar, the judiciary, law enforcement officials, etc.

In the period covered by this report, therefore, the subcommittee has concentrated on two matters of major importance to any plan to insure survival of constitutional government in a post nuclear situation: continuity and succession of elected and appointed officers on a state and local level, and preservation of vital records.

Some of these matters can be solved through new laws passed by the Legislature and appropriate legislative representatives of political subdivisions, but others take a constitutional amendment passed by the voters. It is the hope of this subcommittee that during the current session of the Legislature, the basic legislation can become law as to those matters which the Legislature can deal with, and that the constitutional amendments can be framed and put on the ballot for voter decision no later than the next general election.

PROVIDING OFFICIAL MANPOWER IN A POSTNUCLEAR ATTACK SITUATION

As the subcommittee has pursued its studies of what must be done to prepare our society to repair and reorganize itself after a nuclear attack in the same democratic tradition we now enjoy, it has become plain that the first essential is a plan which will assure a continuity of leadership, both legal and actual.

It is now assumed, among those who have devoted thought to the problem, both federal and state, that with few exceptions the declaration of martial law is undesirable, and equally important, inefficient.

As a general solution, martial law is undesirable because it runs counter to the current of democratic government, because once imposed, it is difficult to end, and because its results are achieved at a price of the surrender of liberty. As a general solution, martial law is inefficient because it would superimpose upon the military a terrible additional work load at a time when all its energies should be devoted to fighting the enemy, because it is simply not possible to pretrain military administrators in the many and diverse techniques of government which are second nature to experienced, responsible civilian officials, and because our society can reconstitute itself much more rapidly under a democratic form of government than under a military dictatorship.

The new federal thinking on this subject is embodied in U. S. House Resolution 2125, authored by Congressman Chet Holifield and others. In this proposed bill to reorganize our civil defense, it is clear that if there is a total failure of local and state government, the federal agency which will move to fill the gap will be a civilian agency rather than a military one, except of course in those areas of important military missions, where martial law would be justified. Further, it is quite apparent from the language of H. R. 2125 that the federal officials would vastly prefer existing state and local governments to stay viable and functioning, if for no other reason, thus to reduce the total burden on the federal agency. Projecting ourselves into the post-nuclear attack emergency, it becomes readily apparent that the total demands on every part of our social and governmental organization will be at an absolute maximum, calling in turn for the maximum contribution each unit of the structure can make to the common good.

Our job, therefore, in California, is to provide a system whereby, if the day of attack ever comes, and if it is successful in wiping out many of our major cities, much of our population and much of our industry, we can still provide the official leadership to mobilize our energies as swiftly and as effectively as possible to tackle the mountainous tasks of rescue, rehabilitation and reconstruction.

In order for the State Government to function, we must have a Governor and a Legislature. Under the California Disaster Act No. 3599, during a state of extreme emergency, the Governor is given very broad powers including complete authority over all agencies of the

State Government and the right to exercise all the police power vested in the State. **But should the Governor, and his entire line of succession be wiped out in an attack, there could be no legal head of the State Government to exercise these powers. Further, if half the legislators of either house of our State Legislature were knocked out, there could be no quorum, and the Legislature could conduct no business, including the election of a Pro Tem Governor.**

To meet this situation the subcommittee called on Attorney General Edmund G. Brown to submit proposed drafts of the constitutional amendments required. The Attorney General's Office complied, furnishing drafts of a proposed constitutional amendment lengthening the line of succession to Governor, and a second dealing with the problem of legislative quorum.

The proposed amendment on line of succession to the governorship provides that the Governor shall make stand-by appointments, located in widely different parts of the State. Under this scheme, if the Governor and the present entire line of succession is wiped out, it is quite probable that at least one of these seven appointees would survive, and the senior appointee (senior from the standpoint of designation of order by the Governor) would become Governor. He would serve until the Legislature elects a pro tem Governor as now provided in the Constitution, or until the next general election.

The Attorney General's suggested approach to the problem of lack of legislative quorum is to provide that the survivors fill the vacancies caused by the attack, via temporary appointments of persons from the same districts in which the vacancies exist, and of the same political party as the last holder of the seat. These appointees would serve until special elections, as now provided by the Constitution, were held, or until the next general election.

In transmitting these recommendations, the Attorney General notes:

> We have in these suggested constitutional amendments tried to implement the principles which Assistant Attorney General Dutton suggested at the hearing should guide us on this problem: (1) assure continuity of civil government, both in legal form and actual, personal leadership; (2) simple, so that it can be promptly, almost automatically implemented; (3) be specific in advance as to actual individuals involved so that all would not be wiped out and so that in case of a transportation and communications breakdown, specific persons could assure immediate fulfillment of the main functions of the State; (4) have a direct connection to the principle of representative government; (5) not unduly interfere with or impose upon the regular course of our governmental procedures prior to any disaster; (6) provide sufficient flexibility to meet the unpredictable demands of a major disaster situation, and (7) sharply limit the time length of power of the persons in a disaster, so as to assure a return to the elective process. We have also attempted, in drafting a proposed constitutional amendment to meet the legislative quorum problem, to assure protection of the tradition of separation of the executive and legislative branches of our government.

The logic involved in this thinking is quite clear. We provide standby Governors in sufficient numbers and sufficiently scattered so that one or more will survive; we make it a standing first order of business for the military to locate the senior survivor and transport him to the seat of government. Meantime, we put the legislative quorum back together through temporary Assembly and Senate appointments made by the surviving members, keeping closely to the same political and geographical distribution we had before the attack. As a corollary, we again make it a standing first order of business for the military to locate the surviving Members of the Legislature (and those they appoint) and transport them to the seat of business on a priority basis. The new Legislature can then proceed to elect a Pro Tem Governor, as presently provided in the Constitution. This requires a call for the purpose by the "senior deputy Secretary of State" and if such deputies are not already appointed with sufficient scattering and in such numbers as to guarantee a survivor, such appointments should and probably can be made without any change in the law.

The subcommittee submitted the draft amendments prepared by the Attorney General to the Governor's Office for review and comment. As the result of conferences involving the suggestions of the Governor's Office, the Bar Association, and the proposals of the Attorney General, Assembly Concurrent Amendment No. 65 was developed for consideration of both the Assembly and the Senate during this session.[2]

It is the recommendation of the subcommittee that this constitutional amendment be passed and that additional study proceed in the coming interim to determine whether or not additional constitutional amendments are necessary to meet the imperative requirements of the State.

The continuity of State Government alone is not enough. Most of the immediate problems of a postnuclear attack situation will have to be met by the governments of local political subdivisions. Insurance of the continuity in leadership is as important at the local level of government as it is at the state level.

To meet the needs at this level of government, the members of the subcommittee have introduced Assembly Bill No. 2781, which would add Article 6 to Chapter 1 of Division 7 of the Military and Veterans Code.[3] This legislation was drafted for the subcommittee by the Los Angeles Bar Association.

In general, Assembly Bill No. 2781 provides that local agencies, i.e., counties, cities and counties, cities (whether organized under charter or general law) districts and other public corporations may appoint standby officers to serve if regular officers are unavailable, in the event of a "disaster" which is defined to mean a calamity, whether man made (such as an attack by nuclear weapons) or natural (such as earthquake, fire or flood) which renders unavailable a majority of the legislative body of the local agency. The standby officers are required to inform themselves of the duties of the office for which they are standbys, keep informed of the business and affairs of the local agency, to report immediately for duty in the event of disaster,

[2] See Appendix 7, p 40.
[3] See Appendix 5, p. 36.

to fill the posts for which they have been appointed, if needed in the order of their appointments. The act also provides that as soon as possible after the disaster, the local agency's legislative body shall meet, survey the damage, reconstitute itself, reconstitute the local agency by appointment, and proceed to perform its functions in the preservation of law and order and in the furnishing of local services.

In its original form, this bill provided for the appointment of three standby officers for: (a) each member of the legislative body; (b) for the chief executive, if said executive is not a member of the legislative body, and (c) for each officer heading a department having duties in the maintenance of law and order or in the furnishing of public services In another section, the original draft provided that "standby officers shall not be officers presently holding offices in or be employees presently employed by the local agency. Should said standby officers become officers or employees of the local agency, their post of standby officer shall become vacant."

Objections were raised at the subcommittee hearings as to the prohibition against present officers or employees of the agency becoming standby officers. The reason behind the prohibition is obviously to preclude their all being killed or disabled simultaneously, but the objections raised were that the prohibition would prevent the appointment of the very person best trained and most qualified to fill the posts, particularly where these posts involve knowledge and training of a highly technical nature, such as firefighting, police work, etc.

The subcommittee and the special committee of the Los Angeles Bar working on this problem have concluded that these objections have merit insofar as they pertain to positions other than the legislative and executive head posts. Therefore, the legislation is being redrafted to provide that standby appointments be made as outlined above for the members of the legislative body and the executive head only. Standby appointments to heads of departments having to do with public health and safety are to be made in this fashion: "As soon as practicable after the effective date of this act, the legislative body of each local agency shall provide for the succession of officers which head departments having duties in the maintenance of law and order or in the furnishing of public services relating to health and safety and over which said legislative body has the power of appointment." This allows the local agency to handle the matter in any way it sees fit; the important thing is that the agency should be prepared to handle it in some fashion in advance of any disaster, not afterward.

The subcommittee recommends the passage of Assembly Bill No. 2781, as amended, to insure continuity of local governmental leadership in time of disaster.

PRESERVATION OF VITAL RECORDS AGAINST NUCLEAR ATTACK

This subcommittee is concerned with the preservation, in compact form, and safe and enduring storage, of such records of the state and local governments of California which could form the basis for reconstructing our government in a postnuclear situation. With vital records at hand, the task is infinitely easier than without them. Indeed, total lack of vital records, or even of any substantial portion of them, would create such confusion that to untangle it would absorb the combined energies of a large part of our officials and citizens for years, at a time when every ounce of energy should go into the work of reconstruction.

In considering this question, however, the subcommittee has become inevitably aware that it is only one phase of a much larger problem of record accumulation, storage, retention, selection and destruction. The latter, larger problem has been of concern to various agencies and legislative committees for a number of years. Writing as late as February of 1957, Legislative Auditor E. Alan Post notes:[4]

> The creation of documents and the collection of documents and records as a basis for the exercise of governmental authority is one of the essential aspects of the governmental process. To manage these documents and records, to provide for their custody and to make determinations as to the preservation of those which are essential and the destruction of those which are obsolete becomes, therefore, one of the major problems of governmental administration.
>
> Although the Central Record Depository was created by legislation of 1947, and a system of official authorization for destruction of obsolete records established as early as 1927 and extended in 1939, **many agencies had not set up a consistent program of record retirement by late 1956. There is definite evidence of growing interest, but it is doubtful if the halfway point has been reached.**

At the present time, almost the entire bulk of state records is concentrated in Sacramento, San Francisco and Los Angeles, with the preponderance being in Sacramento. **In the event of enemy nuclear attack on this Country, the three prime targets would be Los Angeles, San Francisco and Sacramento. Thus, among other results, almost all of our vital records would be wiped out by the blast or rendered radioactive for periods up to two years and consequently unavailable.**

If the bombs fell tomorrow, the only records which we could be reasonably sure of retaining would be those microfilmed by the Secretary of State and stored in the atomic vaults at Felton. These records

[4] Legislative Auditor, *California's Records—Preservation and Volume Control*, February 8, 1957, p 1; see Appendix 8, p 41.

include microfilm copies of the original laws in the State of California, original Journals of the Legislature, the State Constitution, the Spanish Archives, and the California corporation records. The Secretary of State is in the process of microfilming all deeds to land owned by the State of California. In addition, the State Employees Retirement System stores microfilm copies of board minutes, control account records, investment records and other permanent accounting records in a bank vault in Grass Valley, and the Compensation Insurance Fund has attempted to employ the dispersal principal by storing microfilm copies of their important records in their records in Fresno. Both of these might also be still available after a nuclear attack.

Manifestly, however, these records are scarcely enough to allow the government or the citizenry to begin reconstructing their lives and their government in a postnuclear attack situation.

The answer to our problem appears to involve several steps:

1. **A determination of what records are vital in the context we are considering.**
2. **A device, which may involve both legislative action and fiscal aid, to require and/or encourage the microfilming of such records, both public and private, as may be found to be vital and their storage in a safe place under proper conditions.**
3. **An aggressive, continuing program, to carry out the decisions made under Points 1 and 2.**

It was pointed out to the subcomimttee many times during the course of its hearing that the actual proportion of "vital" records to total records may be very tiny indeed. For example, a survey of United States Post Office records showed that only three-thousandths of 1 percent were of the nature considered to be indispensible. Again, the greatest accumulator of records in California State Government is the State Department of Employment. These records are indispensible for operating in normal times, but it was stated to the committee by representatives of the department that virtually none of them would be "vital" in the context of which we speak. Further, the Legislative Auditor points out that the paper in the last five years' personal income tax files and the franchise tax files would pave El Camino Real with documents from San Jose to Los Angeles. Yet very few, if any, of these particular documents, are "vital" to the reorganization of government after a nuclear attack.

Storage of vital state documents in microfilm form in the vaults of the Western States Atomic Storage Vaults near Felton has been offered to the State at cost—$2 per cubic foot. No one has yet provided the subcommittee with any estimate of the total storage space which would be needed by the State, but by way of comparison, the total needs of a city the size of San Jose have been estimated at 20 cubic feet, and the total needs of the United States Post Office Department at 30 cubic feet. **Even if the needs of the State ran 2,000 cubic feet, the total yearly storage cost would be only $4,000, or about the salary of one medium grade clerical employee.**

From evidence supplied to the subcommittee, it appears clear that there can be no safe storage within miles of a target area.

Writing in the July-August, 1956, issue of the *Harvard Business Review*, Robert A. Shiff, President of the National Records Management Council, Inc., reveals the results of a test of the effects of a 20 kiloton bomb on storage equipment:

> The principal blast and heat damage to records storage equipment occurred to the unshielded units, which were all within 500 to 4,700 feet from ground zero (the spot on the test site just below the explosion). Only six units survived the blast. The balance were: (a) destroyed and scattered around the test site as small pieces of metal or unidentifiable debris; or (b) blasted apart but still identifiable; or (c) so badly damaged by missiles that we could not recover them, i.e., take them away in anything like their original form. * * * Records could not survive even in good storage units at 1,270 feet or less. A sensitized thermal strip placed in the Class B safe at 1,270 feet indicated the interior temperature had reached 490 degrees, whereas paper is safe only up to 350 degrees. * * * As for uninsulated storage units, two cabinet files, placed at 2,750 feet and 3,750 feet (behind cement block walls to gauge heat effect rather than blast effect, which would obviously have destroyed them, were badly scorched and not suitable for reuse, but most of the records in them were found in recoverable form . . .

It should be noted here that these effects were from an explosion of a 20 kiloton bomb, which, in the terrible lexicon of nuclear explosions, is a "minor" bomb. Today's weapons run to 20 megatons and higher. It was stated in testimony before the Holifield U. S. House Subcommittee that a 20 megaton bomb extended its comparable blast damage effects to 10 times the distance of a 20 kiloton bomb. Thus, instead of reading, "Records could not survive even in good storage units at distances of 1,270 feet or less," or two miles from ground zero in every direction, and we should read that records in uninsulated storage could not survive the heat damage at distances of five miles to eight miles in every direction from ground zero.

The above has referred to blast and heat damage, without regard to radioactivity, which, according to testimony before the subcommittee, extends over a much larger distance, and may last as long as two years. Records unavailable for two years, in the context of a post nuclear attack situation, might just as well be totally destroyed.

While the cost of adequate storage is negligible, the cost of microfilming is not, and the subcommittee was repeatedly told by witnesses that there is now no consistent comprehensive program within the State Government to produce microfilms of uniform quality and cost with trained operators. According to the legislative auditor, a realistic cost is about 1 cent per document when left in roll film form. Thus, the average cost of reproducing on microfilm the contents of a standard five-drawer letter file cabinet, averaging 4,500 pages per drawer, is estimated to be $225. Obviously, indiscriminate microfilming cannot be allowed, and the most careful selection of records must precede large scale operations.

Two bills bearing on this subject have been introduced by this subcommittee. The first of these creates a Joint Interim Committee on the

Preservation of Essential Public Records, composed of members of both Senate and Assembly, to continue the study of this vital matter after this legislative session shall have adjourned (Assembly Bill No. 2774). This measure or a joint resolution on the same subject would authorize the committee "* * * to ascertain, study and analyze all facts relating to the preservation of public records of the State and of local government agencies in order to permit the functioning of government in the event of the destruction of the originals of such records by an atomic or other major disaster, including but not limited to the operation effect, administration, enforcement and needed revision of any and all laws in any way bearing upon or relating to the subject of this act, and to report thereon to the Legislature, including in the report its recommendations for appropriate legislation."

The second bill on this subject is Assembly Bill No. 2777,[5] which originally proposed to create a Commission on Essential State Records. In its first amended form, this commission would consist of the Director of Finance, a Member of the Senate appointed by the President Pro Tem of the Senate, a Member of the Assembly appointed by the Speaker of the Assembly, the Secretary of State, the Attorney General, a Representative of the County Supervisors Association of California, a Representative of the League of California Cities, and a member of the History Department of the University of California. This commission "shall determine what state records are essential to the functioning of the State government in the event of a major disaster that would result in the destruction thereof. It shall provide for the microfilming on authentic reproduction or reconstruction by electronic process of such records and for the storing of the microfilms or other authentic reproduction or reconstructions of such records in such places within the State as it determines appropriate." This bill also provides that copies "* * * of such records shall have the same validity and force and effect as the originals in the event that the originals are destroyed by a disaster."

In its final form each state agency, with the concurrence of the Secretary of State and the Director of Finance, assume the responsibility granted the commission.

The Legislative Auditor has set forth eight points which, with some minor changes, appear to this subcommittee to cover about what both the proposed joint committee and proposed commission will study, as follows:[6]

1. What functions of which agencies are essential to government in an emergency?
2. Within the essential agencies, which records are genuinely essential?
3. Which agencies normally considered essential would find their functions so disrupted by the destruction of a substantial fraction of the State's population and property that they might as well start over in their creation of records?
4. How can land title companies and counties' photocopying programs be coordinated to serve both public and private interests?

[5] See Appendix 2, p 34.
[6] *California's Records, op. cit.*, p 3.

5. Which records of the counties, municipalities and special districts must be protected?
6. Which records of individuals must be protected—births, marriages, deaths, penal records?
7. At what point is the balance to be struck between the cost of the program and the calculated risk that it will never be needed?
8. What record groups should be microfilmed because of the joint considerations of space-saving and atomic security, whose microfilming could not be justified on one basis alone?

It would appear desirable at this juncture to extend the scope of the proposed joint committee's investigations to include private as well as public records. The joint committee could, for example, call upon the legal profession, and various industry and business groups to survey their own branches to ascertain what vital records should be preserved. Some organizations have already moved in this direction, and according to testimony before the subcommittee, one, the Bank of America, appears to have one of the most advanced programs in the Country.

The Bank of America not only has a complete disaster organization plan ready for operation, but daily microfilms copies of its important records and transactions which it disperses to a number of points throughout the State. On the basis of investigations made for it by cooperating committees, the joint committee could consider what incentives the State might offer to encourage completion of the program, and what laws might be passed to compel microfilming and state storage of records (such as wills, to use one example) vital to the people of the State of California.

This subcommittee earnestly recommends the passage of Assembly Bill No. 2777, to make a start toward the tremendously important program of protecting the essential records of our State and local governments against disaster destruction.

UNFINISHED BUSINESS

It will be noted from the foregoing that the subcommittee has concentrated its efforts on two of the major problem areas enumerated in the preliminary report, and repeated in the introduction to this report: the continuity of official leadership at all levels of government, and the preservation of vital records against nuclear attack.

We have done so because the urgency of the problems seemed to us to require that the first work be done on matters which could be dealt with at this current legislative session, and also because it has become increasingly apparent that if we can successfully handle those two, we can in some fashion solve the others.

This is not to minimize the importance of the other two: problems of the judiciary, and problems of persons, the state and corporations.

These are immensely complex subjects which demand study over a considerable period of time by many people and organizations. We recommend that this subcommittee be continued as an interim subcommittee to work through the period between the end of this session and the beginning of the next, and we earnestly solicit the continued cooperation of the Bar, the Judiciary, and the agencies and individuals who have so graciously assisted this subcommittee in its work.

SUMMARY OF TESTIMONY OF WITNESSES BEFORE THE SUBCOMMITTEE

MARCH 1, 1957

JAMES W. BEEBE, Representing the Los Angeles Bar Association

Mr. Beebe stated that he had been directed to offer the subcommittee the help of the Los Angeles Bar's Special Committee on Local Problems of Disaster to solve the problems discussed in the preliminary report of this subcommittee. He said that time before adjournment of this session of the Legislature was too short to permit full development of the "package" of emergency law to cover the whole situation, and that we should attempt to work on the most critical of these problems —the preservation of law and order—at this session.

He said that to preserve law and order and continued local services, it is essential that there be persons available to do the job. Succession to important offices must be assured. Mr. Beebe's committee had aided in the draft of Assembly Bill No. 2781, which deals with problems of succession in local government, and he stated that he believed that the Legislature had the power to enact such a law. He closed by saying that the work of the subcommittee had engendered national interest and that in the short time the subcommittee had been at work, it had achieved more results than any other group.

FREDERICK G. DUTTON, Representing Attorney General Edmund G. Brown

Mr. Dutton stated that the Attorney General's Office was engaged in studying the problem of official line of succession in constitutional executive and legislative offices, and was drafting a proposed constitutional amendment on this subject. Mr. Dutton laid down the principles which were guiding the office in its work, as follows:

1. Continuity of civil government should be assured, both in the legal and actual leadership sense.
2. A line of succession beyond that presently provided must be sufficiently clear and previously specified as to avoid all doubt as to where the power and responsibility lie.
3. The line of succession should be specific in advance as to actual individuals as well as offices, to allow for preparation.
4. Additional line of succession must be sufficiently long to cope with the incapacitation of public officials on a scale not hitherto experienced.
5. The additional line of succession must consider the likelihood that major areas of population will probably be the principal targets, and therefore must draw from undevastated areas.
6. The additional line of succession must be based on drawing on individuals with the acutal experience and personal leadership to cope with the large scale problems involved.
7. The additional line of succession must reflect the representative responsible nature of civil government.

8. At the same time, the additional line of succession must not impinge upon or complicate the organization or operation of State Government in any sense in its ordinary and regular activities prior to the emergency.
9. The additional line of succession must provide for flexibility so that if a person high in the sequence survives but is not immediately available, another in the line can serve until he becomes available, and if the State should be splintered, any or all can serve in their own areas.
10. The persons thus succeeding to public office should serve only until the earliest possible moment that officials can be regularly elected. Mr. Dutton stated in answer to questions that he had found that California was in the forefront of the work on this problem, indeed, all alone, and that there was evidence that de facto governments would later receive judicial recognition in an emergency situation, but that constitutional government was much more secure.

FRANK M. JORDAN, Secretary of State, and DR. WILLIAM N. DAVIS, JR., Archivist-Historian

Mr. Jordan pointed out that his department had been working on the problem of preserving essential records for many years. Ten years ago, he said, he had all the Spanish archives microfilmed and the original laws of the Legislature microfilmed. At first these were in bank vaults, but later transferred to the atomic vaults at Felton. His department has recently microfilmed all corporation records and stored them in a safe place. In answer to questions, he stated that because of a lack of understanding of the seriousness of the question and the vital nature of the records on the part of some counties, state law as to these matters appeared to be necessary, and that preservation of vital records throughout the State was a state responsibility.

Mr. Jordan and Dr. Davis both agreed that the greater part of the cost of such a program would be in the duplication of existing records on microfilm. They felt that the counties might be able to bear this in cases where any kind of a program exists because it would be a very small item of current expense to make another microfilm where one is already being made. The cost of storage at the vaults in Felton was nominal.

Dr. Davis illustrated the compression of space accomplished by microfilming by noting that the material the Department of State had in storage at Felton amounted to 770 file drawers, or 1,520 cubic feet of space, in their original form; in their microfilmed form, they occupy less than 10 cubic feet of space.

STANLEY B. FOWLER, Deputy State Treasurer, Representing State Treasurer Roland Button

Mr. Fowler said he felt lines of succession should cover succession to the Office of Treasurer in order to carry on the payment of state warrants and take care of the variety of assets which the State Treasurer's Office has on deposit in its vaults. He said that their vault was now in the process of completion and modernization, and that they had been advised it would withstand attack by atomic bombing. The

study should be a continuing one, he felt. To questions, Mr. Fowler noted that the State holds bonds for itself and insurance companies and businessmen with respect to the tax and other situations where security deposits are required. These could be replaced on evidence they were destroyed. The same applies to the cash held. Mr. Fowler doubted that it would be necessary for the Treasurer's Office to participate in a central records atomic storage problem.

MURRAY TODD, Deputy State Controller, and PHIL L. BARNES, Assistant Deputy Controller, Representing State Controller Robert L. Kirkwood

Messrs. Todd and Barnes disclosed that the Controller's Office was in the process of making a study of all records in the department, and to analyze their essentiality and importance in case of atomic attack. The department presently has no records stored in the atomic vaults at Felton, all now being either in Sacramento or dispersed in other offices of the State Controller in Los Angeles and San Francisco. Warrants, pay roll lists, inheritance tax records, were listed as among those in the possession of the State Controller which were vital and which might have a serious effect on the preservation of orderly government if destroyed. Mr. Barnes suggested that it would be almost impossible to keep reproducing records that are temporarily indispensable, but that certain periodic recordings might be made, duplicated and stored against disaster.

Mr. Barnes suggested that multiple storage of duplicate copies of essential records might be desirable to facilitate carrying on in the event of a disaster to Sacramento.

STANLEY PIERSON, Director of the California Disaster Office

Mr. Pierson commented on the importance of the work of the subcommittee, and noted that on receipt of a copy of its preliminary report by the President, it was turned over to the Federal Civil Defense Administration, which was sending a representative here later in March to discuss the matter with the chairman. He commented on H. R. 2125, and noted that the hearings before the Holifield Committee brought out clearly that there would be very little chance of marshal law being declared because the military would be too busy with missions of their own. He noted also that under H. R. 2125, it would be the civilian Department of Civil Defense which would move in rather than the military, and then only at the request of the local officials.

Mr. Pierson pointed out that in the event of a direct hit on Sacramento on a legislative day, our entire constitutional government would be gone, and emphasized the importance of a longer constitutional line of succession.

SHERBOURNE W. MORSE, Representing Federal Civil Defense Administration, Region 7

Mr. Morse commended the State of California for assuming leadership on the problem. He said no other state is as advanced as California, and that the FDCA was keenly interested in the progress of the California studies, and would be sending representatives to consult with the committee in the near future.

M. D. TARSHES, Manager, Sacramento County, Appearing as an Official of Local Government

Mr. Tarshes stated that in his opinion, county governments would be encouraged to do more microfilming of their vital records if they could have access to them for operating as well as security purposes. He cited as an example the fact that most of the county recorder's records must, under present law, be retained in perpetuity, either the original, or in photostatic copy form. He said that if the microfilm copy of these records could be used for operating purposes, microfilming would be much more extensively employed than now. Present statutes governing the retention and destruction of county records are highly confused and should be clarified. Mr. Tarshes had some comments on Assembly Bill No. 2181. Specifically, he objected to the provision which requires that "standby officers shall not be officers presently holding office in or be employees presently employed by the local agency." He said that this might make the purpose of the act defeat itself, because it would preclude the appointment of the most experienced and logically qualified persons to such appointments. Mr. Tarshes also called for clarification of the provisions of the bill determining when a position or a post becomes vacant. He stated that in his opinion provisions in the bill providing for appointments to local agencies by mayors of cities up to 150 miles away in the event none closer was available was impractical because of either lack of communication between the local agencies or lack of knowledge of qualified individuals by officials in other counties, and suggested that such vacancies should be appointments of the Governor or his successor. Mr. Tarshes also pointed out that under the present law, the Governor may issue, during an extreme emergency, rules and procedures which shall have the effect of law, that all officers and employees of state and local government are required to comply with them, and that the Governor may enforce compliance by temporary suspension of the violating officer or employee and appoint his temporary successor. Mr. Tarshes felt there might be some inconsistency between the provision for locally appointed standby officers and the power of the Governor listed above. In response to a statement by Chairman Kilpatrick that all bills so far introduced were "spot" bills and not final drafts, Mr. Tarshes expressed his willingness to work on refinements. He made a final point that there was currently confusion in the law as to how much authority the Governor possesses and how much is left with local jurisdictions, under conditions of extreme emergency, and called for clarification.

WILLIAM H. WARD, Director of Civil Defense for Contra Costa County

Mr. Ward stated that he and others engaged in the business of civil defense had been looking forward to the type of work this subcommittee was doing for some time, that they have recognized the need for it, and were delighted to see it being done. He said that legislation of the type being studied by the subcommittee would have a beneficial effect on the entire civil defense situation. This, he said, because of the widespread assumption on the part of local officials that in the event of an atomic disaster the military would simply step in and take over had impeded civil defense planning and action at a local level.

He said that legislative action indicating that this will not be done would have a most encouraging result in helping local civil defense officials get their jobs done.

Commenting on a point made by Mr. Tarshes, he noted that in most counties, local officials of importance all have civil defense responsibilities, and that calling on them to staff jobs in areas 150 miles away might strip the home county of its responsible officials.

DR. MITCHELL KAUFMAN, Executive Vice President of the Western States Atomic Storage Vaults

Dr. Kaufman discussed the Western States Atomic Vaults in Felton, which have presently 190,000 cubic feet of storage space in a mountain vault with much more available, with the center of the vault 90 feet underground, temperature and humidity controlled, with all sorts of reproductive machinery available. There are, he said, only two vaults of this kind in the United States, one here and the other at Iron Mountain in New York.

Dr. Kaufman said he had visited all but three counties in California. Of those visited, 18 have records completed under safe storage, 11 are preparing, and the others are doing nothing, he said. He cited the example of the work of the Secretary of State of California in preparing, microfilming and storing the records as an effort which had received nation-wide recognition, and noted the examples of other states, specifically Utah and Colorado, where counties are by law required to prepare their records and microfilm them. The states then make a duplicate copy and store them at state expense, including one set of copies filed in the vaults at Felton. Dr. Kaufman noted that the advances in the technique of microfilming had brought the cost down from former years.

In Colorado, he said, microfilm copies were by legislation designated as legal documents for everyday use.

Dr. Kaufman commented that some counties tended to build their own archive centers too close to the center of the county, citing Los Angeles and San Diego, and added that he had been informed by radiological experts that radioactivity following an atomic attack might last as long as two years.

He favored the idea of a State Vital Records Commission, and noted that the simplification of forms, the reduction of paper work to a minimum, and the microfilming and safe storage of vital documents were important to state and local governments in times of peace, as a space and money saver, as well as in times of emergency.

Dr. Kaufman said his company would make space in the Felton Vaults available to the State of California, as a patriotic gesture, at a break-even cost of $2 per cubic foot. He was unable to estimate the total amount of space required for the States' vital records in microfilm form, but noted that the space required by a city the size of San Jose was 20 cubic feet.

H. E. HEMMINGS, Cashier of the Federal Reserve Bank of San Francisco

Mr. Hemmings reported to the subcommittee on the records preservation program of the Federal Reserve Banks and their branches. The program is now system wide. Essentially it consists of the duplication of daily records of each bank by microfilm and immediate shipment (several times a day) via United States mail to a records depository which is considered a safe location outside of the offices of the bank. In the case of the Federal Reserve Bank of San Francisco, with branches in Seattle, Portland, Salt Lake City and San Francisco, the center is Boise, Idaho.

The Federal Reserve Banks have issued a manual, continually revised to be up to date, covering what records are to be duplicated, how they should be mailed, how they should be prepared, etc. Key personnel have identification cards from the FCDA in the hope that these will get them through the lines to the centers and operate the banks.

WALTER E. BRUNS, Vice President of the Bank of America at San Francisco

Mr. Bruns reported on the records preservation program at the Bank of America, which he believed is further advanced than any other bank except the Federal Reserve Banks.

Basically, this program is one in which essential records are microfilmed daily and a complete set is dispatched to a number of branches of the Bank throughout the State, and perhaps outside the State. Total number of depositories was unspecified, but Mr. Bruns stated that it was considerably more than two. The depositories were selected with the idea that one or more would not be attacked. A chain of authority plan has been worked out to cover any anticipated situation, so that the Bank of America can continue operation, with its head office located at any one of a number of points throughout the State.

JOHN EDWARD CASWELL, Assistant Administrative Analyst, Representing the Legislative Auditor, Alan Post

Mr. Caswell began by summarizing assumtpions on which a state records preseravtion program should be based: an enemy attack with nuclear weapons on notice of only hours, major centers of population knocked out, perhaps one-third of the State's population casualties, and perhaps two-thirds of the chief industries inoperative.

In this situation, he said, many records which are considered essential to normal state business would be completely superfluous, citing as an example income tax returns. He suggested that in the emergency situation posed, we might as well forget about income taxes and income tax records and start over again. The same applies to a number of other state agencies, for example Beaches and Parks, which in a post nuclear attack situation would find their normal functions so disrupted that they would have to start again in their creation of essential records. Mr. Caswell suggested that the really vital records for the government in a post nuclear attack situation might be a very few in kind—such as records of basic identification of individuals, primarily birth certificates, documents for identifying property, records of criminals, etc.

He noted that title companies are now microfilming large quantities of land title records, but with no consistent policy or photographic technique, and he suggested the need for standardization.

Mr. Caswell posed a number of questions which need answering, such as: What functions of which agencies are essential to government in an emergency? What records are genuinely essential? What records of local governments must be preserved? What records of individuals must be protected? At what point is the balance to be struck between the cost of the program and the calculated risk that it will never be needed? What records should be microfilmed on the basis of space saving as well as security? Mr. Caswell suggested that state agency heads should be called on at once to specify which of their records are essential to operation in the conditions which will exist after an atomic attack, and what fiscal and legal records of the agency must be preserved, After this information is compiled, it should be reviewed by the Legislature in the light of cost and policy.

C. D. DICK, Assistant Director of the Department of Agriculture

Mr. Dick noted that in case of enemy attack, one of the very important things would be the maintenance of our food supply production, and the maintenance of food free from contamination. He pointed out that the employees of the Department of Agriculture were pretty well scattereded over the State; of 1,300 permanent employees, only about 475 are located in Sacramento. Thus at least a portion of the organization of the Department of Agriculture would survive an attack to carry on the important functions of the deparement, which include prevention of the introduction and spread of pests and the inspection of meat and other food products as to their sanitary quality and freedom from contamination. Mr. Dick spoke of the importance of maintaining the line of succession of the governorship and the power of the Legislature to act as vital to the continuation of the department, of which the head is appointed by the Governor, and its functions determined by legislative act. He felt that the deparement had relatively few vital records which needed protection; mentioned that among those that did were hide and brand records, monthly fiscal reports, and files on the presence of plant diseases and animal diseases.

Mr. Dick reiterated objections to barring employees and officers from becoming standby officers.

DONALD H. RONEY, Chief of Field Operations for the Department of Employment, Representing William Burkett, Director

Mr. Roney told the subcommittee that while his department was perhaps the greatest record accumulator of all state agencies, relatively few of those records would be essential in a post nuclear attack situation. He noted that in such a situation, the main burden of payments to the unemployed would probably be handled by a federal program which would make the State Unemployment Insurance laws substantially inoperative. The department has for a number of years maintained certain summary records of control accounts and statistical records in a vault in the mountain areas. Records used by the department are not of the type which lend themselves to microfilming, in

general, Mr. Roney said, because they have a highly mechanized operation, using electronic equipment.

MARVIN L. BLANCHARD, Organization and Cost Control Division, Representing John M. Peirce, Director of Department of Finance

Mr. Blanchard said that the Department of Finance has been concerned with the problem of records management since about 1940, and has since 1955 by Legislative act been charged with the responsibility for all aspects of research and consultation in relation to records management for the entire State. He pointed out that the problem of records preservation against a disaster is only one aspect of the entire records management program. Mr. Blanchard stated his department did not feel that any new organization is necessary in order to accomplish the objectives of the subcommittee—that the Governor or the Director of Finance out of their existing legal responsibilities can accomplish whatever the Legislature wants.

Mr. Blanchard noted that the percentage of records to the continued life of an organization is usually a very tiny fraction of the total records involved. As an example, he cited the survey of United States Post Office records which showed that the truly vital records were only 1/1000ths of 1 percent of the total.

He cautioned the subcommittee that the fact that microfilming reduces the total bulk of records about 99 percent may lure people into overlooking that the remaining 1 percent may not need to be kept. He also pointed out that from an operational point of view, additional copies of records can be prepared at no cost at all and shipped to dispersal points for storage, at less cost than the microfilming process.

Mr. Blanchard closed by reasserting the responsibility of the Department of Finance for the primary management, business management and fiscal management of the State Government, and that it should have the general responsibility for this type of over-all program. In response to a question, Mr. Blanchard suggested that if state agencies could be induced to dispose of unnecessary records now retained, there would be plenty of space and plenty of money available through not purchasing additional filing cabinets, etc., so that an over-all program of disaster storage of vital records would not cost the state anything.

HAROLD M. DORMAN, Assistant Division Chief, Department of Motor Vehicles, Representing Paul Mason, Director

Mr. Dorman suggested to the subcommittee that his department had three sets of records which might be considered for the disaster storage program: vehicle title files; drivers license files; registration of vehicle files. Certain fiscal records having to do with trust funds in the financial responsibility section are duplicated elsewhere.

Conceding that neither the drivers license file nor the registration files might be considered vital, Mr. Dorman said that because the vehicle title file represents ownership of seven million vehicles, a considerable amount of the total economic wealth in the State, this might be worth preserving. The problem, he said, was how to do it.

Currently on IBM cards, duplication would take a seven million initial run and a daily run of 14,000 to reflect daily transactions. IBM cards do not lend themselves to microfilming.

The department has under current study other methods of recording, such as electronic memory tapes, which it may have installed and operating within two years, which might lend themselves to duplication and storage. It would be necessary to clarify the law on the legality of this type of record in the event others were destroyed.

MAX JAMISON, Representing the Los Angeles Bar Association

Mr. Jamison emphasized the importance of the work of this subcommittee to the preservation of our society and our way of life. He pointed out that we have spent, are spending, and will spend billions of dollars to minimize the damage of attack to our physical properties. Even so, we know that we will not escape damage if attacked. For a relatively modest sum and a little effort, he said, we can provide for the continuation of our civil government and thereby: one, stand a better chance to prevent martial law from taking over; two, keep our civil life functioning so that we can reorganize to defeat the enemy, and three, possibly prevent us from becoming the subjects of a government of the type we will be opposing.

There will not be time to prepare after the attack, Mr. Jamison pointed out. What is to be done must be done beforehand. He urged that the subcommittee continue its work, pledged the cooperation of the Los Angeles Bar Association to further the work. All we need do is provide the tools to remain free; the people will take care of the rest, Mr. Jamison concluded.

LAWRENCE ALLYN, Representing the Legislative Counsel Bureau

Mr. Allyn, in response to questions, commented on several points raised during the hearing about the legality of various kinds of records. His opinion was that no serious questions had been raised; that in the event of a disaster, when only duplicate records were available, it would be possible to legalize those records then; that the Department of Motor Vehicles was merely instructed by law to keep records and not told how, that they had changed their methods in the past and could in the future without any legal conflict.

RICHARD CARPENTER, Executive Director and General Counsel, League of California Cities

Mr. Carpenter, unable to attend the hearing, sent a letter commenting in some detail on matters before the subcommittee. He enclosed with his letter League Report No. 33, entitled, "The effect of an Emergency Upon the Police Powers of a City," with the comment, "It appears to us that a complete understanding of known emergency powers of local governmental agencies will enable your committee to go forward from that point and supply powers which have not been conceded by the courts in similar emergency circumstances."

Mr. Carpenter joined in recommending the creation of a Joint Interim Committee on Preservation of Essential Public Records, and in support of Assembly Bill No. 2781, creating standby officers. He pointed

out that policy—that is, what to do, should be established well in advance of the disaster, and execution of the policy left to the administrative officials and their standbys. He made another point in favor of standbys, which inferred their use as assistants even when their principal survived, in that the sheer fatigue of a 24-hour-a-day operation would in a very short time render an official useless unless relieved.

Mr. Carpenter stated that the league would incline to oppose Assembly Bill No. 3161, as an unnecessary duplication of the state regional civil defense offices.

Further, Mr. Carpenter says they would be opposed to the method by which the proposed district is created, even if it is necessary, and that in any case, if any such district is created, it should be brought into being by the local governments which would be essential parts of the district.

HAROLD W. KENNEDY, County Counsel of Los Angeles County

Mr. Kennedy, also unable to be present, said in a letter that the objects and purposes of the subcommittee's study are of tremendous importance to the welfare of the entire State and all of its people.

He restated the view expressed in his testimony before the subcommittee in December that the proper approach "was to draft a carefully prepared separate and self-executing constitutional amendment that would encompass this problem and set forth a formula for the succession of powers and the restoration of constitutional government and law in the event of a dire catastrophe such as the destruction of legal bodies through enemy attack."

Mr. Kennedy renewed his emphasis on the point that "care must be taken not to amend existing sections of the Constitution or statutory law and raising doubt that through the guise of preparing for a catastrophe brought about by the dropping of atomic bombs upon our people, unusual powers were being granted or summary action taken except in the event that the catastrophe took place and it was essential for the preservation and restoration of government to take such action." Mr. Kennedy proffered further details of his views subsequently.

APPENDICES

APPENDIX 1

AMENDED IN ASSEMBLY MAY 24, 1957

CALIFORNIA LEGISLATURE—1957 REGULAR SESSION

ASSEMBLY BILL **No. 2773**

Introduced by Messrs. Kilpatrick, Miller, and Beaver

January 22, 1957

REFERRED TO COMMITTEE ON JUDICIARY

An act to amend Section 350 of the Probate Code, relating to wills.

The people of the State of California do enact as follows:

SECTION 1. Section 350 of the Probate Code is amended to read:

350. No will shall be proven as a lost or destroyed will unless proved to have been in existence at the time of the death of the testator, or shown to have been destroyed ~~fraudulently~~ ~~or~~ by public calamity, *or destroyed fraudulently in the lifetime of the testator, without his knowledge* ; nor unless its provisions are clearly and distinctly proved by at least two credible witnesses.

APPENDIX 2

AMENDED IN ASSEMBLY APRIL 25, 1957
AMENDED IN ASSEMBLY APRIL 18, 1957
AMENDED IN ASSEMBLY APRIL 11, 1957
AMENDED IN ASSEMBLY MARCH 28, 1957

CALIFORNIA LEGISLATURE—1957 REGULAR SESSION

ASSEMBLY BILL No. 2777

Introduced by Messrs. Kilpatrick, Miller, and Beaver

January 22, 1957

REFERRED TO COMMITTEE ON JUDICIARY

An act to add Section ~~12264~~ 12265 to the Government Code, relating to the protection and preservation of essential state records, and making an appropriation therefor.

The people of the State of California do enact as follows:

SECTION 1. Section ~~12261~~ *12265* is added to the Government Code, to read:

~~12261. The Commission on Essential State Records is hereby created. Its membership shall consist of the Director of Finance, the Secretary of State, and the Attorney General, serving ex officio, and a representative of the County Supervisors Association of California, a representative of the League of California Cities, and a representative of the University of California, who shall be appointed by the Governor and serve at his pleasure.~~

~~The President pro Tempore of the Senate and the Speaker of the Assembly shall each appoint a member to meet with and participate in the work of the commission to the extent that such participation is not incompatible with their positions as Members of the Legislature, and they shall constitute a legislative interim committee on the subject of this section with all the powers and duties imposed on such committees by the Joint Rules of the Senate and Assembly.~~

~~The members of the commission and of the interim committee shall receive no compensation for their services, but shall be reimbursed for their actual and necessary expenses incurred in connection with the performance of their duties.~~

~~The commission shall determine what state records are essential to the functioning of the State Government in the event of a major disaster that would result in the destruction thereof. It shall provide for the microfilming or authentic reproduction or reconstruction by electronic process of such records and for the storing of the microfilms or other authentic reproductions or reconstructions of such records in such places with the State as it determines appropriate.~~

12265. Each state agency, with the concurrence of the Secretary of State and the Director of Finance shall determine what state records it has that are essential to the functioning of the State Government in the event of a major disaster that would result in the destruction thereof, including any records that are highly important and that would be costly to reproduce or reconstruct. Provision shall thereupon be made for the microfilming or authentic reproduction or reproduction by electronic process of such records, which shall be done by the agency, the Secretary of State, or the Department of Finance, as may be determined to be most economical. Such material shall then be stored by the Secretary of State in such places within the State as he determines to be appropriate.

Microfilm copies, electronically reproduced copies, or copies reconstructed from the punch cards which produced the originals of such records shall have the same validity and force and effect as the originals in the event that the originals are destroyed by a disaster.

~~SEC. 2. The sum of ======== dollars ($========). or so much thereof as may be necessary, is hereby appropriated from the General Fund in the State Treasury to the Commission on Essential State Records to carry out the provisions of Section 12261 of the Government Code.~~

SEC. 2. The sum of fifty thousand dollars ($50,000) is appropriated from the General Fund in the State Treasury in augmentation of the Emergency Fund created by Item 283 of the Budget Act of 1957, for expenditure in carrying out the provisions of Section 12265 of the Government Code.

APPENDIX 3

AMENDED IN ASSEMBLY APRIL 25, 1957

CALIFORNIA LEGISLATURE—1957 REGULAR SESSION

ASSEMBLY BILL **No. 2778**

Introduced by Messrs. Kilpatrick, Miller, and Beaver

January 22, 1957

REFERRED TO COMMITTEE ON JUDICIARY

An act to add Section 12260.2 to the Government Code, relating to the State Record Depository, and making an appropriation.

The people of the State of California do enact as follows:

SECTION 1. Section 12260.2 is added to the Government Code, to read:

12260.2. The Secretary of State may establish and operate ~~a Branch Record Depository in the Los Angeles area.~~ *branch record depositories.*

SEC. 2. The sum of ======== ~~dollars ($========)~~ *eighteen thousand seven hundred ninety-nine dollars ($18,799)* is hereby appropriated

from the General Fund to the Secretary of State to be expended for the establishment and support of the branch record depository *in Los Angeles*.

APPENDIX 4

ASSEMBLY BILL No. 2780

Passed the Assembly May 25, 1957

Passed the Senate May 23, 1957

CHAPTER_____

An act to amend Section 12465 of the Government Code, relating to destruction of records by the Controller.

The people of the State of California do enact as follows:

SECTION 1. Section 12465 of the Government Code is amended to read:

12465. When they are in excess of five years old, reports from county and city officials and individuals, claims, canceled and paid warrants, pay roll documents, and other records may be destroyed by the Controller, with the concurrence of the Director of Finance.

APPENDIX 5

AMENDED IN CONFERENCE MAY 27, 1957
AMENDED IN SENATE MAY 20, 1957
AMENDED IN ASSEMBLY MAY 9, 1957
AMENDED IN ASSEMBLY APRIL 30, 1957
AMENDED IN ASSEMBLY APRIL 27, 1957
AMENDED IN ASSEMBLY APRIL 19, 1957

CALIFORNIA LEGISLATURE—1957 REGULAR SESSION

ASSEMBLY BILL **No. 2781**

Introduced by Messrs. Kilpatrick, Miller, and Beaver

January 22, 1957

REFERRED TO COMMITTEE ON MILITARY AND VETERANS AFFAIRS

An act to add Article 6 to Chapter 1 of Division 7 of the Military and Veterans Code, relating to the preservation of local government.

The people of the State of California do enact as follows:

SECTION 1. Article 6 is added to Chapter 1 of Division 7 of the Military and Veterans Code, to read:

Article 6. Preservation of Local Government

1550. The Legislature finds and declares that in a war, or at the start of a war, many areas widely scattered in California are prime targets for enemy attack. Some or all of these areas could be severely damaged in the first or the repeated attacks. Injured persons would be fleeing the areas hardest hit and secondary target areas would be evacuating to the less damaged or undamaged parts of the State.

While such attacks are continuing and in the reconstruction period following such attacks law and order must be preserved and so far as possible government services continued or restored. This can best done by civil government. To help preserve law and order and to continue or restore local services it is essential that the local units of government continue to function.

In enacting this article the Legislature finds and declares that the preservation of local government in the event of a disaster is a matter of state-wide concern. The interdependence of local agencies requires that for their mutual preservation and for the protection of all the citizens of the State of California that all local agencies have the powers to take the minimum precautions set forth in this article. The purpose of this article is to furnish a means by which the continued functioning of local agencies will be assured. Should any part of this article be in conflict with or inconsistent with any other part of this code the provisions of this article shall control. Nothing in this article shall prevent a city or county existing under charter from amending said charter to provide for the preservation and continuation of its government in the event of a war disaster.

1550.01. The terms set forth in this section as used in this article shall have the meanings set forth unless the context requires a different meaning.

"Local agency" means counties, cities and counties, cities, districts, authorities and other public corporations and entities in the State of California, whether organized and existing under charter or general law.

"Disaster" means a war or enemy caused calamity such as an attack by nuclear weapons which renders unavailable a majority of the legislative body of any local agency.

"Unavailable" means that an officer is either killed, missing, or so seriously injured as to be unable to attend meetings and otherwise perform his duties. Any question as to whether a particular officer is unavailable shall be settled by the legislative body of the local agency, or any remaining available members of said body (including stand-by officers who are serving on said legislative body).

"Stand-by officers" means qualified persons appointed pursuant to this article to hold themselves available to function as incumbents of the post for which they have been appointed in case of disaster.

1550.02. As soon as practicable after the effective date of this article, each local agency may provide for the succession of officers which head departments having duties in the maintenance of law and order or in the furnishing of public services relating to health and safety.

1550.03. To provide for the continuance of the legislative and executive departments of the local agency in case of a disaster, the legislative body thereof shall have the power to appoint the following stand-by officers:

(a) Three for each member of the legislative body;

(b) Three for the elected chief executive, if said executive is not a member of the legislative body.

In case a stand-by office becomes vacant because of removal, death, resignation or other cause the legislative body shall have the power to appoint another person to fill said office.

Stand-by officers shall be designated number 1, 2 and 3 as the case may be.

1550.04. The qualifications of each stand-by officer shall be carefully investigated and a summary of the qualifications of each such officer shall be entered on the minutes when he is appointed. Each prospective appointee to a post of stand-by officer shall be examined as to his qualifications under oath.

The legislative body may request the Director of the California Disaster Office to aid in the investigation of any prospective appointee in the manner provided in this section. No examination or investigation shall be made without the consent of the prospective appointee.

Stand-by officers shall not be officers or employees of the local agency. Should said stand-by officers become employees or officers of the local agency their post of stand-by office shall become vacant. Consideration shall be given to places of residence and work, so that for each office for which stand-by officers are appointed there shall be the greatest probability of survivorship.

1550.05. Each stand-by officer shall take the oath of office required for the officer occupying the office for which he stands by.

Persons appointed as stand-by officers shall serve in their posts as stand-by officers at the pleasure of the legislative body appointing them and may be removed and replaced at any time with or without cause. Stand-by officers shall receive no compensation for the performance of their duties as stand-by officers.

1550.06. Each stand-by officer shall have the following duties:

(a) To inform himself of the duties of the office for which he is stand-by officer. Officers and employees of the local agency shall assist him and each local agency shall provide each stand-by officer with a copy of this article.

(b) To keep informed of the business and affairs of the local agency to the extent necessary to enable him to fill his post competently. For this purpose the local agency may arrange information meetings and require attendance.

(c) To immediately report himself ready for duty in the event of disaster at the place and in the method previously designated by the local agency.

(d) To fill the post for which he has been appointed when because of disaster it has become vacant. Stand-by Officers No. 2 and No. 3 shall substitute in succession for Stand-by Officer No. 1 in the same way that said stand-by officer is substituted in place of the regular

officer. He shall serve until the recovery of the regular officer from his injuries or the election or appointment of a new regular officer.

1550.07. The legislative body of the local agency shall meet as soon as possible after a disaster. The place of meeting need not be within the local agency. The meeting may be called by the chief executive of the local agency or by a majority of the members of the legislative body. Should there be only one member of the legislative body he may call and hold said meeting and perform acts necessary to reconstitute the legislative body.

1550.08. At the first meeting after the disaster the legislative body shall:

(a) Ascertain the damage to the local agency and its personnel and property. For this purpose it shall have power to issue subpenas to compel the attendance of witnesses and the production of records.

(b) Proceed to reconstitute itself by filling vacancies until there are sufficient officers to form the largest quorum required by the law applicable to that agency. Should only one member of the legislative body or only one stand-by officer be available, that one shall have power to reconstitute the legislative body.

(c) Proceed to reconstitute the local agency by appointment of qualified persons to fill vacancies.

(d) Proceed to perform its functions in the preservation of law and order and in the furnishing of local services.

1550.09. Should all members of the legislative body, including all stand-by members, be unavailable, temporary officers shall be appointed as follows:

(a) By the chairman of the board of supervisors of the county in which the local agency is located, and if he is unavailable,

(b) By the chairman of the board of supervisors of any other county within 150 miles of the local agency, beginning with the nearest and most populated county and going to the farthest and least populated, and if he is unavailable,

(c) By the mayor of any city within 150 miles of the local agency beginning with the nearest and most populated city and going to the farthest and least populated.

1550.1. If any section, subdivision, subsection, sentence, clause or phrase in this article, or the application thereof, to any persons or circumstances is for any reason held invalid the validity of the remainder of the article, or the application of such provision to other persons or circumstances shall not be affected thereby. The Legislature hereby declares that it would have passed this article and each section, subdivision, subsection, sentence, clause or phrase thereof, irrespective of the fact that one or more sections, subdivisions, subsections, sentences, clauses or phrases, or the application thereof, to any person or circumstance be held invalid.

APPENDIX 6

ASSEMBLY BILL No. 3162

Passed the Assembly May 14, 1957

Passed the Senate May 24, 1957

CHAPTER_____

An act to add Section 55 to the Elections Code, relating to the destruction of voting records and the conduct of elections thereafter.

The people of the State of California do enact as follows:

SECTION 1. Section 55 is added to the Elections Code, to read:

55. In case of a disaster in which a portion or all of the voting records of any county is destroyed, the Governor may appoint an Election Commission to outline and recommend procedures to be followed in the conduct of regular or special elections. The commission shall consist of the Governor, the Secretary of State, the Attorney General, and the county clerk or registrar of voters of each county in which destruction occurs.

APPENDIX 7

AMENDED IN SENATE MAY 16, 1957
AMENDED IN ASSEMBLY MAY 13, 1957
AMENDED IN ASSEMBLY MAY 8, 1957
AMENDED IN ASSEMBLY MAY 1, 1957

CALIFORNIA LEGISLATURE—1957 REGULAR SESSION

ASSEMBLY CONSTITUTIONAL AMENDMENT No. 65

Introduced by Messrs. Kilpatrick, Miller, and Beaver

March 25, 1957

REFERRED TO COMMITTEE ON CONSTITUTIONAL AMENDMENTS

Assembly Constitutional Amendment No. 65—A resolution to propose to the people of the State of California an amendment to the Constitution of the State of California, by adding Sections 38 and 39 to Article IV thereof, relating to the preservation of state and local government in the event of a major war-caused disaster.

Resolved by the Assembly, the Senate concurring, That the Legislature of the State of California at its 1957 Regular Session, commencing on the seventh day of January, 1957, two-thirds of all the members elected to each of the houses thereof voting in favor thereof, hereby proposes to the people of the State of California that the Constitution of said State be amended by adding ~~Section~~ ~~38~~ *Sections 38 and 39* to Article IV thereof, to read:

SEC. 38. Nothing in this Constitution shall operate as a limitation on the power of the Legislature, after the occurrence of a major war-caused disaster, to provide by law for the temporary preservation and operation of state and local governmental agencies.

SEC. 39. The Legislature may at any time provide by law for a method of temporarily filling vacancies in its membership, until such time as elections thereto can be held, resulting from the death or inability to act of members of either house resulting from a major war-caused disaster.

Any act enacted pursuant to this section shall be passed by a vote of two-thirds of all the members elected to each house of the Legislature.

APPENDIX 8

CALIFORNIA'S RECORDS—PRESERVATION AND VOLUME CONTROL

PREPARED BY LEGISLATIVE AUDITOR
February 8, 1957

I. INTRODUCTION

Summary

The creation of documents and the collection of documents and records as a basis for the exercise of governmental authority is one of the essential aspects of the governmental process. To manage these documents and records, to provide for their custody, and to make determinations as to the preservation of those which are essential and the destruction of those which are obsolete becomes, therefore, one of the major problems of governmental administration.

Although the Central Record Depository was created by legislation of 1947, and a system of official authorization for destruction of obsolete records established as early as 1927 and extended in 1939, many agencies had not set up a consistent program of record retirement by late 1956. There is definite evidence of growing interest, but it is doubtful if the halfway point has been reached.[1]

The present report is designed to indicate the topics most urgently in need of consideration by the Legislature and the various state agencies.

Essential Facilities Provided

The California Legislature has provided the essential instruments and enabling authority for adequate preservation and control of records. The principal instruments are the Central Record Depositary and Archives, and the various microfilming programs for which funds have been budgeted. Authority is provided for the establishment of retention periods for different classes of documents, after which the documents may be destroyed. A reviewing system is provided to protect the State against ignorant or careless destruction of valuable documents, while encouraging economical and systematic protection of those that should be retained for long periods or permanently.

[1] A history of the development of the records management and disposal programs of the State of California is contained in the report of the Joint Legislative Committee on Governmental Operation, entitled *Records Management and Administration in California State Government* (May, 1955).

The need for increased control of records' growth is attested by the tripling in volume of the Controller's Claim Schedules and Warrants (paid and duplicate) within the past decade. The volume of personal income tax returns doubled between 1952 and 1954, and increased 21 percent between 1954 and 1956.

The Controller's two principal files, if occupied by ordinary correspondence, would contain enough paper to whiten a 60-foot boulevard completely from Sacramento to San Francisco and on beyond San Jose. Add the latest five years' personal income tax files and the franchise tax files, and one could pave El Camino Real with documents from San Jose on to Los Angeles.

The present report seeks to determine the extent to which the agencies have made use of the facilities and authorization provided by the Legislature for control of records, and to recommend a number of immediate changes. It does not pretend to be a complete survey with full recommendations. It is based on investigation of a number of the largest record groups in the State—the ones that create real problems in budgeting filing equipment and space. *The departments and agencies, themselves, must continue to apply records management procedures to control, and if possible reduce, the bulk of their records.*

This report should be read with the objectives of a record retention program in mind. Those objectives include:

1. Elimination of irresponsible destruction of documents;
2. Systematic retirement of documents from office space to a warehouse-type depository when use reaches a low level;
3. Microfilming when justified on the basis of economy or security;
4. Destruction of documents lacking historical or further administrative value, upon a regular schedule.

II. TOPICS FOR LEGISLATIVE CONSIDERATION

A. An "Essential Records Program" Should Be Established

Summary

A nuclear attack on California would find only the official archives of the Legislature and two relatively minor administrative record groups microfilmed *and in adequate storage.* An immediate determination should be made, under legislative guidance and mandate, of which records are "essential to the continuance of government" in case of nuclear disaster, and a program of microfilming and storage instituted promptly.

An Insurance Policy

As microfilming an ordinary file drawer of materials costs about $45, including preparation costs, rigid requirements must be set up to avoid creating a multimillion-dollar program. Among the factors to be considered are:

1. What functions of which agencies are *essential* to government in an emergency?
2. Within the essential agencies, which records are genuinely essential?

3. Which agencies normally considered essential would find their functions so disrupted by the destruction of a substantial fraction of the State's population and property that they might as well start over in their creation of records?
4. Which records of the counties, municipalities and special districts must be protected?
5. How can land title companies' and counties' photocopying programs be coordinated to serve both public and private interests?
6. Which records of individuals must be protected—births, marriages, deaths, penal records?
7. At what point is the balance to be struck between the cost of the program and the calculated risk that it will never be needed?
8. What record groups should be microfilmed because of the joint considerations of space-saving and atomic security, whose microfilming could not be justified on one basis alone?

B. The Old State Printing Plant Should Be Officially Designated as the "Central Record Depository and Archives"

Summary

State buildings in Sacramento are normally designated by the name of the principal and permanent tenant. The Space Allocation Section of the Department of Finance continues to allocate unneeded space within this building to other agencies. The status of the Central Record Depository and Archives (henceforth referred to as CRD) should be cleared up and space allocations made in conformity with planned requirements and greatest economy.

Resolution Needed for Conflict of Interest

The building at 1020 O Street, Sacramento, formerly occupied by the State Printing Plant, now has three tenants. The second floor of the main building and the second and third floors of the annex, are occupied by CRD. The main floor is occupied by the sorting and filing operation of the Personal Income Tax Division of the Franchise Tax Board. The basement is divided between Department of Motor Vehicles storage and the Secretary of State's ballot paper storage.

The Franchise Tax Board is expected to move to the currently unoccupied building at 1025 P Street, which backs on the old printing plant. According to present plans, other agencies will share 1025 P Street with Franchise Tax, while Franchise Tax proposes to retain permanently the first floor of the main building of the old printing plant.

Estimates at the end of this section demonstrate that the conflict of interest between the Franchise Tax Board and CRD will probably reach a head in the year 1959. Unless space is provided for both activities before that time, the record depository program will come to a halt, with resultant mounting space costs throughout the agencies having need for its services.

Factors affecting the decision on use of the structure will include:

1. Building design
   a. The floors are designed to bear from two to four times the normal office building load of 125 pounds per square foot;

b. The ceilings are high, an advantage in warehousing;
c. It is loft-type space, not suitable for conversion to permanent office space, as has been determined by architectural representatives of the Division of Architecture, the Department of Finance, and the Legislative Auditor.

2. Alternative quarters for CRD and income tax sorting
   a. Relative cost of providing new quarters for the two operations;
   b. Relative need of CRD for a central location, and of personal income tax sorting to remain near its main office;
   c. Possible assignment of space in CRD to noncurrent personal income tax records (transfer of all but current year to archival cartons).

3. Relative efficiency of utilization of old printing plant
   a. Comparison of increased space cost for P. I. T. sorting and filing with average cost of maintaining files before transfer to CRD.

On the basis of present information, it appears that the old State Printing Plant should eventually be taken over entirely by the Central Record Depository and Archives.

Storage Space Available in the Central Record Depository September 28, 1956 [2]

	Cubic feet
Available space, gross	53,859
Less occupied space	48,414
Net	5,445
Less material not shelved	3,452
Shelving and drawers available	1,993

Rate of Growth of Collections

	Cubic feet
Gross receipts, first 10 months, 1956 prorated to 12 months	8,400
Material destroyed, first 10 months, prorated to 12 months	1,200
Growth 1956	7,200
Growth 1955, for comparison	3,200

The rate of growth increased approximately 100 percent between 1955 and 1956. A subjective opinion based on visits in a number of agencies is that the rate of growth will continue to increase in 1957 by about 50 percent, reaching 11,000 cubic feet per year. For present purposes, one should assume that the growth will remain on about that level for five years, to 1962. This anticipates that the backlog of materials more than five years old will be deposited by 1962, and that the falling off in this factor will be compensated for by increased deposits of materials one to five years old.

Shelving requested to fill space now assigned to the CRD will hold 17,392 cubic feet. At 11,000 cubic feet per year, this new shelving will be filled on or about *June 30, 1958*.

Present plans of the Franchise Tax Board contemplate releasing the old Printing Plant Annex upon removal to new quarters. When filled with archival shelving, without mezzanine, this will hold 13,680 cubic

[2] Letter, Archivist to Legislative Auditor, September 28, 1956.

feet On the same assumptions, the first floor of the annex will be filled with documents on or about *September 30, 1959.* The first floor of the main building, and both annex and main basements would still be available for records upon removal of other tenants.

If one were to extend these figures further, the present building would be filled, except for the basement, by about June 30, 1965. However, there are a number of factors that may serve to reduce the rate of growth materially after a few years. Among these factors are:

1. Simplification and rationalization of office procedures;
2. Development of a branch record center in Los Angeles;
3. Use of microfilm in conjunction with an "essential records program";
4. Setting of shorter retention periods on certain record groups;
5. Development of low-cost techniques for "weeding" files.

C. Branch Record Depository in Los Angeles

Summary

A number of state agencies in Los Angeles need low-cost record storage, with constant telephone reference service for records too active to be transferred to Sacramento.

Legislation should be introduced, authorizing the Secretary of State to establish a branch record depository in the Los Angeles area.

An additional sum should be budgeted to care for this activity.

Analysis of Need

About September 1, 1956, obsolescent records of the Department of Industrial Relations and other agencies in Los Angeles were moved to commercial storage from the Fashion Center Building, which was to be demolished to make way for the State Building Annex. No space adequate for record storage was available in state-owned buildings in Los Angeles.

A survey by the State Archivist showed, 300 cubic feet of Material immediately available for storage in a record center, with a total of 6,000 cubic feet probably available by July 1, 1957. In view of the fact that storage space has been held to a minimum in plans for the State Building Annex, it is probable that there will be a continuing need for warehouse-type record storage.

The sum recommended in the Legislative Auditor's Budget Analysis is $18,791. This assumes close to 9,000 cubic feet of records in storage by July 1, 1958, if a branch record center is made available. Increments in succeeding years should be substantially smaller. This type of operation represents an over-all saving to the State by reducing other agencies' requirements for office space and equipment.

It is expected that all permanent archives will be concentrated in Sacramento and that the Archivist will, by agreement with the agencies concerned, send seldom used nonpermanent records to Sacramento when it is economical to do so.

The State Constitution requires that civil service employees be used in servicing these records. However, record center space and miscellaneous services may be provided on lease if space in state quarters continues unavailable.

D. Retention Period for Controller's Documents

Summary

Except for books of original entry, the Controller is authorized to destroy, or to microfilm and destroy, after ten (10) years, "claims upon which warrants have been issued, canceled warrants, and other records involving the expenditure of state money." (Government Code, Section 12465.)

It is recommended that this section be amended to provide that the Controller *may* destroy pay roll supporting documents and attendance reports at the end of four years from the close of the fiscal year in which they were produced; and further, that the Controller *may* destroy claim schedules and paid warrants at the end of five years from the close of the fiscal year in which they were produced; and that the invoices and vouchers supporting the claim schedules may be destroyed after final audit.

Retention Periods Related to Statutes of Limitations

Claims against the State by exempt employees are covered by a three year statute of limitations; the statute runs for but one year on all other employees' salary claims. Hence a retention period of four years should cover both biennial audits and the possibility of requiring evidence for suits by and against the State.

All other claims against the State are covered by statutes of limitations that in no case appear to exceed four years. Hence the provision recommended above provides one to two years' margin of safety.

The rate of reference to these materials decreases rapidly over the first five to six years of life. In 1956 there were 28 actual references to 1,462 cubic feet of 1951 materials (except for a special study of 1951-55), 11 references to 1,156 cubic feet of 1948 materials, and 12 references to 985 cubic feet of 1947 materials.

Such permissive legislation as is recommended will enable the Controller to retain groups of files and individual files for longer periods if action involving them is under way or contemplated.

III. TOPICS FOR ADMINISTRATIVE ACTION

A. For Additional Office Space, Require a Records Survey

Summary

First class office space in a number of agencies is taken up by scores, and sometimes hundreds, of filing cases whose contents are relatively inactive. The Department of Finance now requires a records survey and purging of the files before approving requests for filing cabinets. This practice should be extended to requests for additional office space. Obsolescent material should be destroyed or transferred to CRD, and consideration given to centralizing any remaining bulky files in agency basement or loft before additional office space is granted.

Comparative Costs

The principal cost factors in maintaining a filing cabinet full of records consist of: equipment, space rental, and clerical service. Remington Rand figures the annual cost of a single filing cabinet in office

space ranges from $88 to $640 a year, of which 80 percent goes for clerical salaries, with normal supervisory and space costs in addition.[3]

The Pacific Telephone and Telegraph Company estimates the cost of maintaining a cabinet full of records in office space as $140 a year, in contrast to $6.23 a year when those records are moved to the company's record centers.[4] California's CRD costs are almost identical with those of the Pacific Telephone and Telegraph Company.

No average cost of maintaining state office files has been obtained. A quick check of costs for any one office may be obtained by dividing the file clerks' salaries by the total number of cabinets. It is probable that the cost comes near the Remington Rand average figure of $238 a year.[5]

Aside from labor costs, the space and amortization charges on a file cabinet in state office space amount to $18.90 a year. The comparable cost in CRD is 24 cents.

Further savings in using CRD are found in the fact that few files are used to capacity in office space, while each carton in CRD is normally packed full. Reduction of the number of relatively inactive files not only permits better traffic patterns within an office, but frequently reduces the amount of labor required to locate a file folder.

In establishing central files outside high-class office space, certain dangers must be avoided. Quarters should be properly lighted and ventilated to maintain clerical morale. Work flow patterns must be efficient. Trips between files and offices must be kept to a relatively low level. In many situations, demand for file folders originates in letters received twice daily, and but two trips a day between file room and offices will serve to supply most staff needs.

Scattered Files Conceal Waste

Industrial concerns have begun to realize the need of restricting individuals' files. Proctor and Gamble limits each originator of correspondence to *one* file drawer in office space. The National Records Management Council's rule is one and one-half drawers (2.5 cubic feet) per employee in office space, and an equal amount in storage.

In one department of the State Government the principal filing operation has been thoroughly modernized. But scattered through the remainder of the offices of that department are 4,419 file drawers of material for some 415 employees, or 11 drawers per employee, with 556 additional drawers in agency storage. Applying the more generous N. R. M. C. rule, 759 cabinets of material should be withdrawn from office space. Using the standard of 6.4 square feet per cabinet (including aisles), as much as 4,800 square feet of office space could be released for other purposes.

The capitalized cost of this space, at $20 a square foot, is $96,000—dollars that the State of California must now bond itself to raise in order that it can build more office space.

For these reasons, we recommend that a records survey and appropriate action to dispose of or shift records be taken with respect to

[3] Perrin Stryker, "Money in the Wastebasket," *Fortune, February*, 1953, pp. 144-45, and 156ff.
[4] Pacific Telephone and Telegraph Co., *Use Your Records Center* (pamphlet), p. 10.
[5] Stryker, *loc cit.* Note the wide *range* in cost, quoted two paragraphs above.

any agency requesting additional space before allocating such space to it.

B. Subject Microfilming Projects to Rigid Review

Summary

Microfilm cameras and readers are wonderful gadgets, by which a phenomenal 99 percent reduction in bulk of records can be achieved. This has so impressed administrators that cameras have sometimes been installed without due consideration of three basic steps which should be taken before adopting this method:

1. Useful life for administrative or historical purposes (retention periods) of documents proposed for microfilming—retention period should be officially determined as an initial step;
2. Unit cost calculations for microfilming—an over-all budget figure needs to be accompanied by data showing cost per page and per file drawer for proper evaluation;
3. Cost comparisons with CRD storage—some microfilming programs are more costly than storage and are not required for reference purposes.

We recommend that all current and proposed microfilming programs be supported by the above data when submitted for budgeting.

We submit the following detailed information on microfilming costs for three reasons:

1. To advise agencies to assure themselves of the full costs of microfilming before budgeting for such projects.
2. To point out the necessity for careful examination of any files submitted for microfilming as part of an "essential records program."
3. To suggest the advisability of establishing a central microphotography service. We believe that further investigation will be necessary to determine whether the present load warrants such a consolidation. Our present opinion is that the point will be reached in the near future. If the microfilming phase of an "essential records program" is done directly by the State, rather than by contract, centralization will almost surely be required.

Factors in Cost of Microfilming

The basic costs of microfilming in approximate order of importance are:

1. Labor costs in preparing, placing in order, and indexing;
2. Camera operator's wages;
3. Film and processing costs;
4. Reference costs;
5. Storage costs.

Labor costs for preparation are the great variable. They are almost nothing for State Employees' Retirement System members' permanent account cards, which are in alphabetical order, require no preparation, and can be photographed at the rate of 400 a minute. By contrast, preparation, weeding, and indexing (with spot proofing for quality)

represent 57 percent of the cost of microfilming the State Personnel Board's files.

The factor of hand labor will play a large part in the cost of any "essential records" microfilming program. If two sets of records are rated as of equal value, it may be necessary to eliminate a file that is in bad order, of irregular page sizes, and much-stapled, while an equal number of register cards that may be photographed with no preparation and fed in automatically at 200 to 400 per minute will present no problem.

Practice with regard to camera operation assignments varies widely between state agencies. In one case, junior clerks are employed; in another, all hands from file room supervisor down participate as they have free time. Although mastery of few techniques is needed, less than mastery is useless. Essential to inexpensive reproduction at high speed, as would be required after a major disaster, is a high standardization of density and contrast in the films. This is an art requiring some skill, and acquaintance with the finished product.

We do not feel that casual assignments to camera operation are likely to produce a satisfactorily standardized product. We propose, in continuation of this study, to select samples of films from each agency now having a microfilm program. We shall have them examined by experts and tested on a densitometer.

Film and processing costs are standard, running about $8 per 200-foot roll of 16 mm. film. The size of the documents and ratio of reduction are the two related factors in determining film cost per page. We believe that the slight additional cost of a larger negative (small reduction ratio) is justified in the ease of working with the finished product.

Reference cost we find to be a factor normally neglected in setting up a microfilm program. Yet, as we shall later discuss in detail, one agency has spent thousands of dollars in microfilming records for current use, only to find that searching the original records is much speedier and cheaper. Hence, the originals will be used so long as their physical condition is not impossibly poor.

There is no reason why adequate reference cost figures cannot be developed for any agency. The initial cost for a single Recordak microfilm viewer ranges from $350 to $925. Due to technological developments, this probably should be amortized over not more than 10 years.

One of the principal factors is the time consumed in setting up each individual reel on the microfilm reader. The State Personnel Board staff estimates that it takes from three to four minutes to set up the reel and find an item, compared to one minute to locate an item in a file drawer. If but one frame per reel is normally referred to, the unit cost will be high. In the case of such documents as legal briefs, where hundreds of pages from one reel may be studied, the time consumed in setting up the reel will be negligible in relation to the time consumed in actual study of the reference.

Two factors that are hard to estimate, but which tend to offset each other are: (1) the tendency for the prospective user to reduce his calls for reference material when he knows he must use microfilm; (2) the additional time required if the user must leave his office to consult microfilm.

When photostats of documents must be made, as in administrative or judicial hearings, one must at present figure a cost of 15 cents a page, in quantity. This will be an important factor in some agencies, negligible in others.

The cost of adequate equipment for the storage of microfilm is negligible in relation to the cost of filing cabinets for the same amount of paper. However, we find that microfilm is frequently not stored in the dustfree, humidified and relatively constant conditions that the U. S. Bureau of Standards has indicated to be necessary for long-term preservation of records. Further investigation should be conducted to determine which agencies have satisfactory storage arrangements. Consideration should be given to building an inexpensive storage vault at the Central Record Depository.

For protection against nuclear explosions, however, microfilms should be removed from Sacramento. The Secretary of State has completed a master contract for atomic vault space at such a favorable rate that he will be able to accept without charge to the agency any microfilm currently in its possession that genuinely requires a high grade protection. This space also meets highest standards of preservation against the elements.

We wish to emphasize that there is wide variation in cost between microfilming jobs. We have sought figures from a variety of sources, and believe that the following is typical. The Archivist of the State of Oregon charges $3.20 per 1,000 items, letter size, one side only, with an additional charge for preparation: "refiling, folding or unfolding of documents, de-stapling, etc." This raises the cost to about 0.7 cents an image.

Federal figures come to approximately the same amount. The following table is an extract of typical costs from a more detailed presentation.

Cost of Microfilming: Typical Examples of the Principal Factors *

Operation	*Typical example*	*Cost per 1,000 images*
Preparation of documents	Filing sequence checked and acco fasteners removed (6,000 images/man-day)	$2.00
Camera activities	Rotary hand feed camera, letter size, average color variations (8,000 images/man-day)	1.50
Inspection, developed film	Extensive spot check (12,000 images/man-day)	1.00
Retakes, splicing, mounting	1 retake per 1,000	.50
Film (inc. processing)	Permanent, 16 mm., 24:1 ratio	1.00
Supervision	1 supervisor/5 cameras	.38
Indexing, boxing, labeling	Simple alphabetical file	.04
Messenger service		.21
Equipment	Rotary hand feed camera	.21
Contingencies	5 percent of operating costs	.34
	Total cost per 1,000 images	$7.18

* Adapted from Chester L Guthrie, "Getting Together on Microfilming A Coordinated Federal Government Program," Interagency Records Administration Conference, Report of Seventh Meeting, 1953-1954 Season, May 21, 1954. Appendix, Exhibit 1.

The Secretary of State has kindly made available cost data obtained from the contractor who recently microfilmed the corporation records

of the Secretary's office. These were found to run not over 1 cent per document when left in roll film form. This included the cost of preparation of files which were in particularly good order, but from which many clips and staples had to be removed. In view of higher wage levels in the California Civil Service than those on which the Oregon figures were based, and cost increases since the federal figures were made, an average cost of 1 cent an image appears realistic.

Conversion of cost per image to cost per cabinet depends on the number of pages per drawer or per cabinet. Estimates run from 3,000 to 6,000 pages per drawer. Striking an average of 4,500 per drawer for a standard 5-drawer letter cabinet, produces a cost of $225 per cabinet. Certain materials will run much cheaper. It is estimated that a cabinet of State Employees' Retirement System "members' permanent records" may be photographed for $44 a cabinet, thanks to no preparation cost and high speed automatic camera feeding.

Cost comparisons should be made with Central Record Depository storage in determining on a microfilming program in which atomic security is not a factor. Central Records Depository costs, at the latest estimate, are 82 cents per cubic foot per year, or $6.56 for a completely filled five-drawer letter cabinet. This figure includes rent, amortization of equipment, and salaries. It includes reference service provided by the depository, but does segregate the higher costs of archival services. A cabinet of papers that costs $225 to microfilm can be stored for 34.5 years at present CRD costs.

This serves to illustrate a basic consideration, *that the retention period should be carefully and officially determined as an initial step in a records management program.*

Centralized microphotographic services should be considered as a means of reducing costs. No state agency is prepared to accept work from other agencies, except for the CRD and State Library, which can do so on a limited scale. Yet estimates furnished by the agencies themselves indicate that equipment now on hand has a low utilization expressed as a percent of total time available for use.

Agency	*Camera utilization (Percent)*
Department of Public Health, Vital Records	50
Secretary of State, Corporation	75
State Personnel Board	12
State Employees' Retirement System	8
Department of Justice, Criminal Identification	33

Although the average utilization of camera equipment is low, this is a small factor compared with the labor lost by using machines not best adapted to the materials. The entire investment in an "essential records" program will be lost if standards are not maintained that permit most economical reproduction from film if and when necessary. These are two specific factors in favor of centralized microfilming under expert supervision.

Because of the nature of some agencies' files, centralization of all equipment is not desirable. It may be wise to centralize responsibility and to arrange workloads so that maximum advantage may be taken of equipment the State now possesses.

This is a desirable subject for further study by any committee the Legislature may appoint on the subject of "essential records."

A survey was made of federal microfilming programs for the Fiscal Year 1953. Among the conclusions reached were that the costs of microfilming could have been halved, saving 2.4 million dollars. They also found that typical operation costs were three times what they should have been if the work were done on a mass production basis. In consequence, it was recommended that the National Archives and Records Service should have authority to:

A. Approve all microfilm projects
B. Limit the acquisition of new equipment
C. Pool and transfer equipment
D. Consolidate microfilming operations
E. Operate central microfilming services
F. Establish standards and regulations for all government microfilm operations
G. Establish priorities and approve projects for security microfilming *

We conclude:

1. That $225 approximates the cost of microfilming the contents of a standard filing cabinet, provided they are in good condition;
2. That each microfilming proposal should be estimated independently because of the wide range of costs;
3. That documents should not be microfilmed for reference purposes only, if they can be stored in the CRD more cheaply until destruction date;
4. That centralized control of microfilming activities should be considered in connection with any requests for an increase in microfilming.

C. Modify Filing Systems to Eliminate Expensive "Weeding"

Summary

Filing systems throughout the government should be revised, so far as possible, to eliminate all final item-by-item examinations of materials before destruction or being removed to storage.

Cost Factors and Methods

Records management studies have demonstrated that reducing bulk in files by eliminating individual folders is usually unjustifiable from a cost standpoint. "Weeding" of individual items is even more so. Among the methods of eliminating or reducing this sorting are:

1. Group the folders by year of origin. Example: majority of income tax returns. (This is now done.)
2. Segregate long-retention files at time their status is determined. Example: at time of award separate the workmen's compensation "permanent disability" cases from those that may be discarded after a few years. (Not now done.)

* SOURCE: Irving Zitmore, 'Some Observations on Microfilming Operations in the Federal Government" Interagency Records Administration Conference, *Report of Seventh Meeting*, 1953-1954 Season, May 21, 1954.

3. Color-code permanent papers so that a beginning file clerk may discard unwanted material. Example: summaries and legal documents in mental hygiene and corrections files. (Not now done.)
4. Use a file-within-a-file for permanent materials. (This is now done with some Department of Justice records.)

IV. RECORD PROBLEMS OF SELECTED AGENCIES

Files That Create Bulk

The accompanying tables demonstrate the value of the CRD's activities, and the need for continued study by the departments and agencies of their record management activities. The Historian formerly attached to the Archives surveyed the records in over 1,600 state offices for the

Analysis of Selected Bulk-creating Files—Controller's Office

File	*Volume cu. ft.*	*Location*	*Dates*	*Retention per yrs.*
Claims schedules and supporting pages	9,774	CRD	1946-54	10
Same	2,460	Office (Nov. '56)	1954-56	10
Warrants—originals and duplicates	7,467	CRD	1946-54	10
Same	562	Office	1954-56	10
Gift and Inheritance Tax, Los Angeles	1,568	Office space	1947-56	Permanent
Same, CRD	3,172	CRD	1915-54	Permanent
Total	24,953			

purpose of setting retention periods on the various files. In many instances, large numbers of obsolete files were destroyed, sufficient being retained for documenting the history of the State and its administration. In preparing these tables, we have not attempted to duplicate Dr. Bowman's feat. We believe the material presented sufficiently indicates the need for continued study and action in streamlining office procedures. controlling the production of unnecessary records, and eliminating documents that have served their administrative and historical functions.

A. Controller's Files

Summary

Until relatively recently, the Controller's claim schedules and paid warrants were held permanently. The retention period was first set at 15 years in 1947; in 1951 it was reduced to 10 years. Among recommendations for legislation contained in the first section of this report is that there should be a further reduction in the mandatory retention period. There may be a time after audit procedures are further improved when the subject will again require study with an eye to an additional reduction.

The gift and inheritance tax files present a somewhat different problem. Property of a decedent may not be sold until arrangements have been made to pay the inheritance tax. Undeclared property may turn up after a number of years, when transfer of title is desired. For that reason, the files have been retained.

Analysis of Selected Bulk-creating Files—Department of Corrections

File	*Volume cu. ft.*	*Location*	*Dates*	*Retention per yrs.*	*Remarks*
Inmate files	152	Office, Sacto.	Current	Permanent	Skeleton record in Sacramento
Active parolees	730	Office, Sacto.	Current	See below	Previous file now added
One year retention	638	Agency storage	1948-56	See below	Full file held one year after parole
Parole sluffs	515	Agency storage	1948-56	Temporary	Removed from file above; held to test system
Four-year retention	370	Agency storage	1948-56	Four years	Reduced from 12 to 56 cases per drawer
Parole sluffs	304	Agency storage	1948-56	Temporary	Removed from file above; held to test system
Permanent files	140	Agency storage	To 1956	Temporary	Above weeded, reduced to 10 percent of original volume. Microfilmed, held to test system.
Miscellaneous case files	611	Agency storage	Various	Most, permanent	
Parole files, older group	730	CRD	To 1948	20	
Total	4,190				

That material in each file which duplicates court records is available if needed. The original Inheritance Tax Affidavit and file copy of Appraiser's Report appear to be the minimum essential documents for enforcement. If a three-year retention period were set on the remainder of the files on all estates with a taxable value of less than $250,000, we estimate the reduction of volume to be 80 percent, with an initial dollar saving of $2,000, increasing annually.

Our study of the Gift and Inheritance records in CRD showed that on the average each drawer of material (2 cubic feet) was referred to once in 22 years.

Recommendations

In addition to the reductions in statutory retention period already proposed, we recommend that the Controller study the gift and inheritance tax files to determine the relationship of use to age of file and size of estate, and that it modify its filing system to permit ready disposal of materials whose useful period has ended.

B. Department of Corrections

Summary

The Department of Corrections has a well-organized filing system and is in the midst of testing a system of record disposal and microfilming. The analytical table presents the principal groups and their significance. The first two groups are the genuinely active records. The "parole sluffs" will be discarded as soon as it is ascertained that no material tentatively discarded is genuinely needed. The department expects to discard some 1,300 cubic feet of material in the near future.

We particularly recommend this department on its systematic approach to the problem of record control.

Recommendations

We accept the basic premise that a prison record should be available as long as there is a possibility of the individual returning to prison. The division between the permanent and "sluffable" contents of the file appears reasonable. However, we believe there is room for further departmental study of means of cutting down the "weeding" time—e.g., by color-coding the permanent materials. A review of microfilming costs, with attention to frequency of demand for photostatic copies, we believe to be worthwhile.

C. Department of Education

Summary

In July, 1956, the administrative headquarters of the Department of Education had 4,419 file drawers in office space and an additional 554 drawers, plus shelving, in storage off its garage. As there were approximately 415 employees, each employee had 18 cubic feet apiece or 2.25 letter cabinets per employee. Compare the figures above with Proctor and Gamble's limitation of each employee originating correspondence to one file drawer.

Ninety percent of this material was in office space, whereas modern practice would allow no more than 50 percent in office space. If one adds to this the teachers' certification records on office shelving, the

Analysis of Selected Bulk-creating Files—Department of Education

File	*Volume cu. ft.*	*Location*	*Dates*	*Retention per yrs.*	*Remarks*
Sacramento office	7,400	Main office	Various	Various	A wide range of materials
Sacramento office	920	Agency storage	Various	Various	Book shelving in addition
Total	8,320				

percentage in office space increases. Only one small group of bound volumes has been marked for transfer to Archives.

Record disposal, we are told, is performed on files at least four years old. A senior clerk or secretary offers records of possible further interest or value for a second appraisal by the responsible officer. Those not retained by him are destroyed. In five years, one Authorization for Continuing Destruction has been requested, for School Apportionment Reports. Between December 16, 1955, and August 15, 1956, four spot requests for authority to destroy records came from the central office, while 13 were received from the state colleges.

Recommendations

1. With responsibility for disposal of records decentralized and standards of selection highly personal, we recommend that the department and the archives historian draft and circulate information for guidance of employees in selecting documents of administrative and historical value.

2. We recommend that a continuing effort be made to reduce the ratio of file drawers per employee. With the variety of functions performed, there can be no standard, but an over-all reduction by half does not seem unreasonable. If this were done, close to 3,000 square feet of office space could be saved and 400 five-drawer filing cases released by placing their contents in archival storage cartons.

3. We query whether materials are being discarded without review by the Department of Finance, as required by law. The number of requests for authority to destroy records (Department of Finance Form 8) appears small, if there is regular review. If the requests reflect the true condition, we believe the departmental files need to be combed for "dead wood."

D. Department of Employment

Summary

This department is faced with two problems. The first is the volume created by the Employers' Tax and Wage Returns, where four years' returns occupy 8,900 cubic feet of office space. Yet agency studies show that there are 50 references per day to the two oldest years.

The other problem is created by the department's storing approximately 2,000 cubic feet of records in its own warehouse. A staff member came upon these by chance one day when he was looking for records stored in a nearby warehouse. He spent a half hour or more going up and down each aisle and making notes without being challenged by a single employee. We accept the department's argument that a person unfamiliar with the files would have a hard time locating anything of value. We may add that much of this material was approaching its destruction date. Nonetheless, we believe such a practice is a temptation to vandalism, if to nothing else.

Recommendations

The department should consider transferring its obsolete files from the warehouse to CRD, and if this space is not needed for its own purposes make it available to other agencies through the Department of Finance.

Analysis of Selected Bulk-creating Files—Department of Employment

File	*Volume cu. ft.*	*Location*	*Dates*	*Retention per yrs.*	*Remarks*
Employers' tax and wage returns	5,600	Main office	1954-56	4 years	In filing cabinets
Employers' tax and wage returns	3,300	Main office	1952-54	4 years	In transfer cases. Move to CRD?
Interstate file	512	Warehouse		Eligible for destruction 1/1/57	
Miscellaneous	1,500 *	Warehouse			Referees' decisions, etc.
Total	10,912				

* Estimated.

The department should investigate the possibility of transferring its two oldest years of employers' tax and wage returns to CRD, and providing one male file clerk and a connecting telephone line to service them. There are a number of cost and convenience factors involved. We offer this recommendation as a matter for study, seeing a saving in rental but being by no means sure of the answer a detailed study would produce.

Analysis of Selected Bulk-creating Files—Franchise Tax Board

File	*Volume cu. ft.*	*Location*	*Dates*	*Retention per yrs.*
Franchise and corporation tax files	986	Office	Recent	
Franchise and corporation tax files	2,753	Basement	To 1932	Various
Total	3,739			
Personal income tax	900	Office	1952	4 years
Personal income tax	5,432	Old Ptg. Plant	1953-55	4 years
Personal income tax	909	Warehouse	1947-48	10 years
Personal income tax	2,520	Ptg Plant Annex	1949-51	4-10 years
Personal income tax	660	Various	Misc.	Various
Total	10,421			

E. Franchise Tax Board

Summary

The franchise tax and corporation tax files do not present much of a problem, as the master table indicates. A recent decision in favor of the State in the bank tax suit will permit the discarding of some of the oldest files, unless there is further appeal of the case.

The personal income tax files are the ones that create volume. When the 1952 returns are discarded and the 1956 returns put in their place, 160 new filing cabinets will be required.

Substantial savings in administration will result if contemplated legislation frees lower income bracket individuals from the necessity of filing returns, or alternately if persons having little income beyond reported salaries are permitted to file a punch-card copy of the employer's return.

The wage cost of the initial sorting and filing of income tax returns for the year 1954 was above $80,000 without considering space, equipment and administrative overhead. Costs are compounding at the rate of about 10 percent a year.

We have discussed in Part I, Section B, of this report the prospective conflict of interest between the Central Record Depository and the Franchise Tax Board over space on the main floor of the old printing plant, 1020 O Street, Sacramento.

Recommendations

1. The franchise tax and corporation files should be reviewed for materials that may be transferred to the CRD.
2. A thorough procedural study should be made of personal income tax processing, with a view to mechanizing as much as possible of the auditing and filing.
3. See Part I for recommendations on the space conflict.

Analysis of Selected Bulk-creating Files—State Board of Harbor Commissioners

File	*Volume cu. ft.*	*Location*	*Dates*	*Retention per yrs.*	*Remarks*
Bound volumes	1,000 *	Storage room	1860's to 1920's	Not determined	It is this group of original records that is of particular interest
Miscellaneous	1,600	"Bowling alley"	19/9/53	Various	
Current correspondence and records	150	Central files	1953-56	10 years	Recommend reducing correspondence retention period to 5 years
Total	2,750				

* Estimated.

F. State Board of Harbor Commissioners

Summary

At 5 o'clock several years ago homeward bound San Franciscans watched flames shoot from the north end of the Ferry Building, as fire gutted the end being rebuilt for an International Trade Center. High in the tower were documents chronicling almost a century of San Francisco's seaborne commerce. At the Fire Marshal's recommendation, these were removed to other rooms in the building. An employee of the Harbor Commission was put to inventorying them. Upon his transfer to other duties the inventory was dropped until the second call upon the assistant secretary of the commission by a member of our staff. The assistant secretary thanked the staff member for bringing this matter to his attention again, and it was arranged that the historian of the archives should be invited to go through the documents with the assistance of the Harbor Commission personnel.

The historian of the archives had spent four full days up to January 18, 1957, in the Ferry Building, and was planning to spend several additional days. He described the collection as unique, particularly since many official records had been destroyed in the San Francisco fire of 1906. He has arranged to remove the principal records to the archives, and to offer duplicate materials, when available, to historical and college libraries in the area.

Current files of the State Harbor Commission were found to be in good order. Recent noncurrent files are transferred to agency storage, a long closet well fitted with steel transfer cases and wooden shelving.

Comment

As in a number of other situations, the administrator with whom we talked had a perfectly clear idea of what was needed and was entirely willing to cooperate. In the pressure of other business, records management had simply been pushed to one side.

Good citizenship arises in part from a decent pride in one's country's past, which in turn rests on a knowledge of history. Honest history can only be written from the documents. And it is a major objective of a record program to make an intelligent selection of the meaningful documents and to give them adequate protection. We believe a significant step forward has been taken at this particular point.

G. Department of Industrial Relations

Summary

The headquarters of this department is in San Francisco, with a large branch in Los Angeles and five relatively small branches throughout the State. The San Francisco headquarters and the Los Angeles branch were seen during this study.

The principal file in this department is the closed case records of the Industrial Accident Commission. Of those in the Central Record Depository, reference statistics show that a legal drawer of documents would be consulted twice in a five-year period. As these may constitute claims against the State, it is felt that they must be retained for a long period, and only during the 1955 Legislature was the minimum retention period reduced from "permanent" to "25 years."

Analysis of Selected Bulk-creating Files—Department of Industrial Relations

File	*Volume cu. ft.*	*Location*	*Dates*	*Retention per yrs.*	*Remarks*
San Francisco Headquarters					
Division of Industrial Accidents, cases	275	Office	?	25 years ?	
Same	1,400	Basement (more in office ?)	1946-54	25 years	Bureau proposes to "weed" files to half volume
Same—steno notebooks	180	Basement	1936-52	Not set	Consider destroying when five years old
Permanent Disability Rating Bureau, cases	250	Office files		Permanent	
Legal Bureau, cases	230	Basement	1920-53?	Permanent	
Division of Labor Statistics					
Work injury reports	205	Office and basement	-56	6 mos., nondisabling; disabling permanent?	
Doctor's report of work injury	100	Basement	1955-56	1 year	
Division of Industrial Safety					
Elevator file	200	Office	-56	Orig. and latest inspt. rpt. retained	
Boilers file	380	Office	-56	Same; 10 yrs. on inactive boilers	
At CRD and Los Angeles					
Division of Industrial Accidents, cases	4,808	CRD	Various	25 years for most, if not all cases	
Same, Los Angeles	1,100 *	Office, L. A.	Various	25 years for most, if not all cases	
Same, Los Angeles	500 *	Storage, L. A.	Various	25 years for most, if not all cases	
Miscellaneous	1,188	CRD			
Total	10,816				

* Estimated

The Industrial Accident Commission at one time proposed to add a senior clerk whose duties would be to sort through every closed case file, beginning with the current ones and devoting spare time to the backlog, in order to eliminate unnecessary material. We have suggested in Part III-C, above, means of making the elimination of material from current files a routine and automatic matter. We strongly recommend that closed files be arranged or date-stamped in such a manner that discarding at the end of 25 years will be a simple operation.

Permanent disability files and permanent medical files are at present intermixed with nonpermanent files. When a case has been given a permanent designation, it should be filed separately.

We find the boiler inspection and elevator inspection records are in excellent shape.

Recommendations

We find that the doctors' reports of work injury are being given only limited use. This is a situation similar to that reported by the Hoover Commission, where private enterprise spends hours making voluminous reports, most of which gather dust for six months to a year and are then thrown out. We believe that a new evaluation of this activity is called for.

We believe the department should take a fresh look at its filing procedures, and while doing so, make reference studies to see if the retention period on nonpermanent industrial accident cases cannot be reduced still more.

Analysis of Selected Bulk-creating Files—Department of Insurance

File	*Volume cu. ft.*	*Location*	*Dates*	*Retention per yrs.*
San Francisco				
Active files	1,200 *	Office	Various	To be determined
Inactive files	2,400 *	Basement		
Los Angeles				
Active files	500 *	Office	Various	To be determined
Inactive files	350 *	Agency storage		
Total	4,450			

* Estimated.

H. Department of Insurance

Summary

The Insurance Commissioner has appointed a committee to study its filing problem. Among its files are: central, license, investigations, reports. Figures given in the table are estimates based on the preliminary inventory. The reports file is basic to the history of the agency and of the industry.

Recommendations

We suggest that the historian of the Archives and the records management analyst of the Department of Finance be invited to examine these files before the report of the committee has reached its final stage. We believe the department is to be commended for its systematic approach.

I. Department of Natural Resources

Summary

We investigated the files of the Division of Mines and of the Division of Oil and Gas. The Division of Mines has less than 300 cubic feet of files, and has published most of its basic data. There are some 70 large photographs and some photographic negatives of some historical interest.

The Division of Oil and Gas has purged its general correspondence file within the last few years. Its files of drilling and production records present a problem of continued interfiling.

Recommendations

The Division of Mines should consider releasing photographs to Archives, where more protection can be afforded them. Division of Oil and Gas should consider sending files on inactive wells to the CRD. We question whether it is necessary to give inquirers instant service from these records.

J. Department of Professional and Vocational Standards

Summary

This department is unique in having 28 distinct boards of supervision and as many different administrative staffs. Each board is charged with the licensing of individuals, establishment, and/or schools. Each board has its own files, filing system, and records management policy. We have examined the files of seven of the larger boards.

The basic file in each board is a numerical application file, which may or may not have been combed to remove the inactive material to agency storage. There is an alphabetical Kardex visible file, indexing renewals of licenses, investigations undertaken, and warnings or penalties issued. There is frequently a separate renewal file, where carbon copies of the renewal certificates are placed. Some agencies put the name and address on a postcard renewal notice for the following year. Some boards have set up cycle renewing, so that some renewals fall due during each month and the clerical load is distributed.

One difficulty faced by most boards is that they ordinarily have no way of finding out when a person has died, or has left the trade or profession permanently. Nurses are prone to drop out for 15 or 20 years while raising a family, then will write in to renew their licenses. A clipping service supplies the Board of Medical Examiners with data on physicians' deaths; this would be less useful to the Barbers' Board, where the journeyman might have turned to another trade years before his death.

We find almost invariably that the files are pressing in on office space, and that each board's staff is looking forward to space expansion.

Microfilming is being considered by some agencies. We are inclined to believe there is merit in microfilming original applications, transcripts and the like; there may be more merit in separating out such material as is seldom referred to after the first licensing and placing it in agency storage or in the CRD.

Recommendations

We believe most boards will find it profitable to weed out files where there has been no renewal for several years, and place these in the CRD. Hence each file, when retired to inactive status, should be stamped with the year date when it may be destroyed, based either on date of last licensing or actual age of practitioner.

We believe that the carbon copies of renewals should be kept in a separate file and discarded after not more than three years. In boards where comparatively little is added to the original application and examination, active files should be centralized in agency storage in the basement.

The situation within each agency should be considered individually. We believe that a number of agencies will be able to relieve pressure within their offices by following or adapting the suggestions made above.

K. Public Health, Vital Records Section

Summary

This section records and issues certified copies of the certificates of births, deaths and marriages. By far the greatest demand is for birth certificates. Further, a person may seek copies at any time during his life, although the demand reaches peaks at school entering, military service, and retirement ages. Copies of death certificates are required in the settlement of estates, but aside from that, demand for either death or marriage certificates is relatively light.

The Vital Records Section spent some $70,000 several years ago to put its documents in physical repair for microfilming and an additional $45,000 to perform the microfilming. The microfilming has been continued in succeeding years. However, it has been found more economical to search the original certificates and make photostats than to search the microfilms. Lack of space has led to the storage of the original death and marriage certificates in cartons, and the use of the microfilm copies for search and reproduction. A Recordak reader head has been mounted on a Photostat Junior machine, with a prism to slip the image from the reading screen to the photostat paper, once the proper image has been located. This has not solved the problem of constant shifting of reels, and it appears that search of the original records would continue to be economically desirable.

So far, no action has been taken to give the microfilms protection from nuclear blast. They are sitting outside the vault in the old bank building where they are housed. The original birth certificates are in filing cases within the vault, while the death and marriage certificates are in cartons, stacked one on another without benefit of shelving, in a basement hallway.

Recommendations

Remove all birth certificate film *immediately* to the atomic vault space contracted for by the Secretary of State.

Make comparative cost estimates of search and photocopying of death and marriage certificates (a) under present practices, with a security copy of the film made and sent to the atomic vault, and (b) by buying shelving and archival cartons for the original death and marriage certificates, placing them in the hallway where they now sit, and searching and photocopying the originals.

Analysis of Selected Bulk-creating Files—Public Utilities Commission

File	*Volume cu. ft.*	*Location*	*Dates*	*Retention per yrs.*	*Remarks*
Active files	800	Office	-56	Permanent	Volume based on 2 cu. ft. per drawer, all assumed legal size files
Closed cases	510	Office	-56	Permanent	Volume based on 2 cu. ft. per drawer, all assumed legal size files
Closed cases	1,646	Storage	-56	Permanent	Volume based on 2 cu. ft. per drawer, all assumed legal size files
Total	2,956				

L. Public Utilities Commission

Summary

The case files of the Public Utilities Commission deal with corporations which may consolidate, but seldom die. Applications for rate changes and other adjustments require constant reference to older files. Hence there is small reason to anticipate that a file can ever be entirely dispensed with for administrative purposes. Beyond that, these files constitute a valuable reference to anyone working in the field of business history.

The Public Utilities Commission has been shipping its older files to the CRD from agency storage in San Francisco. It has found CRD's service in returning files upon request satisfactory to its purposes.

The factor that has retarded shipments to CRD has been lack of adequate shipping cartons. The commission plans to continue to ship records more than 20 years old to the CRD.

Recommendations

That the purchasing agent make archival cartons a standard stock item, with reserves in Sacramento, Los Angeles, and San Francisco. We believe that these will be found easier to handle and less expensive than fibreboard transfer cases, and that use will be found for them both in agency storage and in shipping materials to the CRD. Repacking will be reduced to a minimum.

That the Public Utilities Commission make a reference study of its case files, by year of origin, in order to determine if the retention period in agency storage before shipment to CRD may not be materially reduced. We believe they can be given better protection against flood and fire in CRD.

M. Public Works, Division of Highways

Summary

The Division of Highways has contracted with the National Records Management Council for a records management study, with the ultimate objective "to control all phases of paperwork on an integrated basis." Among the recommendations on the preliminary report is the microfilming of a substantial amount of material and the storing of the original drawings plus much additional material in a records storage area in a Division of Highways warehouse.

Further inquiry reveals that the selection of materials for microfilming has been done on the basis of administrative use, although a copy of the microfilm has been sent to a district office for dispersal.

There is no temperature or humidity control or heating in the Division of Highways warehouse area designated for records, and we understand the drawings to be stored there will be given special wrapping in an effort to offset the lack of temperature and humidity control. Further, this record center is not as accessible to the main office of the agency as is the CRD.

Recommendations

1. Any legislative committee investigating records "essential to the continuance of government" should coordinate this agency's microfilming program with the state-wide program.

Analysis of Selected Bulk-creating Files—Department of Public Works, Division of Highways

File	*Volume cu. ft.*	*Location*	*Dates*	*Retention per yrs.*	*Remarks*
Contracts, work orders, related documents	6,320	Office and storage	1912-56	2-500 years	
Drawings and blueprints	4,190	To go to warehouse	1912-56	Permanent	Three microfilm copies being made
General file	9,400	HQ office	1945-56	2 years past current	
Accounting papers	1,760	HQ and storage	1945-56	4-10 years	760 cu. ft. in office
Tabulation cards	1,960	HQ and storage	1936-56	2 to 20	
Miscellaneous	720	Various	1923-56	Various	
Total	24,360				

("The present status of the records survey indicates that 3,500 cubic feet will be destroyed immediately, 7,600 cubic feet will be transferred to the records center and 10,000 cubic feet will remain in the various headquarters offices and central files until subsequently transferred to the records center." Letter, State Highway Engineer to Legislative Auditor, December 26, 1956.)

We do not believe the State can afford the luxury of departmental record centers. We use this term as it has been developed in records management practice, for we do not intend the remark to include central files or a limited amount of on-premises storage outside office space.

N. Public Works, Division of Architecture

Summary

The Division of Architecture has made progress during the past few years in its records management program. Like the Division of Highways, it has a special problem in finding vault space for its plans and drawings. For this we have no pat solution.

The Schoolhouse Section has taken a step forward by arranging to transfer its drawings and other records to the Central Record Depository, finding this location more accessible than the warehouse where they had previously been stored

Recommendations

A cost study of microfilming drawings and of reproduction from film should be made, with comparisons of cost of storage at the CRD for all noncurrent drawings.

Analysis of Selected Bulk-creating Files—Department of Public Works, Division of Architecture

File	*Volume cu. ft.*	*Location*	*Dates*	*Retention per yrs.*	*Remarks*
Schoolhouse plans	5,600	Warehouse	Various	Permanent	To be placed in CRD
Accompanying papers	120	Warehouse	Various	Permanent	To be placed in CRD
Plans and drawings	2,000 *	Office of bldg. storage	Various	Permanent	Additional vault space needed; microfilm?
Miscellaneous papers, contracts, work orders	2,000 *	Office of bldg storage	Various	Permanent	
Total	9,720				

* Estimated

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By
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University of California at Davis

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LETTER OF TRANSMITTAL

ASSEMBLY CHAMBER, STATE CAPITOL
SACRAMENTO, CALIFORNIA, May 1, 1957

Hon. L. H. Lincoln
Speaker of the Assembly; and
Members of the Assembly
Assembly Chamber, Sacramento, California

GENTLEMEN: This report on Electric Power and Development of Northern California, submitted pursuant to House Resolution No. 239, 1955, was prepared at the request of the Interim Committee on Conservation, Planning, and Public Works, by Professor Warren S. Gramm of the University of California at Davis.

The several subcommittees of this committee have long been cognizant of the relationship between state and local physical development programs and population, location, and occupation. These programs of physical development, such as highway construction and water resource conservation, whether planned or not planned to influence population location, nonetheless do so. One of the most important of these, of course, is the multiple purpose type of water development envisaged in the California Water Plan. The study by Professor Gramm examines electric power as an energy source in energy-short Northern California and relates the availability of large blocks of electric energy to the area's resources and industrial potential.

The publication of this scholarly study on energy sources as related to population growth, its location, and industrial expansion is the second of such a series published by this committee. The last General Session published Hugh G. Hansen's Central Valley Project: Federal or State?, which contributed importantly to knowledge regarding basic policy questions facing California. It is hoped that this study will be useful both to state and local administrative arms of government and to their policy bodies in facing many unsolved problems related to water development. While the staff of our committee worked closely with the author of this study in the organization and scope of the report, Professor Gramm himself, of course, is responsible for the facts presented and their emphasis.

Respectfully submitted,

FRANCIS C. LINDSAY, Chairman
Assembly Interim Committee on
Conservation, Planning, and Public Works

PREFACE

This study was originally presented as a doctoral dissertation in economics at the University of California, Berkeley, in 1955, under the title "The Development of Electric Power in Northern California." Twin stimuli for this work were the strategic role played by electricity in industry, and curiosity concerning economic feasibility of the large, undeveloped hydroelectric potential of Northern California.

From the establishment of the focus of the work as a case study in long-term regional planning up to its final revision, the members of my dissertation committee were extremely cooperative and helpful. These were Robert A. Brady, Chairman, Forest G. Hill, Frederic P. Morrissey, Sanford A. Mosk, and James J. Parsons.

The initial study would almost certainly not have been completed without the timely assistance of a research fellowship awarded by the John Randolph Haynes and Dora Haynes Foundation of Los Angeles in 1954-1955.

After reading the dissertation manuscript, Research Director of Harold F. Wise and Associates Samuel E. Wood, consultant to the Assembly Interim Committee on Conservation, Planning, and Public Works, suggested an expansion of the study to relate electric power to industrial development in Northern California. This suggestion was readily accepted since this relationship was an aspect of the problem that had been reluctantly minimized to hold the dissertation to manageable length. The broadened scope of the revised work allows a simultaneous focus upon two basic, related economic problems of the region—optimum use and allocation of water, and general industrial resource development.

Since January, 1957, the study has been revised and economic resource data added to allow an integrated treatment of electric power and industrial development in Northern California. Financial assistance for travel and clerical expenses incurred in the revision was rendered by two faculty research grants: (1) departmental grant, University of California, Davis; and (2) a grant by the Institute of Social Sciences (Volkman Fund), University of California, Berkeley.

In addition to the original dissertation committee, many individuals and organizations have given generously of their time and facilities since the study was initiated in 1953. Portions of the manuscript were read, at various stages of the writing, by Harold L. Buma, Staff Economist, California State Chamber of Commerce; Kenneth Thompson, University of California; Norman Sturm and Frederick J. Groat, California Department of Water Resources; A. Norman Murray and George A. Fleming, U. S. Bureau of Reclamation, Sacramento; Rudolph Jenny, C. C. Welchel, F. F. Mautz, and Robert H. Miller of the Pacific Gas and Electric Company; and several staff members in the San Francisco Office of the Federal Power Commission.

Data made available by Samuel E. Wood of Harold F. Wise and Associates, Sacramento, and suggestions by Bruce Wayber, staff economist, were very helpful in preparation of the several river basin

resource summaries. Also, valuable comments and suggestions have been made by Paul F. Keim and Bruce Glassburner, University of California; L. R. Knerr, John Doran, H. T. Sipe, and Harold Coffey, California Public Utilities Commission, San Francisco; Oswald Speir, U. S. Corps of Engineers; Richard H. May and W. R. Howden, U. S. Forest Service; L. B. Christiansen, U. S. Bureau of Reclamation, Sacramento; and Herschel F. Jones, H. Zinder and Associates, Seattle, Washington. The manuscript was greatly improved in a final reading by Kelvin Deming, University of California. Responsibility for accuracy and interpretation of information provided by individuals and organizations who aided in this project is, of course, entirely my own.

Finally, incalculable credit is due my wife, Marilyn, who copyread and typed the manuscript several times over and has remained a constant source of encouragement throughout.

WARREN S. GRAMM
Davis, California

May 15, 1957

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INTRODUCTION

Electric power has played a vital, strategic role in California's economic development since the beginning of this century. Hydroelectric power from Sierra streams, and fuel oil and natural gas converted into electricity, have grown to constitute a major energy source for the State Energy from new fuel sources, such as nuclear materials, will find their primary use in conversion into electric energy. Hydroelectricity may be expected to become increasingly important as pressures grow for full use of California's water resource. The bulk of the State's water supply is found in the focal area of this study, Northern California, defined as that area north of the Tehachapi Mountains, including the area east of the Sierra Nevada.

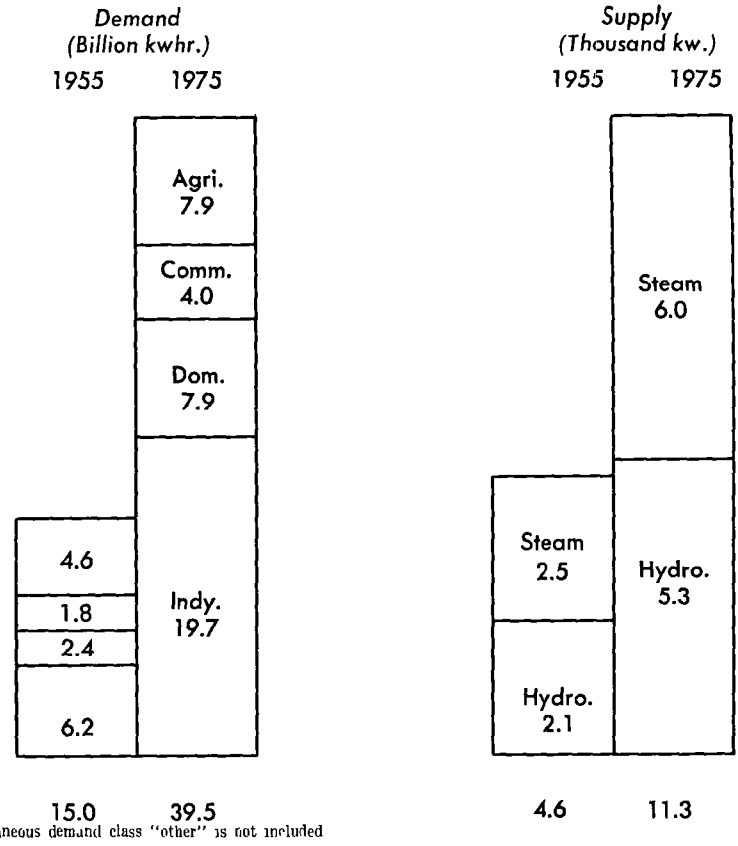
In 1955, almost 17 billion kilowatt-hours of electricity were consumed in Northern California, at an average rate of approximately 2,500 kilowatt-hours per capita. This demand required over 4,600,000 kilowatts of installed capacity. It is estimated that population in the region will rise to over 8,000,000 and that electric energy consumption per capita will more than double by 1975. The resulting electric power demand would require a total installed capacity at generation of approximately 11,300,000 kilowatts. A comparison of the basic supply and demand structures of electric energy in Northern California in 1955 and 1975 is presented in the chart on the following page.

On the demand side, it is apparent that industrial demand presents the major prospective structural shift. Industrial demand for electricity declined after World War II, but with subsequent growth of industry in the region, industrial sales rose from less than one fourth to almost one third of total electric sales between 1953-1955. In the coming decades, it is expected that industrial sales will grow to approximately one half of total sales, reaching a position comparable to the average figure for the United States. Assured availability of electric energy is a prerequisite for maintenance of such an industrial growth rate. Continued rise in demand for all classes is expected except for a possible decline in the rate of increase in agriculture. The physical limits of ground water basins, the economic limits of pumping costs, and the shift of some agricultural land to residential use will likely combine to effect a leveling off in electric power demand for ground water pumping.

California has a total hydroelectric potential of over 10,000,000 kilowatts capacity, most of which is located north of the Tehachapi Mountains.[1] Some 3,000,000 kilowatts had been developed by 1955. The detailed summary of plans for hydroelectric power development presented in Chapters 5-7 indicates that about 3.0 million kilowatts will likely be added to the electric power system by 1975 Of this total, over 1,000,000 kilowatts will almost certainly be added by private electric utilities in the next decade. The Pacific Gas and Electric Company (P. G. & E.)

[1] Federal Power Commission, *Hydroelectric Power Resources of the United States, Developed and Undeveloped 1953* (1954), p. 139.

ELECTRIC ENERGY DEMAND AND SUPPLY BY MAJOR SOURCES,* NORTHERN CALIFORNIA: 1955-1975



	1955	1975
Total	15.0	39.5
	4.6	11.3

* The miscellaneous demand class "other" is not included

SOURCES: Demand. 1955, Table II, p 34, 1975, Table III, p 42, "Energy Required at Generation," minus 13.4 billion kilowatt-hours (20 percent loss at generation and "other" demand), demand class allocation based on discussion in Chapter III (industry, 50 percent, agriculture and domestic, 20 percent, and commercial, 10 percent) Supply: 1955, Tables XX and XXI, pp 134 and 135, minus capacity installed since 1955 and hydroelectric capacity whose output is transmitted to Southern California, 1975, Chapter 8, p 133

will add over 900,000 kilowatts to its works on the Pit, Feather, and Kings Rivers. The second major block of almost 1,000,000 kilowatts of new hydroelectric capacity will be provided by local basin organizations such as the Sacramento Municipal Utility District and several irrigation districts. Two other major sources of new capacity, assumed for completion by 1975, are 465,000 kilowatts included in the State of California's Oroville Project and 371,000 kilowatts to be developed as part of the Bureau of Reclamation's Trinity River Project.

In addition to hydroelectric development within the region, seasonal surplus hydroelectric power may become available to Northern California on an interchange basis with the Pacific Northwest. A Federal

Power Commission study indicates that an economic exchange of electric energy between the two regions could be made—surplus hydro being transmitted into Northern California during periods of high flow of the Columbia River, and steam-generated energy being sent into the Northwest during periods of low water and high electric energy demand in that area

The projected regional electric power capacity requirement of 11 3 million kilowatts and the estimated hydroelectric capacity of 5.3 million kilowatts by 1975 (available for Northern California's energy requirement) indicate a need to more than double present steam-electric capacity by that year. Most of the more than 3,000,000 kilowatts of new thermal capacity will be provided by large-scale (100,000 kilowatts or more) steam-turbine plants fueled by natural gas or fuel oil In the past, the greatest portion of steam-electric capacity has been concentrated in the vicinity of the San Francisco Bay area, the region's primary electric power demand center. Since World War II new population has spread into the coastal areas and into new urban centers in the Sacramento and San Joaquin Valleys Continuation of this geographic diversification of electric power demand will mean construction of thermal-electric generating units near new urban and industrial centers.

While fuel oil and natural gas will continue to provide the major part of fuel consumed in thermal-electric generation, by 1975 basic long-run changes in the regional fuel pattern may be expected to appear. Depleted local reserves of petroleum and natural gas and increased costs of imports will mean a shift toward pulverized coal, imported from the Rocky Mountain area, or use of liquid fuels converted from coal or oil shale Atomic fuels are the major unknown with respect to future energy costs According to the plans of P G. & E., the first atomic-fueled electricity will be furnished to the Northern California power grid in 1957 This energy will be from the 5,000 kilowatt Vallecitos test plant, now under construction, near Livermore It seems certain that economic, large-scale atomic-fueled plants will be operating in Northern California within the next two decades It is possible that future thermal-electric developments in the region will include some use of relatively small-scale diesel or gas-turbine plants in areas remote from the regional transmission network.

Given the absolute limits of water runoff and feasible hydroelectric sites, hydroelectric energy will provide a continuously smaller proportion of the region's total energy supply. For that reason, to considerable degree, the remaining potential will become increasingly significant for the role it can play in meeting peak demands on the electric power system and in contributing to the cost of water control for increasingly vital consumptive uses. By 1975, almost all of the major single-purpose hydroelectric projects will have been developed by the State's private electric utilities. Most of the remaining undeveloped hydroelectric potential, some 5,000,000 kilowatts, will necessarily be developed as an element in multiple-purpose water development. Post-1975 hydroelectric development will be based, to a great extent, on the future economics of consumptive water use. As such use shifts toward domestic consumption and away from irrigation the average price of water will increase between five- and tenfold. Certainly, increased domestic use in the coming

decades will fundamentally alter the economics of projects now being evaluated on the assumption of water sales for irrigation consumption.

There are three main groups of issues in long-term electric power development in Northern California: technological, economic, and political. The main barriers to optimal resource development in the region are to be found in the last two, the economic and the political. The necessity of continued work toward improved solutions to technological problems is obvious; however, application of existing technical knowledge to the energy resource base would suffice to keep the regional, national, and world economy operating for centuries at well above present levels. Known reserves of coal, oil shale, and nuclear raw materials could be converted into electric energy at costs only moderately higher than the current level, based on presently known techniques. Thus, there is no "fuel shortage" on the horizon for a century or more. There are, however, problems of economics—of least-cost production—and of political achievement of such production.

The economics of thermal-electric and single-purpose hydroelectric generation are based on well recognized technological and financial principles. The costs of production (plant and equipment, fuel, wages, construction materials, etc.) can be enumerated by accepted accounting procedures and compared directly with the revenues realized from the sale of electric energy. In multiple-purpose hydroelectric development, on the other hand, diverse, complex, and subjective elements intrude themselves into the evaluation picture. How can the cost of a major structure, such as a storage dam, be allocated between the various purposes of the project (irrigation, flood control, navigation, recreation, hydroelectric energy, etc.)? How can the intangible costs and benefits of the project be imputed into the evaluation procedure to give a complete answer concerning the feasibility of the project? What elements must be self-supporting? How quickly should a project be paid off? Generally satisfactory answers to such questions are not available for water resource planning in the United States today.

Some general principles for water resource and hydroelectric development in the United States and Northern California are presented in Chapter 10. These are: The entire river basin is the proper unit for analysis; the multiple-purpose concept should underlie all evaluation and design procedures; comprehensive, inclusive benefit-cost analysis is an appropriate method for evaluation and ranking of projects; and, finally, technical-economic studies must be developed in relative isolation from the political-institutional issues of development.

Basic political issues in Northern California electric power and water resource development include: determination of the appropriate development agency, establishment of water rights under the law, and the 160-acre limitation on land serviced by water from federal projects. Private utility construction of single-purpose hydroelectric sites is the only sector of water development in which determination of the proper agency has been clearly established. The U. S. Bureau of Reclamation has been the major public agency in the field since its initiation of construction on the Central Valley Project, in 1937. However, since legislative acceptance of the initial units of the State Water Plan, in 1933, the State of California has never fully relinquished thoughts of

developing its own water resource.[2] Since World War II, interest in state purchase of the CVP has reawakened. In 1957 funds were appropriated for preparatory work on the major storage unit in the California Water Plan, the Oroville Project on the Feather River. Fulfillment of the State's water plan depends on solution of such difficult problems as establishment of water rights, State participation in construction, as well as federal financial support.

The heart of the California Water Plan is the transfer of surplus water from the north to the water-hungry areas in the south.[3] The long run "surplus" must be defined and the extent of abridgment of the historic water rights in the "counties of origin" in the north must be compromised with the south's need for assurance of a permanent quantity of water sufficient to repay the cost of necessary structures. People in the northern counties fear an excessive commitment which would subject them to water shortages in future dry years. The south fears a loose arrangement that would curtail supply when most needed, particularly since its taxpayers would pay the larger portion of the project's cost. In the spring of 1957, this issue portends additional years of delay in utilization of California's total water resource.

The economics of any major water storage work in the United States are vitally affected by the Federal Government's support of flood control, navigation, and irrigation benefits. For federal funds to be available for irrigation purposes, lands receiving such benefits are subject to the historical 160-acre limitation. A recent action by the State Supreme Court declared that such a provision was unconstitutional in California. The prospect for further funds for such projects will remain uncertain until this ruling has been revised or reversed.

In many respects these political-institutional issues are most difficult to resolve, since they involve cutting through historical rights and individual interests and preconceptions. Further, in the United States, matters of public policy are subject to the irritating, frustrating, time-consuming process of public debate and majority rule. Hearing the argument of the minority necessarily involves a cost in delayed action for the majority. Students of the water problem in California long have been agreed, that the problem can but become more acute with the passage of time. However, it seems certain that favorable technics and economics and the steadily rising pressure of water demand will assure ultimate construction of major storage and diversion works. But such assurance should not be a basis for overlooking the stark reality that appreciable politically-induced delays in construction of initial units, such as the Oroville storage facility, involve the risk of a water crisis in Central and Southern California in the coming decades.

In general, the several types of problems in water resource of electric power development are considered in the following order: first, the technical, second, the economic, and finally, the political. The technical and economic feasibility of a given project or program must be fairly well established before a political problem can arise—before the final

[2] See Hugh G. Hansen, *Central Valley Project · Federal or State?* Report prepared for Assembly Interim Committee on Conservation, Planning, and Public Works (Sacramento, 1955), pp. 21-44.

[3] California Department of Water Resources, *The California Water Plan*, Bulletin No. 3 (May, 1957). See Chapter 6 for a summary of the plan.

decision to appropriate money for construction is considered. This study outlines the historical development of electric power in Northern California. A general analysis of the economic and technical problems to be faced in development of the region's energy base to 1975 is presented on that basis. Political problems are not ignored; rather they are included to the minimum extent necessary to block out the total development problem in the several geographic and economic sectors of the region. Past, present, and future sources and levels of demand and supply for electricity are analyzed in Parts I and II. In Part III, discussion is focused, in turn, on major technological, economic, and political problems to be encountered in future electric power development.

The projection, in Chapter 3, of regional electric power demand to 1975 is intended primarily as a general planning figure that will emphasize the prospect of steady, rapid expansion of Northern California's electric power capacity requirement. Projections for shorter periods are sufficient for scheduling new steam-electric capacity: even a large-scale plant can be completed within a three-year period. However, major multiple-purpose projects take much longer to complete, both in actual construction and an extended period of planning, study, and political gestation. Assurance of a virtually insatiable electric power requirement provides a strong rationale for long-run hydroelectric planning.

In Chapter 4 the general nature of electric power supply for Northern California is summarized. Chapters 5-7 present a detailed review of the developed and undeveloped hydroelectric potential of the region. In a sense, this section brings up to date Bonner's pioneer summary of the total hydroelectric power resource in California.[4] After a brief analysis of plans for hydroelectric development in each major river basin, a summary table is presented that divides the several sites into "developed," "assumed for development by 1975," and "ultimate development." Included in each basin summary is a review of the area's population, industrial resource base, and prospects for future increase of electric power demand.

The final section, Part III, reviews in some detail the problems to be encountered in achieving optimal development of the water and energy resources of Northern California. The problems are treated in ascending order of difficulty of solution: technological, economic, and political. Unsolved technological problems in electric power generation and transmission present interesting challenges for the engineer and the scientist. However, the summary presented in Chapter 8, indicates that present knowledge is well in advance of the community's ability to make full use of it. The comparatively immature level of knowledge in the economic sphere is summarized in Chapter 10 which reviews the problem of economic evaluation of single- and multiple-purpose hydroelectric projects. Finally, problems in the greatest area of uncertainty—the political sector—are discussed in the concluding chapter

It is readily apparent from this introduction that the study raises many more questions than it answers. Perhaps the most important

[4] Frank E Bonner, *Water Powers of California* (1928). For definitive coverage of early hydroelectric power development in California, see Frederick Hall Fowler, *Hydroelectric Power Systems of California* (1923).

single conclusion is the great need for continuing extended study of the undeveloped hydroelectric resource of the region, as pressure for water resource development rises. Such study will require the combined, coordinated talents of engineers, economists, and others if the direction of best use of Northern California's resources is to be clearly charted. Finally, the extent and rate of movement along such a path will depend on successful political implementation of engineering and economic studies.

PART I

ELECTRIC POWER DEMAND IN NORTHERN CALIFORNIA

CHAPTER 1

THE ROLE OF ELECTRIC POWER IN NORTHERN CALIFORNIA RESOURCE DEVELOPMENT

Although vestiges of pioneer days were still evident in the 1890's, California was about to move into its modern era of rapid economic development. By that decade the leisurely water and wagon connections with the remainder of the country had been supplemented by two transcontinental rail connections and a line running northward to Portland, Oregon. A minimum of manufacturing and service establishments had been developed to serve the needs of the State's inhabitants. However, full use of the new transport facilities and economic development parallel to that in the East were retarded by lack of an adequate, cheap fuel supply. The staple fuel for major population centers at the time was imported coal, supplemented increasingly by petroleum. Both fuels were used for direct heat, development of steam pressure, and conversion into manufactured gas. In the mountain areas, mines and mills were operated on hydro mechanical power or on steam generated from wood fuel. In the valleys a few steam plants had been installed to provide power for irrigation pumps.

Commercial application of electricity rapidly altered this picture. After 1900, hydroelectric stations and oil and natural gas converted into electric energy provided a firm base for general regional growth. California's water and mineral fuel resources allowed it to become a world leader in utilization of electricity—the key to a new way of life in western society.

Assurance of an adequate supply of electric energy is a necessary condition for the existence of a modern industrial community. It is commonplace that minimum living standards and basic factory operations depend upon electricity. Virtually all major developments in the amenities of homemaking, and in the general pattern of contemporary civilization depend on electricity. One of the safest of predictions is that such use will expand in the future. On this assumption, the Federal Power Commission has predicted electric power consumption per home will more than double in the United States by 1980.

As in the home, electricity has fundamentally altered the organization and operation of the factory. The electric motor is the most flexible, adaptable power source yet devised. It can be designed to produce less than one-tenth to more than 50,000 horsepower. Thus, dangerous and cumbersome overhead belts, wheels, and pulleys have disappeared from the modern factory. More efficient plant design and layout as well as more rational plant location stems from use of electric energy. The regional power grid allows electricity to be delvered, at relatively small additional cost, to any consumer within the grid. Industrial plant location decisions have been freed from the requirements of proximity to fossil fuel supplies.

GENERAL PATTERN OF ELECTRIC POWER DEVELOPMENT IN NORTHERN CALIFORNIA

A summary of the regional distribution of the existing electric power capacity and total hydroelectric resource in Northern California is presented in Table I, below. The historical development of the present structure of capacity is presented in detail in Chapter 4, and the supporting detail for estimated hydroelectric development by 1975 is included in Chapters 5-7.

Future Structure of Electric Energy Consumption

In the electric power demand forecast developed in Chapter 3, it is assumed that the per capita consumption of electricity in Northern California would somewhat more than double by 1975. This is likely a conservative estimate. For, while the maximum figure of 7,000 kilowatt-hours of annual per capita demand at generation was used for projected demand, the present level of electric power consumption for the completely electrified home is in the nature of 20,000 kilowatt-hours. All indications are that the trend in California homes, over the long run, will be toward increased use of electricity, as alternative energy sources become depleted.

In addition to substitution of electricity for natural gas in space heating and cooking, major additional blocks of domestic energy will be required for increased use of the heat pump and other air conditioning

TABLE I

ELECTRIC POWER CAPACITY AND UNDEVELOPED HYDROELECTRIC POTENTIAL IN NORTHERN CALIFORNIA, BY REGIONS

(Kilowatts)

PART I. HYDROELECTRIC CAPACITY

Area	Existing capacity	Development assumed 1975	Ultimate development	Total resource
North Coastal	66,880	105,000	1,439,900	1,611,780
North Sierra	1,697,280	2,072,700	1,303,300	5,073,280
South Sierra and Lahontan	1,371,465	751,300	1,857,800	3,980,565
Total	3,135,625	2,929,000	4,601,000	10,665,625

PART II. STEAM-ELECTRIC CAPACITY

Area	Existing capacity	Number of Plants	Planned capacity, 1962
San Francisco Bay	1,793,525	9	625,000
North Coastal	70,500	2	--
San Joaquin Valley	165,500	1	--
Total	2,918,811	14	625,000
Total capacity: (Hydro and Steam)	6,054,436		

SOURCE: Tables XX and XXI, on pp. 134 and 135, respectively.

units. Widespread use of electric ranges, clothes dryers, and dishwashers has initiated a trend toward higher distribution voltages for the American home. It is quite likely that by 1975 such higher voltages will be the rule and each home so equipped will become essentially a substation. That is to say, each home will be equipped with a transformer that will allow the higher distribution votages to be broken down into lower-voltage wiring circuits for various appliances and types of service.

Trends in Electric Power Generation and Distribution

The material presented in the following chapters indicates that the trend toward increased use of steam-electric capacity in the Northern California grid will continue over the long run. Developments in steam-electric generation will probably continue to emphasize large base-load steam plants in the San Francisco Bay area. Such plants, as well as additional smaller scale plants, may be expected to appear in metropolitan areas outside the major load center.

Since steam-electric generation technology is approaching the technological limits of converting heat into electric energy, the amounts of fuel consumed may be expected to increase at least in proportion to the increase in capacity and output. This will mean a continued increase of imports of fuel oil and natural gas into the region, in addition to the possibility of importing coal from the mountain states. The ultimate shift to the atomic fuel plant will not alter this basic pattern since considerable amounts of nuclear fuels will also have to be imported. Of course the smaller bulk of atomic fuels, compared with fuel oil, will have a significant impact on water and rail transport.

No dramatic changes may be expected in electric power transmission during the next several decades. The single major change is the possibility of an ultrahigh-voltage connection between the Pacific Northwest power pool and Southern California, which would form the new backbone for the Northern California power grid. Some increased standardization of intermediate and lower transmission voltages may be anticipated, as well as continued improvement in system control through application of new electronic developments. Increased utilization of such equipment as the digital computer will mean greater efficiency in the use of generating facilities. A most desirable development would be increased standardization of the components in the electric power grid. Such action would mean savings through mass production of parts as well as simplification of replacement and repair.

The Hydroelectric Power Resource

An obvious limitation of the estimated 1975 hydroelectric power development presented in Chapters 5-7 is a lack of detailed economic analysis of the sites that were reviewed. Preparation of a comprehensive economic evaluation of the undeveloped hydroelectric resource of Northern California would require a team of varied specialists working over a period of years. Existing studies vary widely both in currency and the detail presented. Thus, for example, the only comprehensive study of the lower Klamath River Basin was done by the Federal Power Commission in 1944. Before a current statement concerning the feasibility of the projects on the lower Klamath could be made, this study

would have to be completely reviewed in the light of new technology for constructing dams and diversion units and electric power generation and transmission, and the cost structure of the study would have to be adjusted to current or future prices. In addition, the demand aspect of electric power in the Klamath Basin would have to be reappraised in the light of present and contemplated population and industrial growth, as has been done in summary fashion in this study. Perhaps the most important single problem related to comprehensive economic analysis of the hydroelectric resource lies in the fact that there is no single agency that has responsibility for study or development of the various undeveloped sites.

Hydroelectric energy may be expected to decrease as a percentage of total electric generation in Northern California. However, in the context of the general water problem of the State, hydroelectric power will take on increasing importance in future years. Within the next decade the largest and best single-purpose hydroelectric stations will have been constructed by the private utilities in the State. Thus, by 1975, most new hydroelectric development will be of a multiple-purpose nature. Hydroelectric construction and operation will become inseparable from the over-all control and use of California's water resource.

COORDINATED DEVELOPMENT OF NORTHERN CALIFORNIA'S RESOURCE BASE

In its early decades of statehood, California's growth was characterized by waves of economic activity: gold mining first, then stock raising and grain farming. Since 1900, a relatively evenly balanced, diversified economy has evolved. Agriculture, industry, and service trades have developed within the State's varied resource base, which includes nearly every combination and contrast of topography, soil, climate, minerals, and plant and animal life. Extreme diversity of resources among its several sections has led to a wide variety of economic activity.

The major economic resources of Northern California are agricultural land, minerals, timber, and water. While agricultural output may be expected to continue to parallel the general growth of the region, it will likely consume relatively smaller proportions of electricity and water over the long run. Industry and domestic use, respectively, will take the lead as users of energy and water. Industrial growth and the resulting increase in energy consumption will stem, in large part, from continuing expansion of timber and timber products processing.

Long-run Pattern of Industrial Resource Development in Northern California

The following table, based on the river basin resource data in Chapters 5-7, indicates the ultimate yield and employment that will be provided by timber, the major industrial resource in Northern California. It is estimated that an ultimate sustained yield of some 234,000 board feet may be maintained. Based on this "harvest" resource, total employment in lumber and allied products is expected to exceed 90,000 by 1975. Pulp and paper manufacture will become a significant element in this industrial sector, especially in the Lower Klamath and Upper Sacramento River Basins. This will likely be the main electro-sensitive industry to develop in the region and will provide a significant new block of electric power demand over the long run.

POPULATION AND TIMBER RESOURCE DATA FOR NORTHERN CALIFORNIA RIVER BASINS, 1975 AND ULTIMATE

Basin area	Population, 1975	Timber resource: Total res. (Million bd. ft.)	Timber resource: Ult. sust. yield (Million bd. ft.)	Ultimate empl.
North Coastal	316,800	114,574	1,804	48,000
Sacramento	910,600	81,838	1,663	32,747
San Joaquin	1,588,350	36,310	489*	12,500†
Lahontan	16,300	1,201	7*	--
Total	2,832,050	233,923	3,963	93,247

* This is the 1955 output figure Ultimate sustained yield data are not available Given the total timber stand in the basin and the ratio of estimated sustained annual yield to total resource in the northern basins, it is assumed that ultimate sustained yield for the southern basins will approximate 1955 output

† Estimates of ultimate employment in lumber and allied industries in the northern basins indicate an approximate doubling of the 1952 level This multiple has been applied to 1952 employment data for the southern basins

SOURCE Basin data in Chapters 5-7.

Based on continued expansion of output in agriculture in the major lowland valleys, food processing will continue as a major industry in Northern California. It is anticipated that employment here will increase approximately in direct proportion to population. This would mean an increase from 35,770 employees in 1952 to approximately 50,000 by 1975 Other industries employing more than 1,000 workers in 1952 that may be expected to show considerable growth by 1975 are machinery, transportation equipment, fabricated metals, primary metals, chemicals, printing and publications, and stone, clay, and glass manufactures. While petroleum processing in the lower San Joaquin Valley will continue to expand in relation to the rate of petroleum extraction, it is expected that the industry's output in this area will ultimately level off.

Mineral extraction and, necessarily, mineral processing must remain something of an unknown until a more detailed examination has been made of the potential resource in Northern California. The mining of gold, a former leading mineral, has diminished significantly since World War II, and will continue to be subject to the variations in the Federal Government's price. The present mineral leaders, petroleum and natural gas, will at best maintain current levels of output in the next two decades. Domestic output of natural gas will almost certainly be on the decline by 1975. Unless the promise of the tideland oil resource is fulfilled, it is likely that decreased output of petroleum products will also have set in by that year.

Future expansion of minerals in Northern California, then appears to rest on those whose value of output has not been large to the present times These will include chromite, lead, limestone, and zinc, as well as clay products, and sand and gravel. When fresh water distillation of sea water becomes economic, various mineral by-products will appear in measurable quantities. Already magnesium-hydroxide is being produced from sea water at Moss Landing, near Monterey. A proposal has been made for a similar operation at the mouth of the Klamath River.

Water Use and Coordinated Regional Development

The three main consumptive uses of water in the United States are for households, industry, and agriculture. With rising consumption per capita, based in large part on increased domestic and industrial use, water supply prospects in many sections of the Country are becoming increasingly acute. It is estimated that total water use in the United States by 1960 will approximate 312 billion gallons of water a day, almost doubling the requirement of 1945. While irrigation accounts for nearly half of the water used in the Nation as a whole, this percentage is declining as industrial and domestic use rises. The pulp and paper industry, which requires some 250 tons of water for every ton of sulfite wood pulp product, is an example of industrial water requirement that is especially relevant to Northern California. A medium-sized pulp and paper mill will consume more water in a day than would a city of some 5,000 population.

The rise in consumptive water use for domestic purposes can be illustrated by the case of San Francisco. The domestic requirement for San Francisco more than doubled between 1940 and 1956, with the total in the latter year reaching almost 143 million gallons per day. Since the present water supply of the city, the Hetch Hetchy Reservoir and aqueduct, has a capacity of 190 million gallons a day, it is apparent that additional supplies will be required in the next several decades. In Southern California, Los Angeles reported daily consumption of over 395 million gallons in 1956, an increase of some 23 percent in a decade. The water problem there provides the strongest single pressure for making full use of California's water resource.

Increasing long run domestic use of water means that industrial water use in the upper river basins must be carefully appraised. Northern California's prospective paper industry provides an illustration of how the water pollution problem may be expected to become more acute. With future pulp and paper plants on the Lower Klamath River Basin, the problem would likely be minimal. It would be feasible, in general, to locate such plants sufficiently near the river mouth to be below the point of withdrawal of water for domestic consumption. On the other hand, increased expansion of industry in the Sacramento River Basin calls into question the broad problem of alternative consumptive uses: the water in the Sacramento drainage, under the State's long run water plan, would have to be kept sufficiently pure to be transferred to Southern California for domestic water use in the Los Angeles and south coastal area.

Role of Storage and Hydroelectric Power in Allocation of California's Water Supply

Northern California, as a whole, has no general problem of water supply for foreseeable future needs. Nevertheless, pending shortages in particular areas in the region and the anticipated insufficiency of Southern California's supply indicate that in the coming decades pressure will grow for additional storage and water diversion facilities to meet the State's long run requirement. While, under the State Water Plan, the maximum assumed price for water delivered at the

canal-side in the Los Angeles area is $45 per acre-foot,[1] the upper limit for the cost of diverting water to Southern California will be set by the alternative cost of converting fresh water from the sea. Under experiments being conducted by DuPont de Nemours, it is estimated that a method of converting salt water with sun-powered stills will eventually produce water at 75 cents per thousand gallons, assuming a 25-year amortization period for the plant. This cost compares with approximately $3 per thousand gallons under current methods. Converted to acre-feet, this would mean that water under this method would be eventually supplied at about $244 per acre-foot. Such water would almost be competitive with maximum domestic rates now being paid. While sea-water conversion with solar stills might be practicable in Southern California, experiments with other methods hold the prospect of economic conversion independent of continuous sunshine and large areas of pondage.

With the long-run shift in primary demand for water from irrigation to domestic use, the role played by hydroelectric power plants will be altered as well. Water release from storage facilities will be timed to meet domestic consumption needs rather than seasonal irrigation requirements. As water release schedules are revised, reappraisal of hydroelectric output and peaking potential will be necessary. As additional storage units are built for water control purposes in the lower reaches of major streams, single-purpose projects upstream will increasingly take on multiple-purpose aspects.

SUPPLY OF ELECTRICITY AND INDUSTRIAL RESOURCE DEVELOPMENT

The relationship of electric power to industrial location, as well as to industrial resource development, can be considered in two dimensions. For industries such as primary metal reduction, chemicals, and pulp and paper manufacture, electricity is a significant portion of total costs. Hence a low power rate is important. For all other industry, electricity is a minor cost element; however, the availability of an assured supply is a vital, necessary condition of existence. Thus, both certainty of electric power supply and the prospect for low-cost power are important in analysis of long-term resource development in Northern California.

In both hydro and steam-electric development public development would have an economic advantage based on lower finance charges. However, this economic advantage is conditioned by certain institutional restraints on public power development in the United States. Uncertainty marks the policy of both the Federal Government and the State of California in this regard. Precise boundaries to public construction of hydro and steam-electric generation and transmission facilities, as well as marketing procedures for public power, have not been established. This has occasioned significant delay in water resource and hydroelectric development in Northern California and elsewhere in the Nation.

[1] See *Report on the Engineering, Economic, and Financial Aspects of the Feather River Project* (Bechtel Corporation, December 31, 1955), Appendix A "Demand for Water in Service Areas of the Feather River Project," p. 106, prepared by Stanford Research Institute. A maximum delivered price of $226.50 per acre-foot for domestic use in San Diego was paid in 1955, *ibid.*, p. 124.

Until federal and state policies are clarified, industrial development in Northern California will be encouraged by the existence of both public and private electric power systems in the region. On the one hand, existing and potential public development allows some expectation that increments of low-cost power will continue to be forthcoming. On the other hand, the extensive private system of P. G. & E., developing new capacity at a rate based both on its own studies and on demand projections of state and federal regulatory agencies, provides industry with added assurance that energy to meet new load requirements will be provided over the long run.

Economic Basis for Low-cost Electricity

Historically, low-cost electricity has been the product of a limited number of strategically located hydroelectric plants. Long life and minimal costs of operation are the bases for low-cost hydroelectric generation. Steam-electric stations operate within a well-defined range of costs, based essentially on the price of fuel and the size and operating characteristics of the plant (see Chapter 4 for a more complete discussion of electric power economics). Hydroelectric costs are almost entirely a matter of paying off the initial investment in water storage and/or diversion facilities, and electric power equipment. At the most favorable sites the initial cost is low in relation to the life of the plant, hence the cost per unit of output is low.

Such favorable hydroelectric sites have been found and developed in the United States on the Niagara River and in the Colorado and Columbia River basins, the Tennessee Valley, and the Central Valley of California. The Niagara River and the Tennessee and Columbia River basins provide important examples of the casual connection between cheap electricity and the location of electro-sensitive industries. Aluminum reduction and atomic energy developments both in the Tennessee Valley and on the Columbia River are only the outstanding examples of such attraction.[2]

Northern California, with wholesale rates for electricity that are low in relation to parts of the industrial northeast section of the United States, has participated to some extent in the general growth of electro-sensitive industries in the past several decades. The greatest portion of this type of industrial load is currently provided by three firms located in the Antioch-Pittsburg area: Dow Chemical, Shell Oil, and Hercules Powder Company.

Several basic questions may be raised in analyzing the relationship between electric energy supply and industrial development in Northern California. One such question is: "To what extent would low electric power rates encourage industrial growth in this region?"

Prospects for Low-cost Electricity in Northern California

To answer this question, regional resources must be related to the varying costs of electric power stemming from the several energy sources available to Northern California. Regional timber and mineral resources whose development seems most likely to be influenced by low-cost electricity have been indicated above. The table on the following

[2] For a detailed analysis of the Northwest case, see Edwin J. Cohn, Jr., *Industry in the Pacific Northwest and the Location Theory* (1954).

page shows the range of electric power rates for industrial users in major regions of the United States. From these data it is readily apparent that significantly lower rates are to be found in those regions where publicly developed hydroelectric energy is available. Thus, for Northern California, there are three possible sources of cheap electrical energy for industrial development: (1) expansion of the capacity of the existing Central Valley Project administered by the U. S. Bureau of Reclamation; (2) linking of the CVP high-tension transmission system with the Pacific Northwest Power Pool; (3) sale at "cost" of energy developed in the State's comprehensive water plan.

AVERAGE ELECTRIC POWER RATES CHARGED INDUSTRIAL USERS IN MAJOR REGIONS OF THE UNITED STATES: 1955

(Mills per kilowatt-hour)

Region	*Organization*	*Noninterruptible service (cents)*	*Interruptible* *
Northeast	Boston Consolidated Gas Co.	14.4	--
Southeast	Knoxville Utilities Board	6.0	--
Northwest	Portland General Electric	6.7	--
	Bonneville Power Administration	2.5 †	2.0 †
Southwest	Pacific Gas & Electric Co.	7.0-7.1	--
	Southwest Power Administration	7.0	5.2 ‡
	Central Valley Project	4.1-4.6 §	--

* Service to specific industrial users curtailed during periods of heavy demand on the electric power system's capacity.

† Basic rate, $17.50 per kilowatt-year, noninterruptible assumes 85 percent load factor, interruptible, 100 percent

‡ Aluminum reduction (Reynolds Metals Corp.).

§ Wholesale

SOURCE: Private utilities; Federal Power Commission, "Typical Electric Bills, 1955," cities of 50,000 and more population, Washington, D. C. (1955)

There is no foreseeable basis on which a secular decline in costs of privately generated energy may be expected. Since P. G. & E. is a technologically progressive organization and the California Public Utility Commission is one of the more effective regulatory agencies, it may be assumed that P. G. & E. is operating reasonably close to the point of minimum costs for a private electric utility. In February, 1957, P. G. & E. petitioned the Public Utility Commission for a new increase in rates with a fuel-cost escalator clause. On the basis of secular increases in fuel, wages, and the general price level, electric power rates of the company may be expected to continue to rise rather than fall.

Several fundamental questions may be raised concerning the availability of energy from the three public power sources mentioned above. First, the economics of the roughly seven million killowatts of undeveloped hydroelectric power capacity in Northern California must be carefully examined. Second, the nature and extent of availability of energy to be transmitted from the Pacific Northwest to Northern California depends on the rate of development of the Northwest, as well as of this region. Finally, under the major alternatives of the State of California's over-all, long-term water plan it is questionable whether any significant amount of electric energy would be available for sale outside the project itself. There are then two major possibilities for low-cost electric energy in Northern California: public development and

sale of energy from the presently undeveloped hydroelectric sites, and the transfer of public power from the Pacific Northwest.

The short-run cost of electric energy is important. However, it can be overemphasized in evaluating the relevance of electric power for long-term industrial expansion. For the long run, an assured supply of large blocks of energy may be as important as the variation of one or two mills in the electric energy rate. Availability of electric power is part of the "climate" of industrial location. The physical climate of Northern California may be taken as given by the industrial planner. In order for electric energy to attain a parallel level of certainty for new industry, electric power capacity expansion must be scheduled well in advance of short-run needs. The experience of the Pacific Northwest and the Tennessee Valley illustrates how the existence of available "surplus" energy works to attract industry.

Prospects for an Assured Supply of Electricity

Thus, the second question to be raised concerning the relationship between electric energy and industrial development in Northern California concerns the prospects for ready availability of large blocks of energy. Such availability is entirely a matter of human planning. The physical sources of heat for steam-electric generation are sufficient for hundreds of years. Northern California's supply of fuel oil and natural gas will carry the region over the several decades necessary to develop economic atomic energy. Fissionable materials provide a virtually limitless fuel reserve with which steam turbines can be driven to generate electricity at costs that will not be significantly higher than those of conventional fuels. Hence, the availability of electric power supply reserves that are sufficient to attract industry depends basically on far-sighted energy demand forecasting by P. G. & E. and the state and federal regulatory agencies. The uncertainty necessarily attached to such forecasting will be reduced by the greatest practical diversification of the energy sources of the region. This means, specifically, augmenting basic steam capacity expansion with local hydroelectric plants, and extended interconnection with the electric power grids of adjacent regions.

Several writers have expressed well-justified skepticism concerning the adequacy of California's resource base for extensive additional industrial development.[3] Such doubts can be removed only by more intensive study of the State's resources, especially with regard to minerals and hydroelectric energy. On the optimistic side, it seems certain that Northern California industry will expand in the coming decades on the basis of rising population, economic pressures for balanced regional growth and expanded local resource development.

With regard to electric power, economic development should certainly receive its greatest stimulus from a combination of low-cost and readily available energy. In the following chapters particular attention will be directed to the relationship between these energy prospects and the physical resource base of Northern California.

[3] James J. Parsons, "California Manufacturing," *Geographical Review*, April, 1949, Vol 39, No. 2, p 241, and Forest G. Hill, "The Shaping of California's Industrial Pattern," *Proceedings*, Western Economic Association (1955), p. 68

CHAPTER 2

STRUCTURE OF ELECTRIC POWER DEMAND

The City of San Francisco was in the vanguard of commercial application of electricity with the installation in 1879 of the first central power station in the United States.[1] Such leadership stemmed directly from early experimentation with electric generators by individuals connected with the existing gas utilities. By 1886, steam plants serving local loads were in service in every principal city in California.[2] This new use for existing fuels did not, however, meet the need for an abundant, inexpensive source of fuel. Hence, the twin factors of a ready market and an absence of adequate supplies of fuel made the water resource of the nearby Sierra Nevada ripe for development.

Early Hydroelectric Development in Northern California

In 1895 the 3,000-kilowatt Folsom plant was constructed on the American River to serve Sacramento, 22 miles away. This was the first hydroelectric installation in Northern California. In the preceding decade commercial hydroelectric stations had sprung up in such widespread locations in the United States as Appleton, Wisconsin, 1882; Spokane Falls (now Spokane), Washington, 1886; and Highgrove, California (near San Bernardino), 1886. The natural assets of Northern California that supported its leadership in hydroelectric development in the following decades included availability of favorable sites for single-purpose, run-of-the-river hydroelectric plants and an undeveloped mountain hinterland that made land relatively cheap. Also important was the heritage of the preceding hydraulic mining industry, which included clearance of some water-rights issues, provision of a technological background for the rapid development of high-pressure nozzles and the Pelton impulse water wheel, and physical structures such as tunnels, aqueducts, and flumes that could be directly utilized for hydroelectric installations.

The earliest hydro plants were located near the load provided by industrial or mining installations or population centers, because of the technical limitations of electric power transmission.[3] However, development of the Stanley transformer in 1886 permitted a shift from direct to alternating current for electric power transmission and the resulting use of higher voltages over long distances. The construction of the thirteen-mile, 4,000-volt line from Oregon City to Portland, Oregon,

[1] A. H. Markwart and H. A. Barre, "Regional Review of Power Resources, Distribution and Utilization for Pacific Coast States, U. S. A.," First World Power Conference *Transactions* (1924), 1:570. This early installation in San Francisco served an arc-lamp load. Edison's Pearl Street Station receives general credit as the first central station in this Country because it was the first to serve an incandescent-light load.

[2] A. H. Markwart, "Power in California," *Journal of the Franklin Institute*, 204:153, August, 1927. For data on early steam stations see Frank E. Bonner, *Water Powers of California* (1928), pp. 171-206.

[3] For an account of several early hydroelectric power developments at mining operations see T. H. Leggett, *Electric Power Transmission Plants and the Use of Electricity in Mining Operations*, written for the Twelfth Report of the State Mineralogist (1894).

in 1890 was followed in California by the 28.75-mile, 10,000-volt line from the Pomona Plant to San Bernardino.[4] In 1901 the San Francisco Bay area, Northern California's primary electric power market, was connected with the hydroelectric power supply of the Sierra by a 40,000-volt line that spanned the 142 miles between the 9,420-kilovolt-ampere Colgate plant on the Yuba River and Oakland.[5] In a short time the line had been extended 42 miles south to San Jose, thus providing interconnection with the line extending from the Electra powerhouse on the Mokelumne River to San Francisco. Technical developments in hydroelectric generation and in transmission assured adequate continuity of service; and the addition of larger, more efficient steam-electric stations near the primary load center in the following decade provided added operating economies and reliability.

EARLY GROWTH OF ELECTRIC POWER DEMAND, 1900-1939

With electric service assured, the demand for electric power in Northern California multiplied approximately fifteen-fold between the turn of the century and the outbreak of World War II. Except for the depression year of 1935, consumption increased in every year between 1900 and 1939 at an annual average of about 10 percent.[6] By the latter year some saturation in demand in the region was indicated by a diminution of the rate of increase in the number of electric customers per capita. Between 1920 and 1930 the ratio of persons per customer moved from 3.9 to 3.1, and in the following decade it decreased further by an almost negligible amount.[7] In the period 1920-1940 electric power consumption rose 238 percent, with an average rate of increase of 6.3 percent.[8] The earlier rate of increase may be explained by rural expansion and new uses for electricity, as well as the latent general demand for cheaper energy.

Role of Agricultural Demand

California's acute, perennial water problem provides a key element in this early growth of electric power. Irrigation has been a century-old aspect of agriculture in the San Joaquin Valley, and by 1900 the earlier sources of energy for pumping had been largely replaced by electricity. After the turn of the century the well-pumping demand on the east side of the San Joaquin Valley was supplemented by pumping systems in the northern section of the valley that drew water from the rivers and delivered it to gravity canals, and by irrigation systems developed in connection with the increasing rice cultivation north of the Sacramento-San Joaquin Delta region.[9] Other continuing sources of demand outside the primary population centers were oil-well and reclamation pumping, and mining and lumber operations. This rural demand, lying between the hydro sites in the mountains and the urban demand centers near the

[4] Markwart and Barre, *op cit*, p 571
[5] W G. Vincent, Jr, "The Interconnected Transmission System of California," *Journal of Electricity*, 54 567, June 15, 1925
[6] Data for the period 1920-1939 are from California Public Utilities Commission, *Report on a Power Survey of the State of California Conducted by the Public Utilities Commission, Electric Loads and Capacities Long Term, Special Study No 696* (1949), p 34 (Hereafter referred to as CPUC, *Special Study No. 696*.) Data on electric power demand for the period 1900-1920 are from Markwart, *op cit*, p 163
[7] CPUC, *Special Study No. 696*, p. 30.
[8] *Ibid*, p 34
[9] Frederick Hall Fowler, *Hydroelectric Power Systems of California* (1923), p. 34.

Pacific coast, called for distribution to consumers en route, permitting relatively high load-factor operation of the early electric power systems. Early and rapid growth of irrigation pumping gave Northern California its unique July-August load-curve peak, in addition to the more conventional winter peak. The existence of this heavy, industrial-type agricultural demand meant that California's farmers realized the benefits of electrification both for pumping and domestic use much earlier than did their counterparts elsewhere in the United States. In 1934 some 53.9 percent of California farms were receiving central station service, compared with the average of 10.9 percent for the United States.[10] By 1939, largely under the stimulus of the Federal Rural Electrification Administration program, the figure for the United States had increased to 22.1 percent, while that of California rose to 75.0 percent. During this period California dropped from first to third place. With this early saturation in rural electrification, California farmers participated in the federal program of the late 1930's to a very limited degree. By December 31, 1939, there were but four borrowers on Rural Electrification Administration allotments in the State, compared with an average of 15 per state elsewhere in the United States.[11]

Oil—A Competitive Energy Source

The demand for hydroelectric power in Northern California has been conditioned almost from the beginning by the presence of a major competitive energy source. Some 12,000 barrels of petroleum were produced in California in 1876; and by 1900, when output had risen to 4,320,000 barrels, oil products had largely supplanted coal as the basic fuel in Northern California.[12] The output of crude oil and use of petroleum products for steam-electric generation increased steadily in the following decades but was unable to compete with hydroelectric generation as the basic source of electric power in the region The technical and economic advantages of a combination steam-hydro system made a steady increase in steam-electric capacity advisable; but because of the price of oil and its over-all cost characteristics, steam-electric generation remained in the supporting role until the period following the Second World War. The California oil industry was characterized in its early years by an erratic supply pattern, unleavened by adequate storage space or experience. Since the price and availability of oil was relatively unpredictable, the opinion was commonly held that only hydro could provide a basis for a stable, dependable electric power supply. Thus, in the prewar period the major electric power systems depended on hydro for most of their firm capacity, with steam being used for peaking and dry-year reserves.

Favorable comparative costs and the resulting rate structure enabled per capita consumption of electricity in California to reach two and one-half times the national average by 1926.[13] Rate structure policy in this early period neglected geographic differentials but afforded lower rates to industrial users in recognition of their more favorable load factors and the desirability of encouraging industrial development. Two

[10] Rural Electrification Administration, *Report of the Administrator* (1940), p 54.
[11] Robert T. Beall, "Rural Electrification," *Yearbook 1940*. U. S. Department of Agriculture (1940), p. 802.
[12] Joe S Bain, *The Economics of the Pacific Coast Petroleum Industry* (1944), Part 1, p 34.
[13] Markwart, *op. cit.*, p. 163.

examples of the early effects of such rate practice are electric dredging in gold mining and the portland cement industry, both of which became active in 1901, when hydro power had become firmly established.[14]

Trends in Demand Growth, 1900-1939

Several major trends in the development of electric power demand in Northern California between 1900 and 1939 have particular significance for later developments. Most important was the rate of growth of electric power consumption, which exceeded the rates of increase of both population and total regional income. Increased use was encouraged by decreasing electric power rates in almost all sales classifications. Such decreases were permitted by improved organization and technological developments in the industry and by the development of the most favorable hydroelectric sites. Concerning regional demand distribution, steady increases at the primary load center, the San Francisco Bay area, were balanced by rising rural demand. Increased rural demand was based upon additional agricultural consumption, which was in turn the result of a general increase in farm mechanization and use of electrical implements, increased irrigation pumping requirements resulting from the falling water table, more intensive land utilization, and cultivation of additional acreage.

The industrial electric power load grew more slowly since industrial growth in the region was not rapid and few of the industries that did develop were heavy consumers of electricity. Power system demand remained diverse and system efficiency rose, for the "area loss factor" decreased from 34.3 percent of total generation in 1920 to 25.3 percent in 1939, while the area load factor remained quite steady, occasionally moving above the norm of 60 percent.[15]

RISING DEMAND IN THE WAR AND POSTWAR PERIOD, 1940-1956

Two important and relatively independent influences on power development in Northern California during the war and postwar period have been the constant growth of population and the alternate boom and slackening of industrial development. The long-term pattern of migration into California was accelerated by the war and continued at approximately the wartime rate in the postwar period. As indicated in the following table, electric customers and population increased between 50 and 60 percent and consumption of electricity more than doubled between 1940 and 1950.

Industrial demand for electricity fluctuated widely during this period, rising in the war years 1940 through 1944 and falling until 1949, when it began to increase once more. Increased demand in all other classes of consumption was sufficient to maintain a total annual average growth rate of over 9 percent during the entire period. Annual fluctuations in demand were quite regular, caused primarily by varia-

[14] *Ibid.*, pp 164-5.

[15] CPUC, *Special Study No. 696*, Chart 13 and Table 7, facing pp. 38-39. Loss factor is the difference between total generation and total consumption for a given period divided by total generation. Load factor in electric power system operation is the ratio of the average load over a designated period to the peak load occurring in that period.

POPULATION, ELECTRIC CUSTOMERS, AND ENERGY CONSUMPTION IN NORTHERN CALIFORNIA, 1920-1955

Year	*Population*	*Electric customers*	*Total sales (million kwhr.)*
1920	2,072,780	437,173	1,498
1930	2,737,780	842,125	3,566
1940	3,227,399	1,082,447	5,062
1950	4,986,974	1,640,000	11,594
1955	5,963,800*	n a	16,815

* July 1, 1956 (tentative figure)

SOURCES 1920-1940 figures CPUC, "Special Study No 696", 1950 and 1955 figures Population, California State Department of Finance total sales, report on sales by the six privately owned Northern California electric utilities to the California Public Utilities Commission

tions in the agricultural irrigation pumping requirements. Total consumption increased more than threefold between 1940 and 1955, from approximately 5,062 to 16,815 million kilowatt-hours. Between 1948 and 1955 the anual growth rate fluctuated from a maximum increase of 14.4 percent to a minimum of 0.5 percent.

Electric power demand for the United States has also risen steadily in the years following the second World War. After a period of stabilization following the war, the annual average rate of increase in total sales to ultimate consumers has exceeded 9 percent in all except two years since 1946.[16] In 1949 total sales were only 3.1 percent greater than in 1948, and in 1951 the growth figure was 8.7 percent. In 1953 the annual rate of increase rose to 10 9 percent. Rates of 8.8 and 14.6 for 1954 and 1955 indicate continued annual average rates of growth of 9-10 percent.

Although the trend of aggregate demand for electric power is significant as a general measure of growth, knowledge of the structure of demand is vital in power planning. Specific operating problems, a subject not discussed in this work, require analysis that goes behind the major class load divisions.[17]

Demand by Major Consuming Groups

Analysis of the structure of demand (load) for electric power in California by major customer classes has been possible since the present Uniform System of Accounts for Electric Corporations became effective in 1938. Load data for the major consumer classes in Northern California in the years 1938 to 1955 are presented in Table II. The difference in the data bases of the two periods 1938-1948 and 1948-1955 is discussed in a note to the table. The major omission from the figures for the period 1948-1955 is sales of Central Valley Project energy that were distributed through agencies other than the six largest private electric utilities in Northern California This discrepancy results in some understatement of the 1948-1955 totals for all consumer classes except "other" (excluding resale).

[16] Edison Electric Institute, *Statistical Bulletin for the Year 1955* (1956) Percentage growth figures are based upon data in Table 17, "Energy Sales—Total Electric Utility Industry"

[17] Constantine W Bary, "Load Structure of a Modern Electric Utility System," *Proceedings*, American Power Conference (1954), 16:405.

TABLE II

ELECTRIC LOADS BY CUSTOMER CLASSES, NORTHERN CALIFORNIA: 1938-1955

(Millions of kilowatt-hours)

Year	Residential	Commercial	Industrial	Agricultural	Other	Total
1938	753	750	1,602	668	400	4,173
1940	899	841	2,130	812	380	5,062
1942	1,013	1,060	2,864	860	380	6,177
1944	1,234	1,517	3,971	1,100	477	8,299
1946	1,586	1,832	2,981	1,424	633	8,456
1948*	1,970	2,954	2,535	2,110	423	9,992
1948*	1,043	2,286	1,871	1,654	2,576	9,430
1949	1,215	2,543	1,932	1,991	2,922	10,603
1950	1,312	2,775	2,104	2,135	3,268	11,594
1951	1,473	3,133	2,315	2,481	3,869	13,271
1952	1,689	3,203	2,561	2,378	4,329	14,160
1953	2,006	†1,648	5,384	2,963	3,680	15,681
1954	2,171	1,675	5,590	2,998	3,344	15,768
1955	2,384	1,750	6,207	‡4,579	1,895	16,815

* Overlap of the year 1948 for the two sources was included since the components of the several classes differ somewhat in the two groups of data. The differences are summarized, to an extent, in Column (5), Other Sales (excluding resale). For example, in the data for 1948-1954, agricultural sales include only irrigation and agricultural power demand, while all other rural sales are placed in Column (5). In the period 1938-1949 "all *other rural*" sales were *distributed throughout the several demand classes*. The *major omission from* the 1948-1955 data is direct sales of Central Valley Project power.

† Some commercial sales reclassified as industrial since 1953.

‡ One figure presented for rural sales in 1955, "all other rural" included with "irrigation or agricultural power."

SOURCES: 1938-1948 figures: CPUC, "Special Study No. 696," Table 6, facing pp. 33-34. 1948-1955 figures: report on sales by the six privately owned Northern California electric utilities to the California Public Utilities Commission.

Residential

Residential demand for electricity in Northern California increased nearly threefold in the decade 1938-1948, at an annual average rate of over 9 percent, and is estimated to have more than doubled in the years 1948-1955. The consumption of energy per residential customer in Federal Power Commission Power Supply Area 46 (PSA 46) increased about two and one-half times over approximately the same period. Power Supply Area 46 includes Northern and Central California and Northern Nevada. The following figures compare such individual consumption rates with adjacent regions and with the United States.

ENERGY CONSUMPTION PER RESIDENTIAL CUSTOMER

(Kilowatt-hours)

Year	*United States*	*Wash-Ore-Mont-Ida-Utah (FPC Region 7)*	*Calif-Nev-Ariz (FPC Region 8)*	*N & Central Calif-N Nevada (PSA 46)*	*S Calif (PSA 47)*
1935	677	1,105	800	809	785
1940	952	1,510	940	920	934
1945	1,229	2,510	1,250	1,170	1,245
1950	1,830	4,450	1,625	1,640	1,543
1953	2,345	5,420	1,960	2,011	1,820

SOURCES: Regional data: "Regional Office Summary of Data Reported by Utility Systems on Annual Power System Statements," FPC Form 12, for the United States: Edison Electric Institute, "Statistical Bulletin for the Year 1953," Table 36, p. 44. The figures represent average use per *nonfarm residential user*.

Considering both the rate of increase in Northern California, which is exceeded by that of the Pacific Northwest and the average figure for the United States, and the comparative overall growth patterns of the

three areas, future residential consumption per customer in Northern California may be expected to increase at least in proportion to rising incomes. The rate of increase will be affected, however, by the domestic use of natural gas, as long as the supply remains ample. Another key variable in the rate of change of total residential demand for electric power in the region will be the long-term rate of residential construction. Each new residence unit constitutes an added block of demand for electric energy, while the marginal rate of increase in demand for established residences is relatively small Thus, a significant drop in the current high rate of residence construction would have an appreciable effect on total residential demand, although not necessarily on the rate of increase of demand per customer.

In general, the demand for electricity is elastic to decreases in rates and inelastic to increases That is to say, when the electric power rate falls, consumers will increase their consumption of electricity more than in proportion to the rate decrease. On the other hand, if the rate rises, the tendency is for at least the same amount of electricity to be used A relatively small increase in the power rate will not cause a consumer to sell his automatic washer and go back to the washboard Recent experience in Northern California indicates that the demand for electricity in the region is expanding despite higher rates Thus, householders are buying more electric appliances, better lighting, etc., as their incomes rise, even though the cost of electricity is rising with other prices. A recent study by the Federal Power Commission states that the completely electrified home, which will be commonplace by 1980, presently consumes between 20,000 and 25,000 kilowatt-hours per year [18] Average residential use per home is expected to rise from 2,690 kilowatt-hours in 1955 to 7,000 in 1980.

Rate schedules for California residential users provide the customer with some incentive to increase consumption. The following block rate schedule is an excerpt from the rate schedule applied to metropolitan residential consumers in the P. G. & E. system

SCHEDULE D-1 DOMESTIC SERVICE

Rate:

Service charge: per meter per month	50¢
Energy charge (to be added to service charge)	
First 40 kwh per meter per month	3.8¢ per kwh.
Next 60 kwh per meter per month	2.7¢ per kwh
Next 100 kwh per meter per month	2.2¢ per kwh
All excess kwh per meter per month	1.2¢ per kwh

From "Revised Cal PUC Sheet No 2362-E," effective December 1, 1954

This schedule is representative of most residential rate schedules presently in effect in California.

Special promotional or incentive rates set up to encourage the use of a particular type of service or a specific electric appliance have been tried in recent years to a limited extent in Northern California.[19] Their

[18] Federal Power Commission, *Estimated Future Power Requirements of the United States by Regions, 1955-1980* (1956), p 8

[19] For an analytical approach to the problem of rate discrimination within consumer classes, see Carl Edward Magnusson, *Electric Power Markets in Washington* Part II, "Residence Service Markets and a Regional Transmission Grid," University of Washington Engineering Experiment Station, Bulletin No 99 (1938), pp 41-45 A four-stage grouping of residential electric power consumption is proposed that would allow the setting of rates in relation to the customer's order of preference for the service

objective, common to such special rates, has been stimulation of increased electric power consumption during the off-peak periods. Most of the experience in Northern California with incentive rates has involved electric water heaters since water heating rates may be limited to off-peak periods, while space heating rates cannot Load limiting controls for water heaters have been unsuccessfully attempted by P G. & E and the Sierra Pacific Power Company. In the post-war period the California Oregon Power Company (COPCO) provided a special low energy rate for electric water heater installations on a contingent basis that limited the heater wattage capacity and the use of the heater to 18 hours a day. This special arrangement was discontinued in March, 1953, for by that time customers had become willing to pay the regular residential rate for higher-wattage installations than were allowed under the special low rate. The company considers that the incentive rate played a significant role in acquainting the public with the benefits of electric water heating.

Commercial

Commercial demand for electricity includes sales to retail and wholesale trade installations and miscellaneous nonindustrial consumers Table II indicates that consumption in this class of demand rose almost fourfold between 1938 and 1948, at an average annual rate of 12 5 percent. By 1952 commercial demand had increased almost six times over the total in 1938. Although the annual rate of increase in this category has declined somewhat in recent years, the predominance of the service and trade industries in Northern California assures continually increasing commercial requirements, at least in proportion to the basic aggregate growth indices such as population and personal income. The basic rate schedules that apply to most commercial customers in the region are similar in principle to the block rate sample schedule for residential demand. Again taking the current schedule of P. G & E as an example, the basic energy rate ranges from 3 8 cents per kilowatt-hour for the first 50 kilowatt-hours consumed to 2 1 cents per kilowatt-hour for all energy used in excess of 6,000 kilowatt-hours.[20]

Industrial

Industrial demand is the only major class that presents a full cyclical movement between 1938 and 1952. From 1938 to 1944 industrial consumption of electricity rose sharply at an annual average rate of 12 1 percent, reaching a peak of 24 3 percent in 1943. Thereafter a downswing in industrial demand began, the annual average rate falling first to a rate of increase of only 4 percent, and then to a negative rate of 15.7 percent in 1945. Declining industrial consumption continued through 1948, when the total amount of energy consumed in industrial activity fell to some 2½ billion kilowatt-hours, from the wartime peak of almost 4 billion kilowatt-hours, a decrease of over 35 percent in four years. Since 1949 industrial electricity consumption has steadily risen at an annual average rate of about 7 5 percent, to an estimated total consumption of about 2½ billion kilowatt-hours in 1952. During 1943, the

[20] Schedule A-1, General Service, *Revised Cal PUC Sheet No 2720-E*, effective October 22, 1956

year of peak wartime demand, large industrial activity provided approximately one half of the total demand for electric power in Northern California. The nature of this load, characterized by 24-hour operation in many firms, resulted in a load factor of 67.6 percent, an all-time high for the P. G. & E. system.[21]

A number of conditions in the region serve to explain the rapid decline in industrial consumption at a time when all other major class groups were registering steady increases: (1) emphasis during the region's wartime expansion on such "war-sensitive" occupations as shipbuilding and repair, troop service, and overseas shipping installations; (2) the lack of a local market adequate to provide demand for the products of new basic industry; (3) the lack of a natural resource base that would facilitate rapid, permanent, peacetime industrialization; (4) existence of demand for expansion of established service and trade activities; (5) the continued colonial status of the West, which made eastern capital hesitant to shift westward. These conditions stand in contrast to the situation in Southern California, where the war-stimulated aircraft industry provided the foundation for an easy transition to general, though somewhat unbalanced, postwar industrial expansion.

The rise in industrial electric power consumption in Northern California since 1949 may be explained both by the general trend of increasing industrial development in the region and in the United States, and by the increase in the amount of electricity used per man-hour of industrial employment. For most industrial operations, however, electric power is such a small portion of total costs that the energy rate is an insignificant variable in the plant location decision. For a few industries electric energy is a vital raw material, either as a fuel or as the agent for a basic chemical or physical process. In these industries electric energy is a significant percentage of total costs, and the availability of adequate blocks of low-cost energy provides a strong locational attraction. The following table presents the 10 industries whose manufacturing processes required the largest amounts of electricity in 1947. From the preceding review of the timber and mineral resource base of Northern California, it is apparent that a majority of these industries will likely grow in the region over the long run.

INDUSTRIES REQUIRING MORE THAN 40 KILOWATT-HOURS PER MAN-HOUR IN 1947, UNITED STATES

Industry	*Kwhr. per man-hour*
Aluminum	641.1
Electrometallurgical	294.0
Alkalies and chlorine	93.2
Primary zinc	66.2
Inorganic chemicals, n.e.c.	64.0
Cement	62.2
Compressed and liquefied gases	50.2
Pulp mills	44.8
Organic chemicals, n.e.c.	42.8
Carbon and graphite products	40.6
All industries (average)	5.8

SOURCE: Bernard Goldhammer, The Changing Electric Energy Requirements of American Industry, "Proceedings," Western Economic Association (1950), p. 10 (calculated from U. S. Census of Manufactures, 1947.

[21] CPUC, *Special Report No. 696*, Table 8, p. 40f.

These figures considerably understate the current level of industrial consumption of electricity. Between 1939 and 1947 the total electric energy requirement of all industry in the United States more than doubled. Moreover, employment in the electrosensitive industries listed above increased 86 percent during that census period, compared with an increase of 53 percent for all comparable manufacturing industries. The following figures indicate a continuation of this trend through 1953.[22]

ELECTRIC ENERGY PURCHASED BY UNITED STATES MANUFACTURING ESTABLISHMENTS: SELECTED MAJOR INDUSTRY GROUPS, 1947-1953

(Thousands of dollars)

Industry group	*Purchased Electricity 1947*	*1953*	*Percentage increase*
Lumber products	$19,964	$54,541	173 2
Paper and allied	50,606	79,906	57.9
Chemical and allied	85,405	117,084	37.1
Petroleum and coal	28,203	51,288	81.3
Stone, clay, and glass	54,878	94,566	72.3
Primary metals	188,784	349,061	84.9
Fabricated metal	53,957	92,210	70.9
Transportation equipment	59,242	124,152	109.4
Total, all manufacturing	$957,717	$1,720,414	80.2

SOURCE "Annual Survey of Manufactures, 1953," U S. Bureau of the Census (Washington, D C., 1955), pp 122 123

For several decades industrial consumption of electricity in the United States has accounted regularly for over half of total consumption, while such use in Northern California accounted for less than one quarter of total consumption in 1952. Growth of industrial consumption in Northern California since 1952 cannot be directly compared with the preceding period, because of a redefinition of industrial and commercial sales. As indicated in Table II, since 1953 industrial sales have included a significant block of sales formerly designated commercial. Despite this problem, the comparative growth rates of the two classes since 1953 is instructive. In the period 1953-55, commercial light and power sales increased approximately 6 percent while industrial sales rose 15 percent. Finally, in this period industrial sales rose from less than one fourth of total sales to 37 percent. It appears that industrial sales in Northern California are moving rapidly to a position comparable with those in the United States as a whole.

Industrial and commercial customers on the main P. G. & E. system who use more than 6,000 kilowatt-hours per month are billed on Schedule A-13, which is a combination block rate and demand schedule. The charge for the first 6,000 kilowatt-hours or less per month is a flat $150, regardless of the customer's use. For use of over 6,000 kilowatt-hours per month, the rates decrease from 2.1 cents per kilowatt-hour for the first 50 kilowatt-hours per kilowatt to 0.6 cents per kilowatt-hour for all use over 300 kilowatt-hours per kilowatt. The design of the rate is such that large kilowatt demands pay less per kilowatt-hour than

[22] The 1954 Census of Manufactures is not available at this writing Some detail relevant to California's industrial growth is included in a review of data from preliminary 1954 census figures in "Industrial Growth in the Twelfth District," *Monthly Review*, Federal Reserve Bank of San Francisco, December, 1956, pp. 158-162.

smaller demands, assuming the same number of hours of use per month for both demands. The rate is based upon the maximum average amount of power taken during any 15-minute interval but not less than any diversified resistance welder load, with provision made for use of a 30-minute interval for customers with demands exceeding 400 kilowatts, or for a five-minute interval where demand is intermittent or subject to violent fluctuations. Additional provisions are made for ignoring high off-peak demands (10.30 p.m. to 6.30 a.m., and Sundays and holidays) in determining the monthly billing demand, for allowing discounts where the customer receives power at the primary voltage available, and for allowing discounts to firms maintaining high power factors in excess of 85 percent.[23] Service to firms served under special interruptible contracts can be curtailed partially or fully during the contractual period, for periods not to exceed the equivalent of full curtailment for three months.

Agricultural

Agricultural demand for electricity increased more than threefold in the period 1938-1948, at an annual average rate of over 11 percent. With irrigation pumping a major component, agricultural demand showed wide annual fluctuations based on variations in precipitation. Thus, in this decade annual rates of change in consumption varied from a decrease of 11.3 percent in 1941 to an increase of 27.7 percent in 1947. Such fluctuations continued between the years 1949 and 1955, while net gains were registered that brought the estimated total agricultural consumption to over 3 billion kilowatt-hours in the latter year, an amount some four and one-half times as great as the requirement in 1938. Although the percentage of farms receiving central station electricity in California continued to rise after 1940, the extent of saturation during the period is indicated by the rise from 76.2 to 94.2 percent between 1940 and 1953, compared with the movement of the average figure for the United States from 27 1 to 90 8 percent between the same years.[24]

Rate schedules for agricultural power, in common with nearly all other electric rates, are so designed that large installations pay less on a unit basis than small loads, and cost per kilowatt-hour decreases as use increases. Schedule PA-1, which applies to the agricultural power load on most of the P. G. & E system, includes the following provisions: (1) the annual service charge per horsepower of connected load ranges from $8.40 for 2-to-4.9 horsepower to $4 for 2,500 horsepower or more; (2) for the first 1,000 kilowatt-hours per horsepower per year the rate for the smallest horsepower group is 1.75 cents per kilowatt-hour and that for the largest, 1.15 cents per kilowatt-hour; (3) for the next 1,000 kilowatt-hours per horsepower per year the charge is a uniform

[23] Schedule A-13, General Service—Demand metered, *Revised Cal. PUC Sheets Nos 2729-E and 2639-E*, effective October 22, 1956, and February 26, 1956, respectively Power factor is the ratio of kilowatts to kilovolt-amperes, or stated alternatively, it is the cosine of the angle between the vector kilovolt-amperes and kilowatts A power factor of 50 percent means that for a given amount of power, with fixed voltage, twice as much current would be required than with a power factor of unity Since current causes heat, low power factors raise the cost of service by requiring larger-diameter wiring and other additional investment in transmission and distribution equipment than would otherwise be required.

[24] Rural Electrification Administration, *Report of the Administrator* (1940), p. 54, and (1953), p. 14

0.85 cents per kilowatt-hour for all sizes of motors, and for all consumption over 2,000 kilowatt-hours per horsepower per year the rate decreases to 0.60 cents-0.55 cents, depending upon the size of the connected load.[25] The customer load is the sum of the rated capacities of the customer's equipment that may be simultaneously connected to the company's line.

"Other" Demand for Electricity

The final electric power demand class, "other" (excluding resale), includes street lighting, municipal and other railways, and general municipal and government demand. The exclusion of resale energy eliminates double-counting in the calculation of the demand of ultimate consumers. During the period 1938-1948, no significant quantitative change occurred in this category. By remaining stationary in absolute terms, however, it decreased in proportion to total consumption, from approximately 10 percent in 1938 to 4 percent in 1948. Based on the 1955 figures in Table II, the several classes of load had the following percentage relationship to total load: residential, 14.2; commercial, 10.4; industrial, 36.9; agricultural, 27.2; and other (excluding resale), 11.3. Compared with the same relationships in 1938, the major change was an increase in the proportion of agricultural demand at the expense of the residential and commercial categories.

For purposes of regional power planning, analysis of the demand defined by customer classes must be supplemented by consideration of the intraregional, or horizontal, demand structure. Here the single most important development is the continued growth of the historic center of the Northern California electric power market, the San Francisco Bay area. Between 1950 and 1955 the average increase in population of the nine counties of this area was about 18 percent.[26] A continued general rise in population throughout Northern California is indicated, with filling-in of the hinterland of existing urban centers an important phenomenon.

Demand in Adjacent Regions

Because of the existing and potential regional interconnections with the Pacific Northwest and Southern California, consideration of the anticipated rate of growth in demand for electric power in those regions is relevant to estimating the long-run capacity requirement of Northern California. In general, the development of electric power demand in Southern California during the postwar period has been similar to that of Northern California, except for somewhat higher rates of growth in most demand classes. Perhaps the major structural difference in power demand in these two regions is the greater importance of the industrial demand component in the south, based to considerable extent on the continuation of high levels of aircraft production in the years following World War II. In the Pacific Northwest annual consumption of electricity rose quite steadily between 1947 and 1955, from approximately 17 billion to 38 billion kilowatt-hours, after a slight postwar slump.[27]

[25] Schedule PA-1, Agricultural Power, *Revised Cal PUC Sheets Nos 2307-E and 2717-E*, effective August 31, 1954, and October 22, 1956, respectively.

[26] California State Department of Finance, Division of Budget and Accounts, Financial Research Section, *Estimated Population of California, 1950-1954 With Projection to 1965* (1954), p 5 Prepared by Carl M Frisen

[27] U S. Department of the Interior, Bonneville Power Administration, *1956 Advance Program* (1956), Table 3.

Although electric power demand in the Pacific Northwest is heavily weighted by the presence of several basic industrial users, particularly aluminum reduction plants, demand in all consumer classes has risen since the war.

New Peak Levels of Demand

Steadily increasing demand for electric power and the constant expansion of generating capacity were the basic characteristics of development in the war and postwar periods in Northern California. With the breaking of the power shortage bottleneck of 1948-1949 the full pressure of rising demand was released, resulting in successive achievement of record levels of output. In August, 1956, a new monthly demand record on the P. G. & E. system of 2,115,611,554 kilowatt-hours was set, as well as a new record for a single 24-hour period. An alltime system peak of 4,025,300 kilowatts occurred at 3 p.m. on June 28, 1956.[28] The demand for the 24-hour period was 74,344,853 kilowatt-hours,[29] an increase of 2.6 percent over the previous record set in 1955. That this regional growth is part of a larger pattern is indicated by the all-time weekly production record for the United States of 12,327 million kilowatt-hours in January, 1957.

[28] *Annual Report* of P. G & E. to California Public Utilities Commission, 1956, pp 116-117

[29] Nonpublished data of P. G & E, Department of Electric Operations

CHAPTER 3

PROJECTION OF REGIONAL DEMAND TO 1975

Judging by the rate of growth in consumption of electric power in the United States and all its major sections in the past decade, continued increases in demand may be assumed for the near future, given the growth in income and output that maintenance of even average conditions of prosperity would bring. The difficult question presented to those concerned with electric power development in the coming decades is what actual rate of growth in electric power demand may be expected. One method of setting up an estimate of electric power demand is to combine the anticipated rates of use in the several classes of demand into a figure of "demand per capita" and apply this to the expected population level. This is essentially what is done in estimates prepared by the California Public Utilities Commission, such as its Special Study No. 696 and is incorporated in the demand forecast presented in Table III.

A brief examination of prospective movements in the several classes of demand will indicate the nature and extent of deviation that might be expected from the 1975 power demand projection.

TABLE III

ESTIMATED POPULATION, ELECTRIC ENERGY DEMAND AND CAPACITY REQUIREMENT FOR NORTHERN CALIFORNIA: 1950-1975

Year	Population (thousands)	Energy required at generator (Billion kwhr.)		Demand at generator (thousand kw)	Total capacity requirement (thousand kw.)
		F.P.C. *Estimate*	C P U C and *this study*		
	(1)	(2)	(3)	(4)	(5)
1950	4,987	--	13 9	2,497	2,885
1955	*5,964	20 8	20.8	3,740	4,806
1960†	6,650	--	26 6	4,980	5,700
1965	7,116	40 4	35 6	6,660	7,600
1970	7,614	--	45 7	8,550	9,700
1975	8,187	--	57 3	10,720	11,300
1980	--	83 7	--	--	--

* 1956 figure

† Methodological note on projected figures, 1960-1975 Col (1) data computed by applying compounded growth *rate of 7 percent for five-year intervals, Col (3) computed by application of estimated* increase in demand per capita from 4,000 kilowatt-hours in 1960 to 7,000 kilowatt-hours in 1975 at a rate of 1,000 per five-year interval. Col (4) is derived from Col (3) by dividing the latter by 8,760 (hours per year) and by *61 percent (assumed load factor), Col* (5) is derived *by increasing* Col (4) *by* 15 percent (assumed reserve requirement)

SOURCES Col (1) 1950-1956, California State Department of Finance, Col (2) FPC, "Estimated Future Power Requirements of the United States by Regions, 1955-1980" (1956), Cols (3) and (4) 1950-1955 and (5) 1955, CPUC, "Electric Power Survey Years 1954-1958," S-1283.

The following table presents a recent Federal Power Commission forecast of electric power loads by user classes for Region VIII (California, Nevada, and Arizona). According to this forecast, domestic demand (nonfarm-residential) in Region VIII will increase four times

PROJECTION OF LOADS BY CLASSES OF USE IN REGION VIII, 1955-1980

(Billion kilowatt-hours)

	1955	*1980*
Farm, excluding irrigation and drainage pumping	.7	1.2
Irrigation and drainage pumping	5.8	6.6
Nonfarm-residential	9.3	37.4
Commercial	7.3	34.4
Industrial	16.5	78.7
Street and highway lighting	.5	1.0
Electrified transportation	.2	.1
Other deliveries to ultimate consumers	2.4	5.0
Losses and unaccounted for	6.3	27.0
Total energy requirements	49.0	191.4

SOURCE Federal Power Commission, "Estimated Future Power Requirements of the United States by Regions, 1955-1980" (1956), p. 17.

by 1980. This approximates the national average rate and is slightly higher than that anticipated for Region VII, the Pacific Northwest. This trend is consistent with the discussion of long-run trends in energy consumption per residential customer, presented on page 53. Through 1955, Region VIII and Northern California lagged behind the United States average in this regard. In the next several decades growth in residential electric energy consumption will lag as long as natural gas remains available for household use. Ultimately, domestic use will be accelerated by decreasing supplies of natural gas, which will mean a shift to dependence on electricity for cooking and water- and space-heating in Northern California homes. This is consistent with a long-term trend in the United States to the all-electric home.

A possible major source of electricity demand in the planning period is the heat pump. The climatic conditions existing in the valley and foothill areas of Northern California make operation of the heat pump economically feasible. Air, or ground water where available, can be used efficiently as the heat source. The greatest disadvantage of the heat pump is its initial cost which can be justified only by its use for heat in the winter and for air conditioning in the summer months.

Trend in Residential Demand

The general trend of residential demand for the next two decades is expected to show absolute increases at a fairly uniform annual average rate. The rate of change in domestic demand may be assumed as relatively independent of gradual increases in electric energy rates. As long as the cost of electric energy remains a small proportion of total living costs for each household, electric power demand may be expected to remain inelastic to changes in rates. Thus, incentive rates for special appliances or types of service will continue to be relatively ineffective except when they are strategically timed to meet underlying shifts in consumer preferences.

Industrial and Commercial

Industrial and commercial demand in the next two decades may be expected to continue to rise more rapidly than basic population growth. The relatively undeveloped status of Northern California was analyzed in the preceding chapter. Until the region has matured industrially, commercial and industrial electric power consumption may be expected to continue to rise more rapidly than total energy consumption Northern California will probably follow the general pattern illustrated for the larger area (California, Arizona, and Nevada) covered in the preceding table.

There is no indication that future electric power development will have a significant effect on industrial dispersion in the region. The widespread nature of the power grid, plus the development of increasingly efficient small-scale generators that have very flexible location characteristics, means that the availability of electricity will remain a permissive, but not dominating, factor in industrial location in Northern California. The long-term prospects for industrial development based on future exploitation of Northern California's timber and mineral resources is discussed in Chapters 5 through 7.

Agricultural

The long-term pattern of agricultural demand for electricity can be discussed with even less certainty than that of the other major demand classes, primarily because of the tenuous status of several of the major water development projects in the Central Valley. Both the timing and the quantity of future demand for irrigation pumping will be affected by the construction of major water storage and control works, for better control would reduce the impact of low-water years and would ultimately allow replenishing the depleting ground water supply in the Central Valley The effect on electric power demand could be to reduce both the wide year-to-year fluctuations and the total amount of electricity required It is equally possible, however, that the increased energy demand at major canal pumping installations would more than equal the reduced demand resulting from a higher water table in the valley. A general trend of increasing agricultural demand for electricity to 1975 seems assured, based on continued exploitation of the remaining water supply and the increased use of electric-powered equipment on the farm.[1]

In the miscellaneous category of demand, a major possible increment not included in the estimates presented here is that of regional railway electrification. Full electrification of the western United States would mean a tenfold increase over present demand from railways, to an annual total of some 10 billion kilowatt-hours,[2] of which a considerable portion could be drawn from the Northern California grid system. Considering the present trend from steam to diesel-electric motive power in railroads throughout the United States, such a development is quite unlikely until the economic limit of the nation's liquid fuel potential is reached.

[1] The author is presently engaged in a study of the relationship between electric power costs, coordinated surface and ground water use, and agricultural development in California, supported by the Giannini Foundation of Agricultural Economics

[2] U. S Bureau of Reclamation, *A Study of Future Transmission for the West* (1952), p. 13.

Electric Power Demand Forecasts

A projection of electric power demand has several characteristics that save it in some degree from the uncertainty attending most predictions of human behavior. For example, as a consumer good tied closely to everyday living requirements and forming a small proportion of total consumption expenditures for most individuals, electric energy requirements vary closely and directly with changes in population. To those most intimately concerned with the problems of population forecasting, this is perhaps neither impressive nor reassuring. However, since electric power demand is a derived demand, shifts in population trends discernible as much as three to four years in advance are sufficient to alter plans for power capacity expansion.

That power demand forecasting provides room for wide ranges of disagreement and error is illustrated in a comparison of forecasts of long-term electric power demand for Northern California by a number of individuals and organizations in the late 1930's and early 1940's.[3] These forecasts can be divided into two parts: the projection of the Bureau of Reclamation, and all others. The bureau's estimate was prepared in 1944 and the others, representing the State of California, the Federal Power Commission, and several individuals, were developed between 1928 and 1943. All estimates, except that of the Bureau of Reclamation, were remarkably uniform in setting up virtually straight line projections to 1960, with estimated demand in Northern California ranging between 10 2 and 16.9 billion kilowatt-hours for that year. An extension of the projection to 1970 resulted in an average demand figure of 16 billion kilowatt-hours. The estimate prepared by the Bureau of Reclamation, on the other hand, projected a steadily, perhaps sharply, rising curvilinear demand pattern with a total anticipated demand requirement of some 40 billion kilowatt-hours by 1970.

Comparing the bureau's projection with Columns (2) and (3) of Table III one observes that its estimate was fairly close to the estimates presented there. It is evident from subsequent development of demand that the estimates in the FPC study, other than that of the bureau, reflected an overly conservative judgment. The varying times of preparation of the several estimates cannot be considered a significant element, for the electric power demand projection included in the 1947 Problem 7 report,[4] was prepared concurrently by several of the individuals representing the California State Railroad Commission (now the CPUC), the Corps of Engineers, and the FPC, whose separate, earlier estimates appear in the FPC-cited table. Though a forecaster's desire to maintain a conservative, rather than optimistic, bias is understandable and probably desirable, such bias can apparently condition one's appraisal of shifts in major variables. It is not unlikely that the consensus of conservative estimates of electric power demand in the postwar period contributed in some degree to the power shortage that occurred in Northern California in 1948-1949.

[3] Federal Power Commission, San Francisco Regional Office, *Report on Plan of Development Central Valley Basin as Proposed by the Bureau of Reclamation*, Appendix, Plate 3, "Estimates of Energy Requirements by Various Authorities, Northern California" (includes estimates for Northern California, P S A 46, and Central Valley Service Area)

[4] U S Department of the Interior, Bureau of Reclamation, *Central Valley Project Studies Problem 7*, "Further Stages in Development," (1947), p. 60 Data in this study are to 1944, for the most part

Future Demand in Northern California

To allow for the inevitable variance of actual from estimated figures, as well as to indicate the range possible under varying economic assumptions, in its 1949 study the CPUC prepared three projections, which yielded minimum, maximum, and average data, assuming depressed, exceptional, and average economic conditions. The figures in Table III reflect an assumption of continued near full employment economic conditions. For a number of years a rule of thumb in the electric power industry of the United States has been that the demand for electric power may be expected to "double ever decade." Though such a rule would appear to be workable for the next decade or two, the Federal Power Commission in its most recent forecast suggests good reasons for not adhering indefinitely to this over-simplified approach.[5]

There are no other data with which the long-term forecast presented here can be directly compared. Specific or detailed planning by the major operating utility companies in the region is limited to a four- or five-year period, the maximum time required to construct a major electric generation station. General planning activity of private utilities may extend as far as 20 years ahead, but is limited by the uncertainty of future changes in the basic regulations under which they operate. Between 1949 and 1956 the CPUC has prepared short-run forecasts, but its long-term projection in the 1949 study has not been revised.[6] The data on the following pages provide a basis for comparison of the forecast presented in Table III with other electric power requirement estimates. The estimated requirement for the United States in 1975 is somewhat larger than the estimate of 1,400 billion kilowatt-hours presented by the President's Materials Policy Commission for the same year.[7]

Plant Capacity Required to Meet 1975 Demand

Given an estimate of demand for electric energy, setting up the capacity requirement to meet such demand requires several assumptions concerning the technical operating characteristics of the electric power system. System economy in a mixed steam hydro arrangement

ESTIMATED LOAD REQUIREMENTS FOR THE UNITED STATES, FPC REGIONS VII AND VIII, AND NORTHERN CALIFORNIA

(Energy in billions of kwh; peak in millions of kw.)

	United States (1)		*Region VII* (2)		*Region VIII* (3)		*Northern Calif.* (4)	
Year	*Energy*	*Peak*	*Energy*	*Peak*	*Energy*	*Peak*	*Energy*	*Peak*
1955*	553 5	102.7	47 7	8 5	49 0	8 8	20 8	3 7
1960	779 9	143.9	72 9	12.3	70.4	13.1	26 6	5 0
1965	1,006 3	185.9	94.1	15.7	95 0	18.1	35 6	6 7
1970	1,253.1	231 2	117.7	19.6	123.2	23.4	45.7	8.6
1975	1,523 5	280.8	143.7	24.0	155.1	29.5	57 3	10.7
1980	1,821.3	335.3	170.8	28.6	191.4	36.4	---	---

* Actual figures for 1955

SOURCES Columns (1), (2), and (3), Federal Power Commission "Estimated Future Power Requirements of the United States by Regions, 1955-1980" (1956), column (4), Table III, p 42, above

[5] Federal Power Commission, *Estimated Future Power Requirements of the United States by Regions, 1955-1980* (1956), p 4.

[6] The most recent forecast is presented in California Public Utilities Commission, *Electric Power Survey Years, 1954-1958, for the State of California* (1956), Work Order No S-1283

[7] President's Materials Policy Commission, *Resources for Freedom* (1952), Volume III, p. 3 (82 2, H. Doc. No. 527).

involves a complex balancing among many variables of capacity and output. The desired end is that capacity provided to meet the peaking requirement of the system be so selected and designed that it can be used at high levels of efficiency in meeting the total, 24-hour, year-around system load. In the capacity estimate in Column (4) of Table III these relationships are subsumed in the assumption of a system load factor of 61 percent.

The essential nature of electric power service requires the provision of reserve generating capacity to guarantee service in the face of unplanned outages of generating units and unexpected load growth. The amount of reserve capacity required for a given system is based upon the degree of interconnection of the several generating stations, the size of generating units, and, where hydroelectric power is involved, the quantity of water available in adverse water years. Although reserves for Northern California in the past decade have periodically fallen below the national average and the commonly used planning figure of 15 percent, the following data indicate that presently planned additions to capacity will meet that minimum figure.

PLANNED RESERVES FOR THE UNITED STATES, REGION VIII AND PSA 46: 1956-1959

(Thousands of kw.)

	U. S.	*Region VIII*	*FPC Power Supply Area 46**		
			Dec. peak req.	*Capacity*	
Year	*percent†*	*percent†*	*Kw.*	*Kw.*	*percent†*
1956	17.2	17.8	3,420	4,151	21.4
1957	13.3	14.9	3,624	4,156	14.7
1958	18.2	21.1	3,853	4,866	26.3
1959	17.8	17.4	4,130	4,866	17.8

* Data are for P. G. & E. system that will include over 90 percent of total capacity in PSA 46 during these years. Most of the balance of the area's capacity will be provided by the Central Valley Project.

† Excess of planned capacity over estimated requirement.

SOURCE: "FPC Monthly Report," "Electric Power Supply and Requirements by Regions, Class I Electric Utility Systems," data as of December 31, 1956.

The estimated capacity requirement for Northern California to 1975, presented in Column (5) of Table III, assumes a reserve requirement of 15 percent throughout the period.

Underlying the problem of development of electric power in Northern California in the years to come is the broad developmental question: how can changing technology, a shifting structure of demand, and the region's resource base best be integrated over time? The pertinence of this question does not depend on the precision with which the capacity requirement of the region for 1975 is estimated today. Rather it suggests the urgency of continuous evaluation and reappraisal of electric energy needs in relation to the region's industrial, agricultural, and general economic growth.

PART II

SUPPLY OF ELECTRIC ENERGY IN THE REGION

CHAPTER 4

THE ENERGY RESOURCE BASE OF NORTHERN CALIFORNIA

The broad limits and general direction of future electric power development in Northern California will evolve from the interrelationship of a rapidly changing technology and the region's energy resource base. Though our concern here is with Northern California, there are compelling reasons for a more inclusive perspective in analyzing the total resource base of the area. Established electric power interconnections to the north and south, natural gas pipeline connections to the southwest, and receipts of petroleum products from throughout the world all militate against limiting the definition of the energy resource base of Northern California to include only those resources located within its physical boundaries.

Increasing dependence on imported fuels makes the interregional and world resource reserves of unprecedented consequence to Northern California. Recent rates of increased world consumption compared with slower rates of discovery and re-evaluation of reserves of conventional fuels make even this widened base of regional energy supply less than reassuring, for the adequacy of conventional fuels to meet world demand of the year 2000 has been seriously questioned.[1] Use of the term conventional fuels suggests the promise of technology to find new means of meeting world energy requirements. The ultimate feasibility of commercial application of atomic energy is now widely accepted. However, nuclear power will not be a substitute for many present uses of liquid fuels, it is not expected to lower total energy costs, and its raw material base is not inexhaustible. There remains, therefore, a case for conservation of the world energy resource and the allied need for each region to carefully develop its optimum path of development within the relevant technological-resource milieu.

DEVELOPMENT OF THE PRESENT REGIONAL ENERGY PATTERN

The structure of energy supply in California presents some contrast with other major regions in the United States. Petroleum and natural gas are the basic energy sources in the State, compared with hydroelectric power in the Pacific Northwest, natural gas in the Southwest, and coal in the remainder of the Country. The extent to which fuel oils are supplemented by natural gas and hydroelectric power in California is indicated in Table IV. Coal consumption is so negligible that it is not enumerated in summary statistics on fuel consumption in the State.[2]

[1] Palmer Cosslett Putnam, *Energy in the Future* (1953), p 239 Using the energy unit 1 Q (one billion billion British thermal units), the maximum plausible United States requirement of 4 3 Q by A D 2000 is compared with estimated net reserves, recoverable at less than double present costs, of 4 Q The world scene presents only a slightly more favorable relationship with a requirement of 27 2 Q to be met with reserves in the nature of 30 Q *Ibid*, figures 9-11, p 232

[2] Data on fuel consumption in the United States are available only by major sections and states The structure of use for fuel oil, natural gas, and hydroelectric power is sufficiently similar in Northern and Southern California, however, to allow some generalizations concerning either section based on data for the entire State

TABLE IV

TOTAL SALES OF FUEL OIL AND NATURAL GAS, CONSUMPTION BY ELECTRIC UTILITIES, AND ELECTRIC POWER PRODUCTION IN CALIFORNIA: 1940-1955

Year	Total fuel oil consumption* (million bbl) (1)	Total natural gas consumption (billion cu ft) (2)	Electric power production		
			Fuel oil consumption (million bbl) (3)	Natural gas consumption (billion cu ft) (4)	Total electricity generated† (billion kwh) (5)
1940	71 5	352 0	5	14 0	9,789
1941	77 2	375 0	1 3	12.1	10,462
1942	99 8	404 0	3 3	12 1	11,583
1943	136 4	457 8	5 2	36 0	14,776
1944	134 2	502 0	4 1	56 7	15,887
1945	146 3	502 4	3 4	35 1	15,903
1946	109 9	487 9	10 2	18 6	17,314
1947	111 4	548 4	16 0	39 9	19,432
1948	101 7	617 6	11 9	61 2	20,287
1949	98 5	619 3	14 4	65 3	22,112
1950	97 6	683 9	9 4	78 3	24,836
1951	107 9	787 8	15 4	83 1	29,375
1952	103 0	792 5	11 6	74 3	29,252
1953	110 0	862 2	17 7	117 6	35,064
1954		933 9	11 3	178 8	37,762
1955			22 0	183 6	42,517
1956			22 3	149 5	46,575

* Includes distilled and residual fuel oils Residual fuel oils comprise about 20 percent of total fuel oil use in California, but are used almost exclusively in electric generation

† Includes hydroelectric and thermal output

SOURCES Columns (1) and (2) U S Bureau of Mines, "Minerals Yearbook", columns (3) and (4) Federal Power Commission, "Consumption of Fuel for Production of Electric Energy, Annual Report", column (5) Federal Power Commission, "Electric Power Statistics, 1920-1940" (1941) and "Production of Electric Energy, Capacity of Generating Plans 1945-1956" (1957).

Following the displacement of coal by petroleum and hydroelectric power at the beginning of this century, the only major development in the structure of fuel consumption in Northern California before World War II was the shift from manufactured to natural gas. Three major developments in the postwar period have significantly altered the basic pattern of energy supply in the region: (1) construction of natural gas pipe lines to the southwest; (2) the shift to net imports of petroleum products; and (3) the transition to primary reliance on steam-electric generating plants that ended a half century of preeminence of hydroelectric power. By the end of 1952, California's annual fuel requirement totaled approximately 103 million barrels of fuel oil and 792.5 billion cubic feet of natural gas. Of these amounts, some 17.7 million barrels of fuel oil and 117.6 billion cubic feet of natural gas were used in electric power generation. Hydroelectric power output totaled about 18,654 million kilowatt-hours, thus accounting for approximately 14 percent of the basic energy requirement of the State.[3]

[3] The structure of basic energy consumption may be examined by reducing fuel oil and natural gas data to the common base of kilowatt-hours The conversion factors used here are the average figures for California, .088 gallons of fuel oil (42 gallons per barrel) or 12 3 cubic feet of natural gas equal one kilowatt-hour, taken from Federal Power Commission, *Consumption of Fuel for Production of Electric Energy* (1953). The kilowatt-hour equivalents, in billions of kilowatt-hours, are as follows fuel oil, 64 4, natural gas, 49 2 These figures, added to hydroelectric output, yield total energy sales of 132 3 billion kilowatt-hours for 1952

Petroleum

Petroleum was established as the basic fuel resource of Northern California by 1900, and its consumption has risen rapidly, almost without interruption, since that time.[4] Production has been concentrated in three major areas The Los Angeles basin was the primary source of crude in the earliest period, followed by the San Joaquin Valley discoveries, which made that region the leader between 1900 and 1920. The coastal and Los Angeles area has dominated the picture of petroleum output since that time. Until the early 1930's, output of California's wells provided the basis for a steadily rising exportable surplus of petroleum products Shipments of all petroleum products outside the Pacific Coast area jumped from 16,000,000 barrels in 1922 to 90 million in 1923 and maintained an average of 84,000,000 barrels a year until 1930.[5] Despite the high level of demand, inventories accumulated to an all-time record of 188 million barrels in 1930. This development, in combination with the generally depressed economic conditions throughout the world during the 1930's, lead to a retrenchment of the industry, which lasted until the outbreak of the second World War.

The current phase of the California petroleum industry is highlighted by a shift from self-sufficiency to net imports of petroleum products stemming directly from large wartime demands. In addition to technically over-rapid extraction and consequent accelerated depletion of individual wells and fields, the war-induced increases in output revealed an over-all average decrease in output per well of some 10 percent in the period 1941-1945, compared with 1936-1940.[6] The output of California crude has increased continuously in the postwar period, except for a brief period in 1949-1950, and in March, 1953, exceeded 1,000,000 barrels per day for the first time. However, demand has risen even more rapidly than supply; and the California industry can no longer fulfill the requirement of its primary market, the Pacific Coast area. Tanker imports of Arabian crude, as well as completion of a pipeline connection between Alberta, Canada, and the Pacific Northwest, herald the beginning of a new era in the California oil industry.

The kinds of petroleum products imported into the Bureau of Mines District 5[7] highlight the two fundamental qualitative problems of the California petroleum industry: relatively low-gravity crude and obsolete refining plants. Total imports of petroleum products into District 5 increased almost eightfold from 1949 to 1953, imports of crude oil rising from 23,000 barrels to over 134,000 barrels per day, and gasoline receipts increasing from 7,000 to 34,000 barrels per day during this period.[8] During the same period production within the District rose by less than 5 percent Foreign imports came from Venezuela, Borneo, Sumatra, and Saudi Arabia. Refined, domestic imports came from Utah and Wyoming, and crude oil came from Texas. Completion

[4] See Joe S Bain, *The Economics of the Pacific Coast Petroleum Industry* (1944), Part I, p 34, for a summary of petroleum production to 1940 For the period 1941-1954 see U S Bureau of Mines, *Mineral Yearbook*

[5] Federal Reserve Bank of San Francisco, "Western Power and Fuel Outlook," Supplement to *Monthly Review*, November, 1950, p 24

[6] *Ibid*, p 26

[7] District 5 includes California, Oregon, Washington, Arizona, and Nevada

[8] Federal Reserve Bank of San Francisco, "The Petroleum Industry on the Pacific Coast and Recent World Oil Developments," Supplement to *Monthly Review*, March, 1954, Table 4, p. 16.

of the 718-mile, 24-inch pipe line from Edmonton, Alberta, to Vancouver, British Columbia, in 1953, with its planned extension into the state of Washington, is a culminating element in the parade of imports into the California petroleum market area.[9]

The complex, multiproduct yield of the refining process, combined with a refining industry unable to take the maximum possible volume of top-grade derivatives from the native, low-gravity crude, results periodically in a problem of storing excess inventories of various low-grade distillates. Modernization of refining capacity would only partially alleviate the situation, for the basic problem would remain of matching the irreducible supply of residual fuel oils with their variable and seasonal demand. In the early years of the industry, the lack of other fuels in California provided a ready market for the low-grade residuals Though the increased refinery output between the late 1920's and World War II was largely oriented to demand for gasoline, the by-product of heavy fuel oils, which constituted about 40 percent of refinery output of the period, was absorbed by increased demands in water and rail transportation.[10] Since 1945 the demand for heavy fuel oil has declined. The shift of railroads to diesel-electric power, a loss of one former major source of demand, is probably permanent. Reduced maritime and railway demand was replaced by increased use of heavy oil in industry and the electric utilities immediately following World War II, but this fillip has been dissipated by the latter groups' increasing substitution of natural gas.[11] Further decreases in demand for California's heavy fuel oil stocks will certainly follow with the linkage of the Pacific Northwest with Canadian oil and natural gas. The most recent period of excess fuel oil stocks, 1949-1953, resulted from this general softening of demand plus weather favorable to hydroelectric power generation and the desire of the military for larger above-ground reserves.

A significant aspect of California's pattern of fuel oil supply is its effect on price. The long-term price trend for fuel oil in the State presents a gradual rise with rather marked short-run fluctuations. Taking the price of fuel oil at Richmond refineries in 1915 as a base of 100, one finds that by 1940 the index price had risen only five points. By 1945 it had risen to 153.[12] The following data trace the price of residual fuel oil in California since that time.

PRICE OF RESIDUAL FUEL OIL, CALIFORNIA: 1945-1952

	1945	1946	1947	1948	1949	1950	1951	1952
Price: (bbl.)	$1.10	1.22	1.55	2.11	1.64	1.41	1.78	1.70

SOURCE U S Bureau of Mines, "Minerals Yearbook," 1945-1948, listed as price for California, 1949-1952, list at San Pedro

Natural Gas

Natural gas was discovered by chance near Stockton, California, in 1864, and its use in the State was limited to that municipal area for the balance of the century. By 1907 domestic service was established

[9] Federal Reserve Bank of San Francisco, *Monthly Review*, May, 1953, p 63
[10] Supplement to *Monthly Review*, November, 1950, *op cit*, p 28
[11] Data on the use of fuel oil by major consumer classes in California were prepared annually by the Petroleum Statistics Section, Bureau of Mines, Region III, San Francisco, until 1953 Monthly publication of this information began in 1954
[12] Speech by Lesher S Wing before the Commonwealth Club, San Francisco, September 3, 1947. (Utilities Section, not published in *Transactions*)

in Santa Maria, Santa Barbara County, following the discovery of oil and natural gas in that area six years earlier. Additional oil discoveries in Southern California and the upper San Joaquin Valley led to widespread development of natural gas service in Southern California between 1910 and 1924. Northern California's participation in this development awaited the discovery of the Buttonwillow and Kettleman Hills oil discoveries, north and west of Bakersfield, in 1926 and 1928 Developments in long-distance gas transmission, such as the production of large-diameter, electric-welded steel pipe, provided the technical base for spanning the 250 miles between Buttonwillow and the San Francisco Bay area by what proved to be the longest gas-transmission line in the west for that period.[13] Availability of surplus (waste) gas at Ventura was an added economic incentive for the project. During this early period California natural gas was casing-head, or wet, gas, which is found in association with crude oil extraction. By 1930 natural gas had almost completely replaced the original manufactured gas, and has provided about 99 percent of total utility sales of gas in California since that time.[14]

Sales of wet gas have decreased markedly in recent years, both absolutely and in relation to dry gas. By the late 1940's wet gas accounted for about one third of the total output of natural gas in California, compared with more than 96 percent between 1935 and 1938. Because of increasing use for pumping, drilling, and reinjection to maintain field pressures in petroleum production, wet gas now makes a diminishing contribution to the total amount of natural gas available for distribution in the State. Decreased use of wet gas in Northern California was accelerated by the development of dry gas fields within the region. The most important of these is the Rio Vista field, judged the sixth largest natural gas field in the United States, which was discovered in 1936 in the lower Sacramento Valley, some 40 miles northeast of San Francisco Since that time dry gas has contributed between 75 and 80 percent of total natural gas supply in Northern California.

Dry gas yields about two times as much heat, by volume, as does wet gas, and in addition presents the operating advantage of a supply that can be controlled in relation to demand, rather than being dependent upon petroleum extraction. This is especially important for Northern California, where few natural underground storage sites exist.

Increased use of natural gas since World War I has been one of the most important energy developments in the United States. Since the major sources of supply, other than California, are concentrated in the southwestern states of Kansas, Oklahoma, Louisiana, and Texas, long-distance transmission of natural gas to major population centers developed rapidly after 1926, when several long-standing technical bottlenecks had been removed. The inadequacy of California's domestic supply was apparent in 1943, following a detailed study by a group of Southern California private utility companies. In 1947 Southern California was connected with the southwest by a thousand-mile pipe line. In the same year P. G. & E. signed a five-year agreement with Southern

[13] Charles M. Coleman, *P G & E of California* (1952), pp. 299-302
[14] Supplement to *Monthly Review*, November, 1950, *op cit*, p 12.

California utilities to share out-of-state deliveries; and at the same time it contracted independently with the same supplying company, the El Paso Natural Gas Company of Texas, for future direct delivery to Northern California over P. G. & E.'s own line. This pipe line, commonly called the "Super-inch" because its 34-inch diameter was larger than that of any other then in use, extended 502 miles from a point south of Hollister, California, to its connection with the El Paso system at the California-Arizona border.

In 1951 gas was delivered to the San Francisco Bay area from the southwest over this line of a capacity of 400 million cubic feet. By 1954 the over-all length of the "Super-inch" line had been increased to 786 miles by the addition of 284 miles of "looping" (parallel, connected line) and pumps, which increased the transmission capacity of the line to 700 million cubic feet per day, and storage capacity in about the same proportion. In March, 1957, the California Public Utilities Commission authorized P. G. & E. to proceed with construction of the final section of looping. This will increase the total effective length of the line to 1,004 miles and the daily transmission capacity to about one billion cubic feet. In the period 1947-1954, imports of natural gas into Northern California increased from zero to some 228 billion cubic feet annually, and by the latter year constituted about 68 percent of the total requirement in the region.[15]

The relationship between the three primary natural gas consumer classes—domestic, commercial, and industrial users—has shifted markedly in Northern California since the 1930's, in a direction opposite to that of the rest of the country. With natural gas coming into general use as a household fuel and for space heating in this region, the ratio of domestic and commercial demand to industrial demand rose from 3:2 to 3:1 between 1936 and 1945. Because of the vital nature of the community's heat requirement, natural gas service to dwellings and commercial establishments is considered noninterruptible, even though it is charactertized by sharp daily and yearly peaks. Industrial service contracts may include, on the other hand, specific provision for temporary cessation of supply during certain periods, or upon advance notice. Growth of this highly seasonal, noninterruptible load has increased the need for promotion of off-peak, interruptible demand that would improve the system load factor. The effectiveness of special low rates that have been afforded industrial users to encourage such demand has been weakened in recent years by deficiences in supply, which are necessarily levied against customers with interruptible service contracts. Though the supply and sale of natural gas in Northern California is under the control of the major electric utility company, natural gas is available as a fuel for steam-electric generation on the same basis as other interruptible industrial users, except for periods of emergency. As is indicated in Table IV, the use of natural gas for electric generation has risen in approximately the same proportion as the total consumption of natural gas in the region.

Hydroelectric Power

Hydroelectric power, Northern California's third independent energy source provides one of the most picturesque, as well as economically

[15] Pacific Gas and Electric Company, *Annual Report, 1954*, p. 24.

significant, phases of development of the region. The region's rugged streams, falling precipitously down their mountain courses, made Northern California's hydroelectric plant unique from the outset. Relatively small quantities of water falling great distances set the pattern of power plant design. Thus, in the most characteristic installations, the normal stream flow was diverted into a lengthy conduit and returned to the natural flow of the same, or a companion, stream, after passing through the powerhouse turbine. This type of hydroelectric operation is epitomized by the 60,000-kilowatt-capacity Bucks Creek plant on the Feather River, which was completed in 1928. The water supply of this installation is drawn from the watershed high above, through a series of reservoirs, lakes, tunnels, and creek beds. Its impulse-type water wheel operates under a head of 2,561.6 feet below the forebay, the highest head of any hydro plant in the Western Hemisphere.[16]

The development of a large number of attractive hydro sites resulted in an electric generation system that used hydroelectric output to meet base-load requirements while steam-electric generation was used on a supplementary basis. During the first three decades of this century hydroelectric plants comprised between two-thirds and three-quarters of total electric generating capacity.[17] The evolution of the hydrosteam ratio is presented in Table V. Primary dependence on hydroelectric

TABLE V

ELECTRIC GENERATING CAPACITY IN CALIFORNIA AND NORTHERN CALIFORNIA BY MAJOR SOURCES: 1920-1956

(Thousands of kilowatts)

Year	Hydro	Steam	Internal combustion	Total	Hydro-steam ratio*
Part I: California					
1920	567	363	3	934	.61
1925	1,190	623	4	1,816	.66
1930	1,642	1,049	6	2,698	.61
1935	1,749	1,086	32	2,867	.61
1940	1,541	1 127	49	2,717	.57
1945	1,987	1,348	48	3,384	.59
1950	2,604	2,667	45	5,316	.49
1953	2,866	3,896	45	6,607	43
Part II: Northern California					
1928	961	†280	--	1,241	.77
1948	1,513	735	2	2,250	.67
1956	3,045	2,919	1	5,955	.51

* Hydro capacity expressed as a percentage of total capacity

† Includes all thermal generating capacity

SOURCES Part I Federal Power Commission, 1920-1940, "Electric Power Statistics" (1941), 1945-1953, "Production of Electric Energy, Capacity of Generating Plants" (1953) Part II 1928, Frank E Bonner, "Water Powers of California" (1928), p 18, 1948, California Public Utilities Commission, "Electric Loads and Capacities," Long Term (1948), Special Study No 696, Table 25, sheet 1 of 2 facing pp 40-50, 1956, pp 233 and 236, infra (includes installations under construction)

[16] Coleman, *op cit*, p 298

[17] The importance of the early role of hydroelectric power in California is indicated by the estimate of A. H Markwart, "Power in California," *Journal of the Franklin Institute*, 204 165, that by 1926 approximately 95 percent of the State's energy requirement was provided by electricity The northern section was more dependent on hydro at that time than was the remainder of the State.

power was sustained until very recently by favorable cost relationships in comparison to other methods of electric generation, and by the Northern California system peak, which often occurred in the summertime when the stream flows were still high Although water storage capacity was included in hydro developments in Northern California whenever possible, the small number and capacity of reservoir sites made the region's predominantly run-of-river system very sensitive to the highly seasonal May-August runoff of most streams in the area. This problem has been remedied to a limited extent by the construction of several major storage works under the multiple-purpose public program inaugurated in the 1930's, which ushered in the second major phase of water development in Northern California.

Current water planning in the region has its roots in studies that began in the late Nineteenth Century and evolved into the actual program of development being carried out by several public agencies today.[18] With the completion of the Shasta project, which included a total of 453,000 kilowatts of capacity at the main dam and the Keswick afterbay installation, general water development in the region was significantly integrated with hydroelectric development for the first time. Power output from several streams became controlled by decisions based on multiple-purpose water use, for the power storage capacity of Shasta Reservoir accounted for over 60 percent of such storage in the region. The relatively simple administrative pattern of a single major private utility making most of the initiating decisions for hydroelectric development and resulting water utilization became complicated by multiple jurisdictions and the well-known issues of public-versus-private water resource development.

Steam-electric Power

Steam-electric generation had become established in all major population centers by 1900 and its future place in the regional electric system had been indicated by the connection of the pioneer Folsom hydroelectric plant with Sacramento's early steam station. Within a decade the role that steam generation was to play until very recently was established by two similar, related developments. To meet the anticipated invasion of the San Francisco electric market by the Great Western Power Company, the San Francisco Gas and Electric Company (successor to the pioneer California Electric Light Company), whose electric generation facilities were limited to high-cost, inefficient steam stations, was consolidated in 1905 with the California Gas and Electric Company The latter had no San Francisco market outlet and no steam complement for its hydroelectric generation system.[19] The two companies retained their operating and corporate identities under the control of the newly formed Pacific Gas and Electric Company. In 1909 Great Western, which was to be a major P. G. & E. competitor until their consolidation in 1930, constructed a 10,500-kilowatt-capacity steam plant on the Oakland estuary to firm up its exclusively hydro system. Steam was developed in six 600-horsepower water-tube boilers, which were fired by four oil burners.[20] Continued

[18] A summary of the evolution of water planning in California is presented on pp. 87-89, *infra*.
[19] Coleman, *op. cit.*, p. 229
[20] Frederick Hall Fowler, *Hydroelectric Power Systems of California* (1923), pp. 378-380.

improvements in design of boilers and turbines in the ensuing decades led to increased operating efficiencies, but did not produce economies sufficient to shift the emphasis away from hydro development until after World War II.

Expanding Steam-electric Capacity Since World War II

Curtailment of construction of electric power capacity in Northern California during the war, conservative estimates of immediate post-war requirements, and bottlenecks in supply of materials for such plant expansion as was undertaken contributed to a regional power shortage in the winter of 1948-49. The need for a rapid increase in capacity was obvious, and the shorter time required for construction of steam-electric plants made movement in that direction inevitable. Steam-electric construction received a potent stimulus, moreover, from several developments that raised this energy source off the technological-economic plateau on which it had rested for some years. Higher temperatures, increased pressures, and added reheat cycles possible in large-scale base-load plants, plus such features as unitary boiler-turbine design and outdoor-type construction, contributed to lower costs of construction and output. In addition to these solid technological roots, emphasis on steam-electric capacity was favored by the prior development of the most favorable single-purpose hydro sites and the political-administrative delays that would inevitably precede development of much of the remaining hydroelectric resource. With the construction of 1,415,725 kilowatts of steam-electric capacity between 1946 and 1952, steam exceeded hydroelectric capacity in Northern California for the first time. The development of steam-electric generation in the region in the period following the second World War is exemplified by the 625,000-kilowatt Pittsburg steam station, which was completed in 1954. With four boiler-turbine units, each nominally rated at 150,000 kilowatts, this outdoor plant is the largest of its type west of the Mississippi River.

The Electric Power Grid

Electric power transmission, though not a source of energy, plays a vital role in determining the cost and the portion of output that is distributed to ultimate consumers. In Northern California the most effective use of generating stations has been aided from the earliest days of the industry by recognition of the advantages to be derived from applying the principle of interconnection of all units of output and consumption.[21] Pooling of the region's electric energy supply has been facilitated by the development of load dispatching techniques. Such operations were inaugurated in the present system when the California Gas and Electric Company placed the control of operations in the hands of a load dispatcher, in Oakland in 1906. Within several years this procedure was in general practice for all large companies in California.

Complete coordination of Northern and Southern California systems was delayed by the failure of the latter to adopt the 60-cycle standard, which was adopted elsewhere in the United States after 1890.

[21] For a summary of this early development in California, see W. G. Vincent, Jr., "The Interconnected Transmission System of California," *Journal of Electricity*, 54:563-575, June 15, 1925.

The area south of the Tehachapi Range, served by a 50-cycle system, could not be economically connected with the rest of the State until the changeover to 60 cycles was virtually completed, in the late 1930s. Since that time interregional coordination has been improved by the establishment of a Southwest Power Interchange Commission, which establishes policy for the operation of modern electronic control systems. In general, energy exchange is carried out by bulk transfers between operating companies. Where large net balances may be expected to occur regularly, special contracts are made such as the "wheeling" agreement between P. G. & E. and the Bureau of Reclamation and the direct-sales contract between P. G. & E. and COPCO. Regarding the total energy resource of Northern California, existing interregional connections yield a net deficit, for P. G. & E.'s firm delivery contract with COPCO is not matched by an import balance from any other area.

FUTURE ELECTRIC GENERATION FROM PRESENT ENERGY SOURCES

There is little chance that the existing structural relationships in electric power generation in Northern California will be drastically altered in the next two decades, assuming that no major upsets occur in existing international relations. This generalization is based upon the physical availability of fuel reserves at present sources of supply and large blocks of undeveloped hydroelectric power both in the region and adjacent to it. The terms "reserve" and "resource" must be used with caution and their physical and economic attributes clearly defined for a given place and time. Concerning reserves, for example, reconsideration of both the economic and physical characteristics of coal deposits in the United States led to a 1948 estimate of an economically recoverable reserve of 223 billion tons, compared with the figure, 3.1 trillion tons, that had been accepted since 1909.[22] Definition and appraisal of Northern California's water, timber, and mineral resources will be the primary concern of the following chapters.

Long-run Petroleum Supplies

The future supply characteristics of petroleum products, which will remain the primary fuel for electric generation in Northern California for several decades, will depend on the output pattern of the State's refining industry and on the continued availability of foreign supplies. Extensive modernization of the local refining industry would reduce the local supply of residual fuel oils. But considering the nature of domestic crude and the structure of demand for residual fuel oils, the effect of such reduction would likely be limited to a minimal secular increase in the price of fuel oil, not sufficient in itself to call forth substitute fuels. Assumption of a continued increase in imports of petroleum products into California is based on the failure of an intensive post-war exploration program to produce a major new oil source in the State. By 1950 California's crude oil reserves, already below the national average, were barely keeping pace with increased output. With the growing importance of imports, the amount and location of world oil reserves becomes of utmost significance for Northern California.

[22] Putnam, *op. cit.*, p. 127.

Before the nationalization of the Suez Canal by Egypt and the invasion of the Gaza Strip by Israeli forces late in 1956 the United States had a relatively assured supply of oil from the Middle East fields. Maintenance of this connection is vital to conservation of United States' domestic reserves, for the Middle East possesses an estimated reserve of 81 billion barrels, approximately 58 percent of the world total.[23] Continuing friction in that area makes more meaningful than ever the possibility of nationalization, as in the case of Iran, or of political realignments that would cut off this source of oil from the United States. Elimination of imports from the Middle East could result either from political refusal to contract for the oil, or from pricing it out of the United States market. Even if relatively normal, pre-1956 relationships are resumed, some increases in the price of imported petroleum products may be expected to result from development of the Middle East's domestic market, increasing world competition for a shrinking supply, and secular increases in costs of extraction and transport. In the short run of a decade or two, it does not appear that Northern California would be priced out of such a market. Hence, it appears that until 1975 an assumption seems warranted of increasing imports of petroleum products under conditions of rising costs.

Natural Gas

As with petroleum, the future pattern of natural gas consumption in Northern California will be directly related to the conditions governing imports. However, long-term availability of foreign oil imports seems more assured than the supply of natural gas piped from the Southwestern United States. Proved natural gas reserves for the United States increased 32 percent between 1946 and 1953; however, because of increased demand in the same period, total reserves fell from 33 to 23 times annual production, an alltime low.[24] These relationships apply in general to the Southwest, the Nation's primary natural gas supply center, which has approximately 88 percent of the United States proved reserves and 84 percent of the current output. Though natural gas consumption in the Southwest has leveled off since 1951 to an amount approximately equal to exports, decreasing costs of natural gas in that region relative to prices charged in its export markets may be expected to lead to additional industrial development in the Southwest, with resulting increases in local sales of natural gas. Since some 70 percent of the gas consumed outside the five southwestern states is exported from them, the existence of strong demand in regions other than Northern California is apparent. Another prospective deterrent to the long-term availability of natural gas imports from the Southwest is federal regulation of the independent natural gas producers whose gas moves into interstate commerce, which may result from the June, 1954, decision of the Supreme Court in the *Phillips Petroleum Company* case. Such regulation could affect both the rate of discovery of new reserves and the desire of smaller companies to move their product in interstate commerce.

[23] Supplement to *Monthly Review*, March, 1954, *op. cit.*, p. 4.
[24] National City Bank, *Monthly Letter on Business and Economic Conditions*, "Federal Regulation vs Competitive Enterprise in Natural Gas Production," December, 1954, p. 136.

The 1956 change of P. G. & E.'s Pleasant Creek natural gas field in Yolo County from a producing field to a storage facility is symptomatic of the worsening reserve position of Northern California. Elsewhere in the United States 172 such storage fields had been set up by 1955. However, this was the first development of this kind in California. This new storage unit will be capable of delivering back into the company's system a maximum of 80 million cubic feet of natural gas a day. The stored gas will come both from imports and from various California fields.

The inadequacy of natural gas reserves in the Southwest to fulfill present export commitments over the long run is indicated by negotiations carried on in 1956 between the El Paso Natural Gas Company and the Pacific Northwest Pipeline Corporation. The latter organization has access to the newly developed Canadian natural gas fields as well as large reserves of its own in the San Juan Basin of New Mexico and Colorado. The Texas company proposes to buy at the Canadian border and immediately turn back to the Pacific Northwest company 50 million cubic feet of gas, taking delivery of a like amount from Pacific's San Juan Basin fields. Officials of El Paso assert that such augmentations to their present reserves are essential for maintenance of service to California and other customers in the Southwest.

In July, 1957, P. G. & E announced plans for a 1,300-mile natural gas pipeline from Alberta, Canada, to the San Francisco Bay area, to be in service by 1960.

The basic daily requirement of natural gas is geared primarily to domestic demand Since economic operation of long-distrance natural gas transmission requires maintenance of line pressure, increased capacity for domestic peaks means that greater quantities of gas are available for off-peak, low-rate use. This is the basis on which consumption of natural gas in electric generation has kept pace with the increase in total demand, and suggests that until domestic deliveries decline, electric-utility use may be expected to remain high Ultimately, however, is appears certain that natural gas consumption will be restricted to such high-cost uses as domestic cooking and heating

All future electricity demands in Northern California could be met by steam-electric generation. The only conditioning elements are the questionable long-term availability and prospective rise in prices of conventional fuels, which may be expected to bring substitute fuels into the region by 1975 At present it appears that all existing and contemplated fuels consumed in electric generation will be used primarily to develop steam pressure to activate steam turbines Technical improvements in internal combustion engines and gas turbine generators may be expected to continue; nevertheless, these sources are not expected to increase in relative importance in Northern California Construction of small- and medium-sized steam-electric plants, extension of the existing grid system, and development of the fairly widely dispersed hydroelectric potential will combine to militate against subregional, small-scale diesel or gas turbine generators coming into general use

Northern California's Undeveloped Hydroelectric Resource

Although inadequate to meet the ultimate electric energy requirement of Northern California, the region's hydroelectric potential is one

of its most important resources. All major undeveloped sites lie in the Sierra Nevada overlooking the Sacramento and San Joaquin Valleys and the Coastal Range north of the San Francisco Bay area. In 1928 Bonner estimated this resource at 6,104,849 kilowatts installed capacity and 3,668,823 kilowatts annual average output capacity for the entire state.[25] Defining Northern California to include the area north of the Tehachapi Range and west of the Sierra Nevada, the total hydroelectric potential of Southern California was estimated by Bonner as 62,255 kilowatts. By 1953, more complete records of stream flow, additional site studies and technological developments that make additional sites feasible, and increased anticipated outputs from a given water volume and power head had combined to raise the estimated undeveloped hydroelectric potential of California to 7,802,100 kilowatts of capacity. With a total existing installed capacity of 2,822,447 kilowatts, the 1953 estimate of the hydroelectric resource of the State totaled 10,624,547 kilowatts.[26]

The hydroelectric potential of Northern California will be augmented in the future by improved watershed management, development of pumped storage facilities, and possibly by cloud seeding. Better watershed management will mean better control and more complete utilization of runoff from rain and snow melt. Cloud seeding to induce rain or snowfall could be very useful in supplementing runoff during periods of minimum stream flow, but to date its effectiveness has not been demonstrated in Northern California

Pumped storage plants utilize off-peak energy, usually from hydroelectric plants, to pump water into reservoirs to be released to generate electricity during system load peaks. Their feasibility has been established by several plants now in operation in the Eastern United States and by some 40 European installations.[27] The recent shift in the hydro-steam ratio of the Northern California system promises to alter fundamentally the economics of hydroelectric capacity in the region. This change could well mean a significant development of pumped storage in the electric power system. In the future, hydroelectric energy promises to supplant steam generation to some extent in supplying system peak loads This means, on the one hand, that hydro energy available for peaking must be valued in terms of the alternative cost of adding new steam capacity. On the other hand it means that it will become more and more economical to utilize off-peak hydro energy to pump the falling water back up into a reservoir, where it can be held in readiness for full release during periods of peak electric power demand. Pumped storage from both Upper Klamath Lake and the Klamath River will be developed as an element in the Big Bend Project of COPCO, planned for completion in 1958.

[25] Total installed capacity at that time was 1,512,900 kilowatts, making the total hydroelectric potential 7,386,315 kilowatts Frank E Bonner, *Water Powers of California* (1928), p 33 Hereafter the term "capacity" used alone, in reference to hydroelectric power, will mean installed capacity

[26] Federal Power Commission, *Hydroelectric Power Resources of the United States, Developed and Undeveloped, 1953* (1954), p 139 An annual average output capacity of 4,529,041 kilowatts is indicated by dividing the estimated annual output of 39,674,400 thousand kilowatt-hours by 8,760 (hours per year)

[27] CPUC, *Special Report No 696*, p. 67

Electric Energy From Adjacent Regions

Additional electric energy may become available to the region during the coming decades through imports based on interchange agreements with adjacent regions Most of such supplementary energy would be based upon the future development of the remaining hydroelectric potential of the Colorado and Columbia River systems. In 1946 the Bureau of Reclamation estimated total potential of the Colorado River at over 3,500,000 kilowatts of capacity and almost 20 billion kilowatt-hours of annual average output.[28] By 1953, 1,773,655 kilowatts had been developed, with a total annual average output of 7,851 million kilowatt-hours, while an undeveloped potential of 5,239,900 kilowatts remained.[29] The Columbia River Basin in the Pacific Northwest presents the largest single block of undeveloped hydroelectric power in the Nation. By 1953 total development in the North Pacific area amounted to 4,856,012 kilowatts of capacity, with an annual average output of 34,343 million kilowatt-hours. The undeveloped potential of the Columbia River Basin totaled 30,218,500 kilowatts of capacity, with an estimated annual average output of 139,012 million kilowatt-hours. The total potential of the entire North Pacific area was 33,994,800 kilowatts of capacity and 159,323 million kilowatt-hours of annual average output.[30] Although a complete high-voltage connection between the Pacific Northwest power pool and Northern California has not been put into operation, the technical and economic feasibility of such connection has been indicated in a recent study.[31]

The amount of energy available to Northern California from these adjacent regions depends on the supply and demand characteristics of the electric power markets in each of the three areas. The growth of electric power demand in Southern California is expected to increase in approximately the same proportion as Northern California. Regarding the Pacific Northwest, it has been estimated that the total requirement of the area would rise from 6,769,000 kilowatts in 1956-57 to 12,647,000 kilowatts by 1966-67—under average hydroelectric conditions.[32] The estimated developed capacity of 1966-67 is only 12,784,000 kilowatts. It is obvious that this surplus margin of 137,000 kilowatts is insufficient for any firm energy export commitment in the next decade. Feasibility of energy interchange between Northern California and the Pacific Northwest is likely to develop only on the basis of the complementariness between water runoff control in the Pacific Northwest and the existence of substantial steam-electric capacity in Northern California. Thus, in the spring when the waters of the Columbia must be withheld for flood control and irrigation purposes, the minimum energy output could be firmed up with California steam-electric generation. In the summer months of heavy flow of the Columbia River, surplus energy moved into Northern California would be utilized as steam-electric replacement.

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[28] U. S Department of the Interior, Bureau of Reclamation, *The Colorado River* (1946), p 18.
[29] FPC, Hydroelectric Power Resources, *op cit*, pp. 39, 123
[30] *Ibid*, pp. 55, 132, 134.
[31] Federal Power Commission, San Francisco Regional Office, *Report on Feasibility of California-Oregon 230—KV Interconnection* (1953)
[32] U S Department of the Interior, Bonneville Power Administration, *1956 Advance Program* (1956), Appendix, Table 12. Includes Washington, most of Oregon, northern Idaho, and western Montana

The rate of development of the Colorado and Columbia Rivers is dependent on political and institutional factors as well as the technical and economic feasibility of various sites. A mitigating aspect in the complementary development of electric power in the three regions is the short period of time required for construction of steam-electric stations compared with the lag between a political decision to proceed with a major public hydroelectric plant and its actual completion. For planning purposes it would appear that the scheduling of additional steam-electric capacity in Northern California could be integrated with prospective energy imports from new hydroelectric capacity on the Colorado and Columbia Rivers.

CHAPTER 5

HYDROELECTRIC DEVELOPMENT: NORTH COASTAL AREA

California may be divided into seven major hydrographic areas. Three of these—the North Coastal, Central Valley, and Lahonton areas —have a significant hydroelectric potential. Inclusion of the Lahonton area, the eastern drainage of the Sierra Nevada, is somewhat optional in a study concentrating on Northern California since, except for the Truckee River, the runoff and hydroelectric system connections are directly linked to Southern California. The Central Valley area, divided into the Sacramento and San Joaquin River Basins, is discussed in Chapters 6 and 7. Political divisions as such are ignored, unless they are significant for power development or operation. The minimal nature of this problem is indicated by the fact that the Klamath and Truckee Rivers are the only major California streams that cross the State's boundary.

This chapter will include all streams draining directly into the Pacific Ocean that have a hydroelectric potential. All such streams lie north of the City of San Francisco. The two major subsections are the Klamath Basin, which includes the Trinity River as a tributary, and the Eel River Basin.

THE KLAMATH RIVER BASIN

The Klamath River Basin is divided geographically into two sections: the upper portion, which is a high, level plateau above Keno, Oregon; and the lower, a rough, mountainous, forested area that lies between Keno and the Pacific Ocean Logging, lumber products manufacture, and agriculture are important economic activities in the Upper Basin. Annual precipitation there, varying from 10 inches in the valley to 60 inches in the surrounding mountains, yields a fairly even runoff because of the absorptive property of the lava-based soil. In the Lower Basin, logging, lumber mills, and recreation provide the basis for most economic activity. Mining, a major factor in the past, has declined in importance. Some agriculture is carried on in the tributary basins. Precipitation in the Lower Basin varies from 40 to 100 inches during the year, resulting in quite an irregular runoff. Both sections are relatively undeveloped, and as indicated on pages 77-81, considerable growth is anticipated in population and in all current major activities. The Trinity River is the major tributary of the Klamath, contributing approximately 30 percent of the discharge of the latter at its mouth, although the Trinity drains only about one-fifth of the total watershed.

Stream Flow

The Klamath River has its source in Oregon, enters California at river mile 220 (measured from the mouth), and flows from there in a southwesterly direction, draining into the Pacific Ocean near Klamath.

MAJOR NORTHERN CALIFORNIA STREAMS AND RESERVOIRS

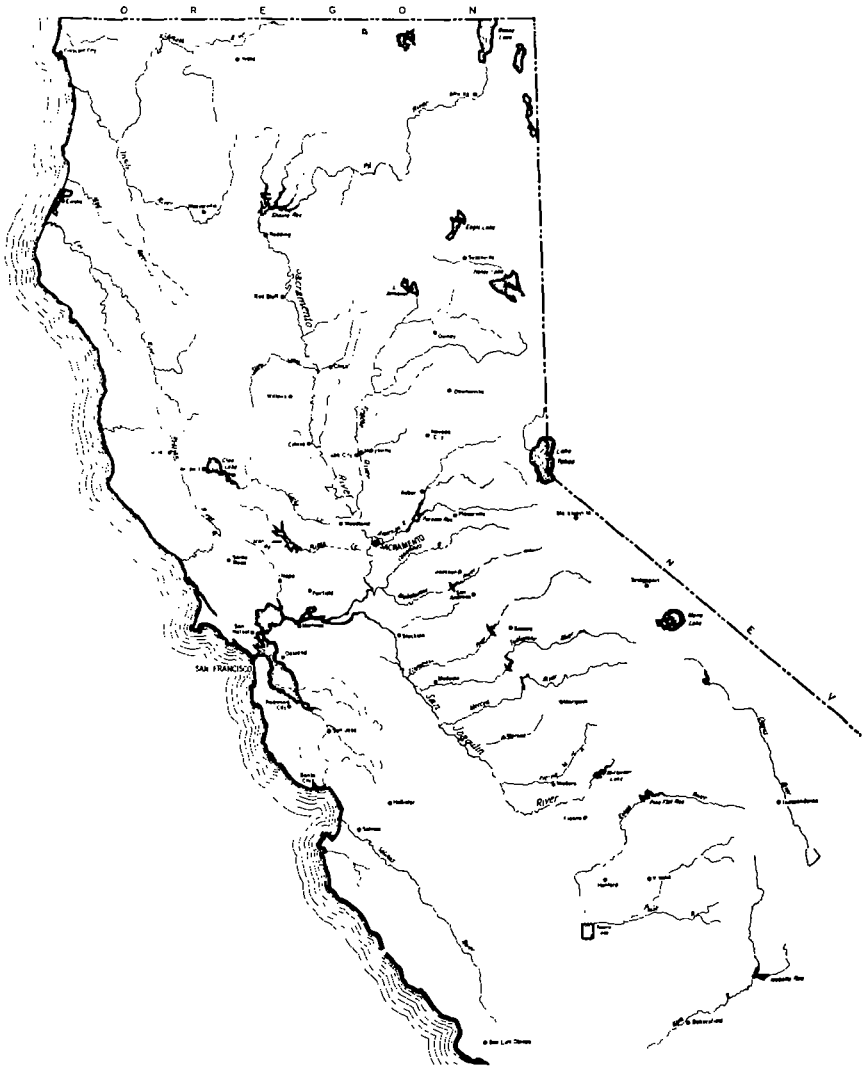

PLATE I

The total area of the drainage basin is 15,715 square miles.[1] Five main tributaries, the Trinity, Salmon, Scott, Shasta, and Lost Rivers, are included in the 10,020 square miles of the basin that lie in California. Fairly complete runoff records are available at numerous stations on the main river and on the major tributaries.[2] Records for the Klamath River both at Keno, which lies just inside Oregon, and at the river mouth, indicate the volume of water contributed by the five major tributaries. The *mean* flow for the 50-year period ending in 1957 was 1,795,000 acre-feet at Keno, and 12,982,000 at the mouth. Figures for the period 1905-1927, 1,360,000 at Keno and 11,000,000 acre-feet at Requa, were used by Bonner to establish 1922 as the average water year on which to base his calculations.[3] Bonner's average flow figures for 1922—1,400,000 and 9,050,000 acre-feet—were also used by the FPC in its 1944 study of the Klamath Basin.[4] The Trinity empties into the Klamath about 43 miles from the ocean, with a mean runoff for the period 1894-1947 of 3,932,000 acre-feet, and an estimated annual average of 3,500,000 acre-feet. Its flow is similar to that of other streams in this area; about 75 percent occurs in the five-month period January through May.

Electric Power Development

The present electric power development in the Klamath Basin consists of six hydroelectric and three diesel-electric plants operated by COPCO, one hydroelectric, and two steam plants operated by P. G. & E., two industrial steam plants operated by Weyerhauser Timber Company and Long-Bell Lumber Company, and one industrial hydro plant operated by Swanson Mining Corporation. The diesel stations at Crescent City and Yurok will be put out of service in the summer of 1957. The remaining diesel station has a capacity of 200 kilowatts and the four steam plants are rated at 82,750 kilowatts. Details of the developed hydro installations are presented in Table VI, on the following page. Comparisons of the basin's total developed hydro capacity (56,480 kilowatts) with the estimated undeveloped figure (1,299,500), and of the actual average annual output (274 million kilowatt-hours) with the estimated potential (almost 8 billion) show that less than 5 percent of the hydro potential has been developed. Construction has begun on COPCO's 80,000-kilowatt Big Bend plant, and its 25,000-kilowatt Iron Gate Project, also on the Klamath River, will likely be built in the next decade.[5]

Studies of Basin Hydro Potential

Studies concerned with utilizing the water resource, "* * * the most valuable single resource of the Klamath River Basin,"[6] have been

[1] California State Water Resources Board, *Water Resources of California* (1951), Bulletin No. 1, Table 7, p 56

[2] *Ibid*, Table 15, pp 80-83 Unless otherwise cited, basin area and runoff data in Chapters 5-7 are from this source

[3] Frank E. Bonner, *Water Powers of California* (1928), p. 38. The Requa measuring station is about two miles from the river mouth. The mean flow there is about 300,000 acre-feet less than at the mouth

[4] Federal Power Commission, *Potential Hydroelectric Power of the Klamath River Basin* (1944), report prepared by William A. Froggatt. (Hereafter referred to as FPC, *Klamath Basin Report.*)

[5] Preliminary construction of the Trinity diversion project of the Bureau of Reclamation has begun Details of this project are presented in the following chapter.

[6] FPC, *Klamath Basin Report*, p 2.

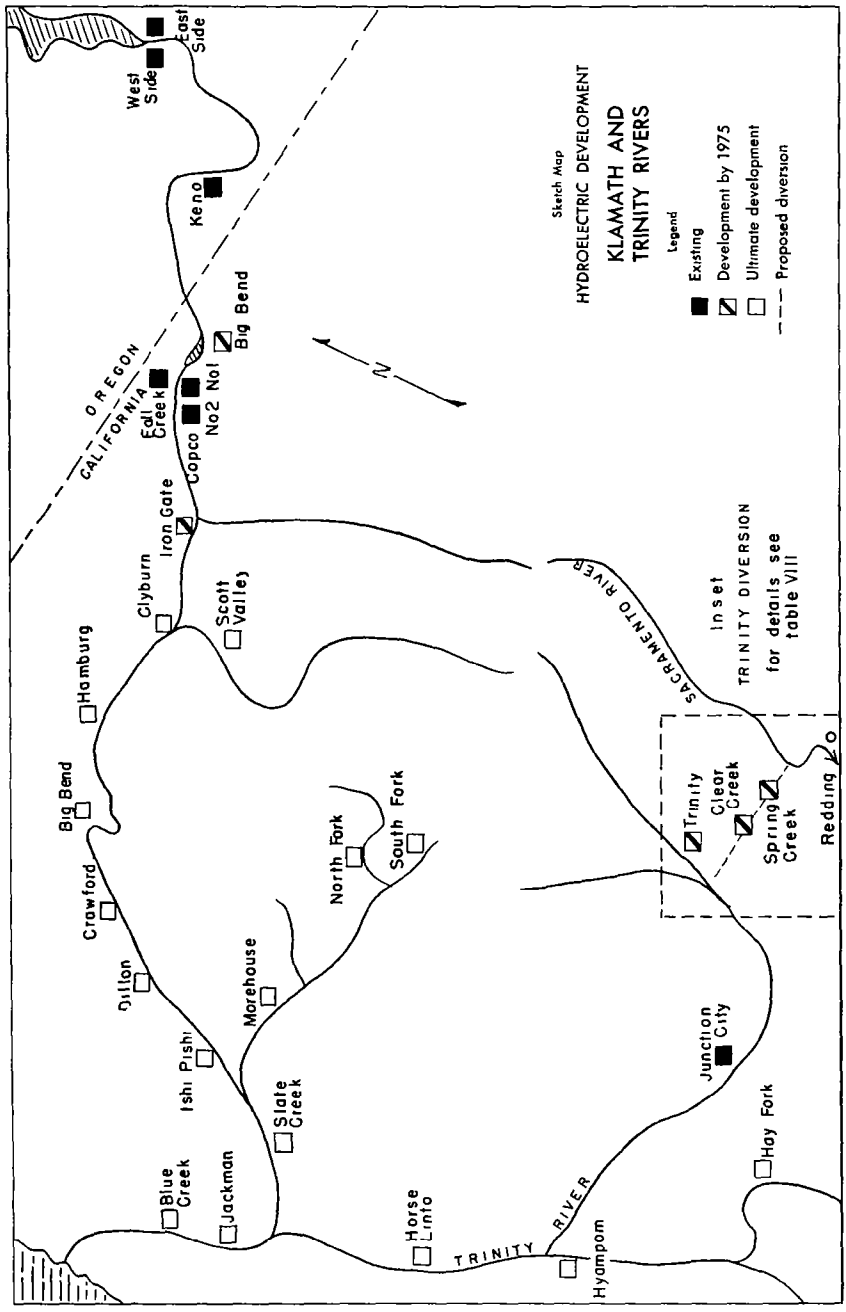
Sketch Map
HYDROELECTRIC DEVELOPMENT
KLAMATH AND
TRINITY RIVERS
Legend
Existing
Development by 1975
Ultimate development
Proposed diversion
OREGON
CALIFORNIA
West Side
East Side
Keno
Big Bend
Eal Creek
Copco
No2
No1
Iron Gate
Clyburn
Scott Valley
Hamburg
Big Bend
Crawford
Dillon
Ishi Pishi
Blue Creek
Jackman
Morehouse
Slate Creek
North Fork
South Fork
Horse Linto
TRINITY RIVER
Hyampom
Junction City
Hay Fork
SACRAMENTO RIVER
Inset
TRINITY DIVERSION
for details see
table VIII
Trinity
Clear Creek
Spring Creek
Redding
N

PLATE II

TABLE VI

EXISTING AND ULTIMATE HYDROELECTRIC DEVELOPMENT OF THE KLAMATH RIVER BASIN

Plant	Water source	Installation capacity (kw)	Average annual generation (million kwhr)	In service	Owner
Existing:					
West Side	Klamath	600	5	1908	COPCO
East Side	Klamath	3,200	18	1924	COPCO
Keno	Klamath	760	4	1914	COPCO
Copco No. 1	Klamath	20,000	106	1918	COPCO
Copco No. 2	Klamath	27,000	130	1925	COPCO
Fall Creek	Fall	2,200	10	1903	COPCO
Junction City	Trinity	2,720	10	1905	P G & E.
Salyer*	Trinity	1,600	--	----	Swanson
Total		58,080	283		
Completion assumed—1975:					
Big Bend	Klamath	80,000	--	----	COPCO
Iron Gate	Klamath	25,000	--	----	COPCO
Total		105,000			
Ultimate development:					
Clyburn	Klamath	45,000	290	----	--
Scott Valley	Scott	25,000	160	----	--
Hamburg	Klamath	60,000	416	----	--
Big Bend	Klamath	100,000	580	----	--
Crawford	Klamath	80,000	508	----	--
Dillon	Klamath	60,000	405	----	--
Ishi Pishi	Klamath	110,000	722	----	--
Forks North Fork	Salmon	7,500	82	----	--
Forks South Fork	Salmon	11,000	66	----	--
Morehouse	Salmon	30,000	196	----	--
Slate Creek	Klamath	100,000	750	----	--
Hay Fork	Hay Fork	40,000	220	----	--
Hyampom	South Fork Trinity	45,000	293	----	--
Horse Linto	Trinity	65,000	390	----	--
Jackman	Klamath	120,000	800	----	--
Blue Creek	Klamath	70,000	435	----	--
Total		952,500	6,313		

* Average annual generation for this plant is less than one million kilowatt hours. Date in service is not known.

SOURCES: Operating characteristics of sites and installations in all tables in Chapters 5-7 are from Federal Power Commission, "Hydroelectric Power Resources of the United States Developed and Undeveloped 1953" (1954), unless otherwise cited. Existing plants, Table 4, pp. 89-91, undeveloped sites, Table 9, pp. 134-138.

made since the early 1920's. These have ranged in scope from consideration of specific sites and sections to coverage of the entire basin. Bonner's study is the only one that covers the entire watershed with emphasis on water power. The State's interim report on the basin is similarly comprehensive, but accepts the power recommendations of prior studies by other organizations and restricts itself to more general developmental considerations.[7] The 1944 study of the FPC presents a detailed study of the hydro prospects of the major sites of the entire Lower Basin. The "comprehensive plan" of COPCO and the Bureau of Reclamation's 1954 Preliminary Report on the Upper Basin, presented alternative proposals for development of the reach of the river

[7] California State Water Resources Board, *Interim Report on Klamath River Basin Investigation, Water Utilization and Requirements* (1954). (Hereafter referred to as SWRB, *Interim Report on Klamath River.*)

between Keno and the Shasta River confluence.[8] Fulfillment of the growing power requirement of the Klamath Basin through utilization of its hydroelectric potential has been retarded by the existence of several water control controversies and by development of new capacity elsewhere whose output could be transmitted into the basin.

Completion of the new 51,200-kilowatt Humboldt Bay steam plant and the consummation in 1954 of a power sales agreement between COPCO and P. G. & E. established the pressing need for more energy in this basin. By the terms of the latter, P. G. & E. agrees to provide 60,000 kilowatts of firm capacity to COPCO.[9] It has been estimated that 200,000 kilowatts of additional capacity will be required by 1960, based on an estimated population of 180,000 and a lumber industry expansion that will, in itself, require 150,000 kilowatts of added capacity.[10] In addition to the construction of local plant and increased capacity of the COPCO–P. G. & E. interconnection, this pressure for increased energy could be relieved to some extent by completion of the high-capacity interconnection with the Pacific Northwest Power Pool. Such a pattern of local demand would make local steam-cost comparison especially relevant in the evaluation of specific undeveloped hydro sites.

Development of the Upper Klamath Basin

The existing development of the Upper Basin[11] consists of the Link River Dam, which controls Upper Klamath Lake for irrigation and power releases. West Side and East Side powerhouses located adjacent to the dam, and Keno powerhouse, located two miles below Keno. The dam was completed in 1921 by COPCO's predecessor as part of a 50-year agreement with the Bureau of Reclamation, consummated in 1917.[12]

In plans for the development of this section, consideration has been given to the possibility of diverting a portion of the Klamath River to the Upper McCloud or Upper Sacramento and of further development of reclamation, irrigation, and wildlife refuges. The FPC 1944 study considered five alternative Upper Basin diversion plans and found two to be sufficiently attractive to warrant further consideration.[13] The bureau was skeptical of the desirability of such diversion at that time, consistent with its general policy of discouraging water diversion until such water seems clearly established as surplus over future local needs. This position was sustained in its 1954 preliminary study, in which the possibility of a diversion was not mentioned. Rather, the prospective increases in consumptive water demand in the Upper Basin are emphasized by the suggestion of possible increased drafts on Upper

[8] COPCO's "Comprehensive Plan" is presented as Exhibit J in *Application for License for Big Bend No 2 Development, Klamath River, Oregon*, before the Federal Power Commission, April 16, 1951. U. S Department of the Interior, Bureau of Reclamation, *Upper Klamath River Basin (Oregon-California), A Comprehensive Departmental Report on the Development of Water and Related Resources* (Preliminary Study). (Hereafter referred to as BR, *Upper Klamath Report*, 1954)

[9] BR, *Upper Klamath Report*, p 120

[10] SWRB, *Interim Report on Klamath River*, p 92.

[11] The Upper Klamath Basin has been topographically defined in this study as the plateau lying above Keno The BR *Upper Klamath Report* defines the Upper Basin to include that area just below COPCO Reservoir that includes Butte, Red Rock, and Shasta Valleys. According to a bureau source, this decision was based on such administrative considerations as the existence of studies of those valleys and the irrigation requirements thereof.

[12] Frederick Hall Fowler, *Hydroelectric Power Systems of California* (1923), see p 88 for details of this agreement.

[13] FPC, *Klamath Basin Report*, p. 5.

Klamath Lake. Future irrigated acreage is expected to increase from 392,000 to 660,000 acres. Even with the addition of 240,000 acre-feet of storage in Klamath Lake, average stream flow at Keno would be reduced more than 10 percent.[14] At present there appear to be no hydro sites in the Upper Basin that are suitable for development; however, prospective water use and control there will have a vital bearing on the nature of the development of the considerable downstream potential.

Development of the Lower Basin

There are three hydroelectric plants in the Lower Basin: the Fall Creek Plant and COPCO Nos. 1 and 2, which are located on the main stream. COPCO Reservoir (Lake) is located above COPCO No. 1 and provides storage that allows both units to be used as peaking plants in the COPCO system.

The FPC 1944 study presents the only general plan for the Lower Basin since Bonner's work. The plans of COPCO and the Bureau of Reclamation presented alternatives for development of the river section between Keno and COPCO Reservoir. COPCO initially proposed the completion of a four- or seven-plant system, either of which would provide approximately a capacity of 250,000 kilowatts. The difference in the two alternatives was that the remaining development, the head between Keno and COPCO No. 2, would consist of either the single Big Bend plant or three plants, Big Bend Nos. 1, 2, and 3. Under FPC Project No. 2082 the company has applied for licensing of the Big Bend Project, which includes Big Bend Nos. 1 and 2.

The bureau suggested that this power potential might best be utilized by either a multiple-purpose diversion system that would include the 104,000-kilowatt Ikes Mountain unit or by a system of four plants on the main stream that would also include irrigation features.[15] The power element in the latter option would have been of smaller total capacity than that of the COPCO plant because of the irrigation diversion. The bureau considered the diversion proposal to be feasible without the power element. In its examination of the hydroelectric potential of the main stream and the major tributaries in the lower basin, the FPC considered alternatives based on assumption of varying water flow and the effects of excluding tributary sites of marginal feasibility. On the main stream 15 sites between Brush Creek and the river mouth were evaluated and found to present a maximum possible capacity of 970,000 kilowatts and an aggregate benefit-cost ratio of 1.11. This ratio is based on an estimated annual benefit of $25,588,000, resulting from the sale of 5,782,000,000 kilowatt-hours of electricity, divided by an annual cost of $23,051,000. Federal financing was assumed in the cost calculation. Though some flood-control benefits would result from the development, their value was not added to the annual benefit figure.

[14] BR, *Upper Klamath Report*, pp. 12-21

[15] *Ibid*, pp. 53-54. In the Butte Valley irrigation plan, water would be diverted from the Klamath River above Keno to a 170-foot lift into Butte Valley, from which a conduit system would carry water back to the Klamath River canyon at a point above COPCO Reservoir where the proposed Ikes Mountain plant would generate from a 1,600-foot head. The 576,000 acre-feet of active storage in Klamath Lake would support 85,000 kilowatts and a firm external load (above irrigation pumping requirements) of 320 million kilowatt-hours annually. Ultimate consumptive demands for water would reduce these figures to 47,000 kilowatts and 175 million kilowatt-hours, respectively.

Six sites on several tributaries were examined, and presented a total potential capacity of 220,000 kilowatts and a benefit-cost ratio of 0.95 under similar assumptions.

Problems in Future Development

The timing and extent of future development of the Klamath River will be controlled by several noneconomic issues. In 1956 the Bureau of Reclamation withdrew its proposed Ikes Mountain project upon receipt from COPCO of an agreement to provide future payments to farmers in lieu of the irrigation benefits provided by the bureau's plan. However, questions concerning COPCO's Big Bend application provide a setting in which two of the three major political-institutional issues become apparent: the conflict of COPCO with the bureau and with the State of California on questions of water control.

The Big Bend plant will be located in Oregon, 11 miles downstream from Keno and 25 miles upstream from COPCO No. 1.[16] It will have an 80,000-kilowatt capacity, be connected with the company's system, and have storage facilities that will allow it to be operated for daily peaking in the same general manner as COPCO Nos. 1 and 2. License was granted by the FPC in October, 1953, subject to several conditions: first, the company must provide assurance of the continued availability to it of the amount of water assumed in its output estimates; and second, the company must fulfill the long-delayed requirement of applying to the FPC for licenses to operate its existing power installations on the river. The first condition has been resolved in favor of the company. The Bureau of Reclamation assured COPCO that the Link River Dam agreement would be renewed after 1967. This was a second aspect of the agreement made by the company when the bureau withdrew its multiple-purpose Ikes Mountain proposal. Hence the company has assurance of the existing stream flow regime for its Big Bend Project.

The FPC's second condition leads to the area of conflict between the company and the State of California, for one object of the condition was to promote a resolution of the controversial Iron Gate water-control project. Both the State and COPCO have made proposals to the FPC concerning this site, COPCO's being included in its "comprehensive plan." In the decision on Big Bend, the FPC stated that its decision on the State's Iron Gate proposal would await the filing by COPCO of licenses for its existing plants. This move is apparently designed to bring the two Iron Gate proposals together for direct comparison, with the possibility that this will result in resolution of the long-standing controversy. The main issue in the dispute is the effect on fish and navigation of the daily, cyclical water release from COPCO Nos. 1 and 2, which causes river waves two to three feet high in the vicinity of Seiad Valley.[17] To meet objections to this operation COPCO applied to the FPC for a preliminary permit for the Iron Gate Project on April 8, 1931 (FPC Project No 1161). But, indicative of the overlapping

[16] Decision of William James Costello, Presiding Examiner re Project 2082, titled *Upon an Application for License Under the Federal Power Act to Construct, Operate and Maintain a Hydroelectric Project In, On and Along the Klamath River in Oregon,* issued October 2, 1953, pp 3-6

[17] Decision of William James Costello, Presiding Examiner Docket No E-6390, titled: *Upon an Order to Show Cause Why Five Hydroelectric Developments in the Klamath River in Oregon and California Should Not Be Licensed Under the Provisions of the Federal Power Act,* issued July 7, 1953, p. 19.

nature of such water-use conflicts, the company withdrew its request in 1934 as the result of stipulations of the Bureau of Reclamation that were not acceptable to COPCO.[18] A major element in the problem is the proper basis for sharing costs of the required installations. The problem of maintenance of fisheries has been recognized in the terms of the Big Bend No 2 application, which include provisions for replacement of a state egg-taking station and for fishway facilities at the diversion dam

In March, 1957, COPCO took the initial step toward compliance with the FPC's second condition of application for license for its existing hydroelectric plants on the Klamath River. This step was included in the company's renewed proposal for construction of the Iron Gate Project. COPCO proposed to the FPC that its license for the Big Bend development be amended to include the Iron Gate proposal and the licensing of its six existing plants. Also the company has applied to the State Water Rights Board for permission to construct a reregulating dam that will meet the state's objection to irregular releases from COPCO Nos. 1 and 2.

Any additional development of the Klamath River will await legislative response to a recent action of the Oregon and California Klamath River Commissions, which were established by the two state legislatures in 1953. After several years of study the two commissions signed a contract concerning the development and use of the waters of the Upper Klamath Basin. Since this is interstate water, the contract must be approved by the Federal Government as well as the state legislatures, although less than 2,000,000 acre-feet, or about 15 percent of the entire runoff of the Klamath River, are affected by the contract. The action of the FPC on further hydroelectric development of the river is certain to await the contract's final confirmation.

A final major political issue in development of the Lower Klamath River is the block to construction of any dam or other obstruction on the river between the confluence of the Shasta River and the mouth of the Klamath, which was set up by an initiative measure sponsored by the State Fish and Game Commission and adopted in 1924.[19] So long as the hydroelectric potential of the Lower Klamath remains marginal in nature, there is a strong prospect that this will remain an effective barrier to development.

The Trinity River Basin

The 2,270-kilowatt Junction City Plant of P. G & E. is the only operating electric generation plant in the Trinity River Basin. Historically, there have been two sets of plans developed for the river The first, commonly called Trinity Diversion plans, have had to do with the transfer of some of the flow of the upper portion of the river to the Sacramento River. Other plans have been concerned with the development of several hydro sites on the South Fork and the lower portion of the main stream. The studies of Bonner and the FPC include separate treatment of both sectors. The Bureau of Reclamation, on the other hand, has been concerned primarily with the diversion possibilities, as an element in the Central Valley Project.

[18] *Ibid*, p 12.
[19] Bonner, *op. cit*, p. 41.

Hydroelectric development of the lower Trinity River will be somewhat affected by the upper diversion, for the total annual average flow of approximately 3,500,000 acre-feet would be reduced by the 865,000 acre-feet that would be stored or diverted annually to the Sacramento River under Bureau of Reclamation plans In the lower Trinity Basin the FPC considered three undeveloped sites with an estimated total capacity of 150,000 kilowatts and found them to have an aggregate benefit-cost ratio of 1 13.[20] Two of the projects, Hay Fork and Hyampom, are on the South Fork of the river, hence are not affected by the upper diversion. The third, Horse Linto, would be located just below the confluence of the two branches, so the storage in the reservoir contemplated at that site would be reduced.

Included in the long-run plans of the Bureau of Reclamation is a study of the estimated 650,000 kilowatts of undeveloped hydroelectric capacity of the lower Klamath River and adjacent basins. It appears that the only area in the basin favorable for development by 1975 lies within the section of the main stream between Keno and the Shasta River confluence. It is assumed that the several political and water-control matters still at issue will be resolved in the next two decades and that COPCO's Big Bend and Iron Gate Projects will be constructed by 1975. The hydroelectric potential of the Klamath River Basin is summarized in Table VI.

Data in Hydroelectric Development Tables

Tables VI to XIX, which present a summary of hydroelectric development in Northern California, are divided into three parts: (1) existing plants plus those under construction; (2) sites that seem assured of development by 1975 because of outstanding feasibility or interest shown by a development agency; (3) sites having some technical feasibility but whose development prospect is presently uncertain. Hydroelectric plants of less than 100-kilowatt capacity are omitted

Total capacity figures for major power streams and for the region are expressed in kilowatts, and annual average generation is in kilowatt-hours. These units are used in the basic FPC source on hydroelectric resources in the United States. Choice of the kilowatt as a unit to express electric power capacity is somewhat arbitrary since it can also be expressed in kilovolt-amperes or horsepower. The conversion factors of 0 9 kilovolt-amperes or 0 7457 horsepower equal one kilowatt have been used whenever original data were presented in kilovolt-amperes or horsepower.

The capacity rating of a given hydroelectric station can be at best only an approximation of actual capacity and total output Water, the prime mover, varies widely in quantity from season to season and year to year The capacity indicated by the manufacturer's nameplate rating of the generator is most commonly used as the official rating, but considerably greater actual capacity is usually built into the generator as a safety factor. Also, a generator can be operated for short periods of time in excess of its rated capacity without damage from overheating. In many cases operating experience indicates that constant operation over the rated capacity is possible. The inclusion of kilowatt-hours of

[20] FPC, *Klamath Basin Report*, p 12,

output in the tabular summary presented in each river basin section gives an indication of the actual, compared with optimal, output that may be expected from each hydroelectric station Not included in the tables, but very important for electric system operation, is the dependable, or firm, capacity of a given installation, for the sum of dependable capacity figures compared with the system load is the basis on which the required amount of thermal-electric firming capacity is estimated.

THE EEL, SMITH, AND MAD RIVER BASINS

The Eel River Basin covers 3,701 square miles of the low-lying mountains of the coastal range. The average runoff of 5,267,000 acre-feet measured at Scotia is based entirely on rainfall that occurs primarily in the winter rainy season. From July to October, stream flow becomes almost negligible. Existing electric power development is limited to the 8,800-kilowatt Potter Valley Plant. Power from this installation is developed from storage in Van Arsdale Reservoir on the South Branch of the Eel River and 470 feet of head that is developed by diversion to the Russian River watershed.

A joint-agency study in 1933, one of a group known as the "308" series, estimated the power potential of the Eel River at 338,692 kilovolt-amperes to be developed in 18 plants.[21] The FPC's 1953 estimate places the hydroelectric potential at 282,900 kilowatts. There are at present no active plans for development. An individual, Bruce L. Codding, has filed for preliminary permit under FPC Project No. 2202 for the Castle Creek Project. It would be located on the Middle and North Forks of the Eel River, and Halls Creek and Short Creek, tributaries to the Middle and North Forks. The project would include three dams and two powerhouses with respective capacities of 234,000 acre-feet and 27,500 kilowatts, plus necessary tunnels and conduits. While the primary purpose of the project would be the generation of hydroelectric energy, additional benefits would be realized from irrigation and water control. Several municipalities in the basin are working on water utilization studies, but none has reached the stage of a formal proposal for development. Details concerning the undeveloped potential of the Eel River are presented in Table VII, on the following page.

The Mad River Basin lies between the Eel and the Trinity River Basins. A second study in the "308" series estimated that by combining the flow of the Mad and Van Duzen Rivers with two upstream reservoirs and a diversion system, seven power plants with a total capacity of 79,000 kilowatts could develop the 2,316 feet of head.[22] The FPC's 1953 estimate reduced the power potential to 52,000 kilowatts, to be developed in six plants. Details of these installations are presented in Table VII.

The power potential of the Smith River, located between the Klamath River Basin and the California-Oregon border, is estimated at 136,500 kilowatts. Details of the three plants proposed in the development of this river are presented in Table VII.

[21] *H. Doc 193*: 73d Cong, 2d Sess, p. 48
[22] *H. Doc. 188*: 73d Cong, 2d Sess., p. 8.

TABLE VII

EXISTING AND ULTIMATE HYDROELECTRIC DEVELOPMENT OF THE EEL, SMITH, AND MAD RIVER BASINS

Plant	Water source	Installation capacity (kw.)	Average annual generation (million kwhr.)	In service	Owner
Existing:					
Potter Valley	Russian	8,800	58	1908	P. G. & E.
Ultimate development:					
Round Valley	Middle Fork Eel	39,800	191	----	--
Dos Rios	Middle Fork Eel	14,900	102	----	--
Bell Springs	Eel	24,900	186	----	--
Red Mountain	North Fork Eel	3,800	23	----	--
Casoose Creek	Casoose	14,900	119	----	--
Hull Creek	Hull	14,900	123	----	--
Mina No. 1	North Fork Eel	9,700	65	----	--
Mina No. 2	North Fork Eel	14,900	103	----	--
Island Mountain	Eel	24,900	200	----	--
Sequoia	Eel	39,800	314	----	--
Branscomb	South Fork Eel	7,500	52	----	--
Hollow Tree	South Fork Eel	5,000	40	----	--
Tuttle	South Fork Eel	14,900	111	----	--
Dyerville	Eel	11,900	104	----	--
Forks	Van Duzen	12,700	59	----	--
Bridgeville	Van Duzen	28,400	139	----	--
Rockland	North Fork Smith	45,000	234	----	--
Canthook	South Fork Smith	37,500	175	----	--
Craigs	South Fork Smith	54,000	294	----	--
Ruth	Mad	3,000	10	----	--
Big Bend	Mad	30,000	151	----	--
Gold Rock	Mad	6,000	18	----	--
Butler Valley	Mad	4,000	19	----	--
Canyon Creek	Mad	6,000	20	----	--
Essex	Mad	3,000	21	----	--
Total		471,400	2,874		

SOURCE Federal Power Commission, "Hydroelectric Power Resources of the United States Developed and Undeveloped, 1953" (1954)

ELECTRIC POWER AND INDUSTRIAL DEVELOPMENT OF THE NORTH COASTAL AREA

Ultimate development of the hydroelectric potential of the north coastal river basins will be related, in considerable degree, to the nature and rate of general development of the region. A comprehensive study of the resource base of the area is being prepared by the U. S. Department of the Interior in cooperation with other government agencies.[23] The area covered in this study includes all of Del Norte, Humboldt, and Trinity Counties, about one-half of Mendocino and Siskiyou, and small portions of Lake and Glenn Counties, as well as a small area in Oregon.

The table on the following page presents basic population and economic data for the five counties that comprise the bulk of the area

[23] U. S. Department of the Interior, Pacific Southwest Field Committee, *Natural Resources of Northwestern California, Preliminary Report* (1956) The report is supported by Appendices on Land Use, Land Classification, Timber Resources, Geology, Mineral Resources, Mineral Industry, and Water Resources (Hereafter referred to as *Natural Resources of Northwestern California.*)

included in the Department of the Interior's study.[24] These five counties include all of the hydroelectric potential of the north coastal area. The estimated 1975 population figure for the Klamath River Basin has been derived from a tentative projection of population by counties to April, 1960, prepared by the financial research section of the Budget Division of the State Department of Finance. The estimated rate of

POPULATION AND INDUSTRIAL RESOURCE BASE OF THE NORTH COASTAL AREA, 1950-1975

	Del Norte	*Humboldt*	*Mendocino*	*Siskiyou*	*Trinity*	*Total*
Population						
1956	16,200	96,500	55,100	32,200	6,500	206,500
Estimated increase 1956-1960	3,000	25,300	8,700	1,000	300	18.5%
1975 (estimate)	--	--	--	--	--	316,800
Industrial Base						
1. Timber (million board feet)						
Total resource	11,844	45,919	19,669	21,528	15,614	114,574
1951 cut	142	1,231	586	374	173	2,506
Ultimate sustained yield	--	--	--	--	--	1,804
2. Lumber and allied manufacturing						
Total employment, 1952	2,167	13,538	5,894	4,591	1,115	27,305
Ultimate employment	--	--	--	--	--	48,000
3. Mining (thousand dollars)						
Chromite	$485	--	--	$348	--	$833
Gold	--	--	--	--	$238	$238
Sand and gravel	$586	$428	$220	--	--	$1,234
Electric Power (billion kwhr)						
Net import 1956 (estimate)	less than 1					
Net import 1975 (estimate)	1.0					

SOURCES Population, 1956-1960, California State Department of Finance, total timber and mining resources "California Blue Book, 1954," lumber and allied manufacture U S Department of the Interior, "Natural Resources of Northwestern California," Timber Resources Appendix, electric power, infra, Chapters 2, 6 and 8

population change for the counties in the Klamath River Basin between July 1, 1956, and April 1, 1960, was applied to the period 1960-1975. It must be emphasized that the figures developed by the State Department of Finance in its projection are tentative, and that application of such figures to a longer period compounds the degree of uncertainty involved Nevertheless, it is felt that for the purpose here—a long-term estimate of electric energy consumption—such general figures are adequate. This method of population projection will be applied to the succeeding river-basin analyses in Chapters 6 and 7.

The basic resource pattern reflected in the table indicates the general pattern of the region's long-run economic development. While the north coastal area has less than 1 percent of the State's population and approximately 8 percent of the total land area, it has nearly one-third of the total commercial forest area and 36 percent of the total water supply With the basic pattern of land use unlikely to change, population growth in the coming decades will encourage steady expansion of the region's timber and timber products industry. Production

[24] Economic data for California are most commonly available only by counties, except for special studies

of plywood and veneer has developed rapidly in this region since 1946. In 1952 some 200 million board feet of veneer logs were converted to plywood in the area. By 1955 there were 11 plywood plants and 15 veneer plants, with respective annual output capacities of 560 and 575 million square feet.

The estimated ultimate sustained yield of forest lands in the region is lower than current production. Hence, additional employment must come from increased manufacturing and processing of timber products. The greatest potential in this regard is the development of a pulp and paper industry in the region. However, such a development will depend on a more-complete utilization of the timber product. It is estimated that in the process of timber cutting, between 20 and 30 percent of the total cubic content of the wood remains in the forest area as woods residue (limbs, dead trees, culls, and breakage.) In addition, mill residues (wood residues resulting from conversion of logs to lumber, veneer, or plywood at the mill) were between 53 and 63 percent of the volume of logs received at the mill in 1952. Of this mill residue, about two-thirds is coarse material suitable for chipping and ultimate conversion into paper pulp, hardboard, and other products. In this five-county area, production of chips in 1952 amounted to approximately 3,000,000 cubic feet, some of which were shipped outside the region for manufacturing.

It is estimated that woods residue, coarse mill residues, and thinnings, all of which are suitable for pulp and paper manufacture, will total almost three billion cubic feet under ultimate sustained yield conditions. "Studies by the California Forest and Range Experiment Station, Berkeley, California, indicate that the 78 million cubic feet annually of coarse mill residue produced in the redwood area in 1952 could supply five pulp mills, each with a capacity of 250 tons per day. On this basis, if all the future 278 million cubic feet of residue and thinnings are used for pulp and paper production, this material could support 18 plants of 250 tons capacity."[25]

As indicated in the summary table, commercial mineral extraction in the north coastal area is limited, for the most part, to sand and gravel, chromite, and gold. In addition, the area has undeveloped resources of chromite, manganese, copper, gold, limestone, and other minerals whose extent and economic recoverability are presently not fully known.

Between 1880 and 1952 gold accounted for 69 percent of the dollar value of mineral production in the north coastal area. The shift to emphasis on crushed stone, sand, gravel, and chromite is explained by: (1) the growing population in the area, with increased requirements for home and road construction; (2) government stock-piling and resulting support prices for chromite; and (3) decline in gold mining because of federal monetary policy.[26] While structure of future production will be strongly influenced by the above conditions, the availability of electric power will also be significant. In the past, mining operations in this area have been almost the sole users of small-scale diesel-electric generating units. In several instances mining operations have not been resumed since World War II, because of the high cost of energy from

[25] Natural Resources of Northwestern California, *op. cit.*, Timber Resources Appendix, p. 15.

[26] Natural Resources of Northwestern California, *op. cit.*, Mineral Resources Appendix, pp. 3-4.

such plants. Further expansion of the power grid throughout the north coastal area will doubtless lead to some expansion in mineral extraction.

In 1956, over twice as much electric energy was consumed as was produced in the area. If the assumed population of 316,800 for 1975 is multiplied by a per capita consumption of electricity of 7,000 kilowatt-hours per year, the demand for electric energy by 1975 in the region will be approximately two billion kilowatt-hours. If the hydroelectric plants assumed for completion by 1975 are in operation, approximately one billion kilowatt-hours will be produced in the region. This will mean a net import requirement of approximately one billion kilowatt-hours. Considering the potential development of a large pulp and paper industry in this region, the estimate of 7,000 kilowatt-hours of consumption per capita by 1975 is probably conservative. Development of such an industry will, without doubt, require more additional electric power capacity in the area than has been estimated here.

Considering the general growth of electric power demand in the Northern California grid system, the amount of energy available for import into this region will tend to diminish over time. Thus the supply will become increasingly located within the basin. This will mean that the undeveloped hydroelectric potential can justifiably be compared in the future with small-scale basin steam plants rather than with more economic base-load plants, plus the cost of transmitting the energy from the load center to the north coastal area It is possible, in addition, that the growth of demand in this area will improve the economics of importing energy from the Pacific Northwest power pool.

The underlying rationale for the Pacific Northwest-Northern California intertie is the minimization of the steam-electric capacity requirement in the Pacific Northwest and the saving of fuel consumption in Northern California. In 1951-1952, Northern California had approximately one million kilowatts of modern steam-electric capacity. "These plants had an average monthly output of over 300 million kilowatt-hours during the summer months of 1951 and 1952. This is the period when most of the surplus hydro energy is available in the Pacific Northwest. If a 230-kv. interconnection had existed between the two areas and surplus hydro energy had been available, a monthly average of at least 100 million kilowatt-hours could have been used to replace steam generated energy." [27] This interconnection was found to have a favorable benefit-cost ratio of over two to one, on the assumption of an incremental cost of three mills per kilowatt-hour for steam-electric energy delivered at load centers in the San Francisco Bay area, as the value of surplus energy.

The existence of an assured demand for energy in the north coastal and upper Sacramento River areas would alter the cost assumptions of a new study in at least two respects: (1) lower transmission costs and losses because of energy consumption near the Oregon-California border, and (2) comparison with the alternative costs of a smaller-scale basin steam-electric plant rather than a large-scale base-load station. In high water years in the Columbia River Basin a large additional block of energy would almost certainly become available for Northern California industrial users during the summer months. Such

[27] U S Federal Power Commission, San Francisco Regional Office, *Report on Feasibility of California-Oregon 230—KV Interconnection* (1953), p. 27.

energy constitutes one of the main prospects for low-cost industrial power in this region.

Even with complete development of the basin, a considerable quantity of surplus water will be available for diversion to Central and Southern California, in addition to the 865,000 acre-feet of the Bureau of Reclamation's present Trinity Diversion. Underlying current controversy is the reluctance of present water-rights holders to make a firm long-term commitment on the exact amount of the surplus.

CHAPTER 6

HYDROELECTRIC DEVELOPMENT: NORTHERN SIERRA AND SACRAMENTO VALLEY

The Central Valley area, defined as "all basins draining into the Sacramento and San Joaquin Rivers above the eastern boundary of the San Francisco Bay area near Collinsville, including Goose Lake Basin in Modoc County" is accepted here as the proper hydrographic unit for the general purpose of water resource analysis.[1] However, since both the Sacramento and San Joaquin Rivers have major tributaries with significant, independent hydroelectric resources, they will be treated here as separate basins. Their interrelated nature will become clear in discussion of the Central Valley Project.

The Sacramento River Basin, stretching from the rugged Sierra Nevada, on the north and east, to the tule lands of the Sacramento-San Joaquin Delta, on the south, presents a wide variation in both topography and climate. The primary tributaries of the Sacramento River include the McCloud, Pit, Feather, Yuba, Bear, and American rivers, which have their sources in the Sierra Nevada; and Cottonwood, Stoney, Cache, and Putah creeks, which drain the coastal ranges, to the west. The drainage area of the Sacramento River Basin totals 26,548 square miles, with an estimated mean seasonal runoff of 22,389,700 acre-feet at Sacramento. The runoff from all drainage basins of the Sierra Nevada, based largely on snowmelt, is highly seasonal in nature. Since the upper portion of the Sacramento drainage basin consists of porous lava, its summer flow is better sustained than that of other basins. Still, the runoff in the period March-June is 42.8 percent of the annual total. Diverse economic activities in the basin include mining, lumbering, agriculture, processing of agricultural products, miscellaneous light manufacture, and service trades.

THE McCLOUD RIVER BASIN

Much of the flow of the McCloud River originates from springs in the lava formation of the upper basin, fed by percolation of the perpetual snow-melt from Mt. Shasta. The river discharges into the Shasta Reservoir. The watershed covers approximately 685 square miles, the upper section of which has been almost completely logged off. The lower section is covered primarily with brush, woodland growth, and scattered timber. The stream flow has the seasonal characteristics of the area, with the heaviest runoff occurring in the late spring and summer months, but because of the lava base in the upper watershed the flow is relatively even. The power potential of the McCloud River is based on an estimated mean flow of 1,403,000 acre-feet and an average drop of approximately 48 feet per mile. Bonner suggested, on what he recognized as very meager data, a possible development of four power plants with a total capacity of 221,000 kilowatts.[2] Early barriers to development included private use of the land for fishing clubs and summer residences. More important was a lack of adequate storage sites,

[1] California State Water Resources Board, *Water Resources of California* (1951), Bulletin No. 1, p. 29

[2] Frank E. Bonner, *Water Powers of California* (1928), p. 66

which meant that the required high-load-factor operation would depend on coordinating the McCloud development with a power system that had adequate peaking capacity elsewhere.

Plans for Hydroelectric Development

At present there are two plans that have been proposed for development of the hydroelectric resource of the McCloud River. In December, 1951, COPCO applied for a preliminary permit to study the development on the McCloud River of a six-plant, remote-control, outdoor-type project that would fully utilize the head between elevations 3,700 and 1,100 feet. In January, 1953, application for license for FPC Project No. 2099 was filed, in which the company proposed immediate construction of plants No. 3 and No. 4, work on No. 4 to begin immediately upon approval by the FPC. These two plants would develop 90,000 of the total capacity of 284,000 kilowatts included in the COPCO plan. The other plan is that advanced by P. G. & E. for a development, including two power plants, that would coordinate the McCloud River with its existing Pit River system. The P. G. & E. proposal will be presented in detail in the following section, on the Pit River.

THE PIT RIVER BASIN

This basin is divided topographically into two major sections. Above Fall Creek the basin is a broad, semiarid plateau, with lava bed plains of four to five thousand feet interspersed between mountain ridges rising several thousand feet above them. Below Fall Creek the river begins its sharp descent through the mountainous terrain lying between Mt. Shasta and Mt. Lassen. The total basin area, including the major tributaries, is 5,346 square miles. The annual average flow of the stream is 3,426,000 acre-feet, most of which originates in the large springs that feed Fall and Hat Creeks. Goose Lake, located in the northeast corner of the watershed, lies at the head of Pit River, but for nearly a century evaporation has exceeded the inflow. No water has passed into the Pit River inlet since 1862. Because of the characteristics of the basin, the flow of the Pit River is more dependable than that of any other major California stream.

One of the best power streams in the State, its full development is virtually assured within a decade. Existing and prospective developments are summarized in Table VIII, on the following page. Pit No. 4 went into service in 1955. Applications for permission to proceed with the development of Pit No. 6 and Pit No. 7, on the main stream, have been made to the FPC and have been designated Project Nos. 2104 and 2137, respectively.

Coordinated Development of McCloud and Pit Rivers

A major prospect in the development of this region is the proposal by P. G. & E. for coordinated development of the McCloud and Pit Rivers.[4] The project would be carried out in two stages and would include the construction of eight dams, five tunnels totaling 17½ miles, and two powerhouses with an ultimate total capacity of some 238,000

[4] Before the Federal Power Commission, *Application for a License for the McCloud-Pit Development on McCloud and Pit Rivers, California*, February 3, 1954. Under this application the project has been designated FPC Project 2106.

TABLE VIII

EXISTING AND ULTIMATE HYDROELECTRIC DEVELOPMENT OF THE PIT, McCLOUD, AND UPPER SACRAMENTO RIVER BASINS

Plant	Water source	Installation capacity (kw.)	Average annual generation (million kwhr.)	In service	Owner
Existing:					
Alturas	Pine Creek	450	2	1907	COPCO
Pit No. 1	Pit	56,000	288	1922	P. G. & E.
Pit No 3	Pit	72,900	382	1925	P G. & E.
Pit No. 4	Pit	90,000	--	1955	P. G. & E.
Pit No. 5	Pit	128,000	826	1944	P. G & E.
Hat Creek No. 1	Hat Creek	10,000	45	1921	P G. & E.
Hat Creek No 2	Hat Creek	10,000	51	1921	P. G. & E.
Shasta	Sacramento	378,000	1,863	1944	BR
Keswick	Sacramento	75,000	347	1949	BR
Kilare	South Cow Creek	3,000	17	1903	P. G. & E.
Cow Creek	South Cow Creek	1,200	12	1907	P. G. & E.
Volta	Battle Creek	6,400	46	1901	P. G. & E.
South	Battle Creek	4,000	36	1910	P. G. & E.
Inskip	Battle Creek	6,000	40	1910	P. G & E.
Coleman	Battle Creek	13,800	58	1911	P. G. & E.
Total		854,750	4,013		
Completion assumed, 1975:					
McCloud*	McCloud	32,000	--	----	P. G & E.
McCloud-Pit*	McCloud-Pit	206,000	--	----	P. G. & E.
Pit No. 6*	Pit	74,000	--	----	P. G. & E.
Pit No. 7*	Pit	100,000	--	----	P. G. & E.
Trinity diversion†					
Trinity	Trinity	98,000	--	----	BR
Clear Creek	Trinity	130,000	--	----	BR
Spring Creek	Trinity	143,000	--	----	BR
Total		783,000			
Ultimate development:					
Castle Crag	Sacramento	12,000	91	----	--
Table Mountain	Sacramento	150,000	786	----	--
Iron Canyon	Sacramento	72,000	440	----	--
Pit No 2	Pit	14,000	95	----	--
Sugar Loaf	Hat	5,000	42	----	--
Total		253,000	1,454		

* Capacity figures from FPC Project No. 2106, planned capacities of Pit Nos 6 and 7 amended in 1957.
† Capacity figures from Bureau of Reclamation Trinity diversion plan. Under partnership development, P G & E and the Bureau of Reclamation would be joint owners

SOURCE (except as otherwise indicated above) Federal Power Commission, "Hydroelectric Power Resources of the United States Developed and Undeveloped, 1953" (1954).

kilowatts. In the first stage of development, McCloud River water would flow first into Iron Canyon Creek, a tributary of the Pit, and the combined flow would flow through the McCloud-Pit Powerhouse (to be rated initially at about 154,000 kilowatts), which would be located about 1,500 feet downstream from the existing Pit No. 5 Station. In the second stage of development Squaw Valley Creek and the upper McCloud would be developed to provide additional storage for the McCloud Powerhouse, to be located below the junction of Huckleberry Creek and the McCloud. Another generating unit would be added to the McCloud-Pit Powerhouse. Water diversion and control provided by this development would be used by the prospective Pit No. 6 and

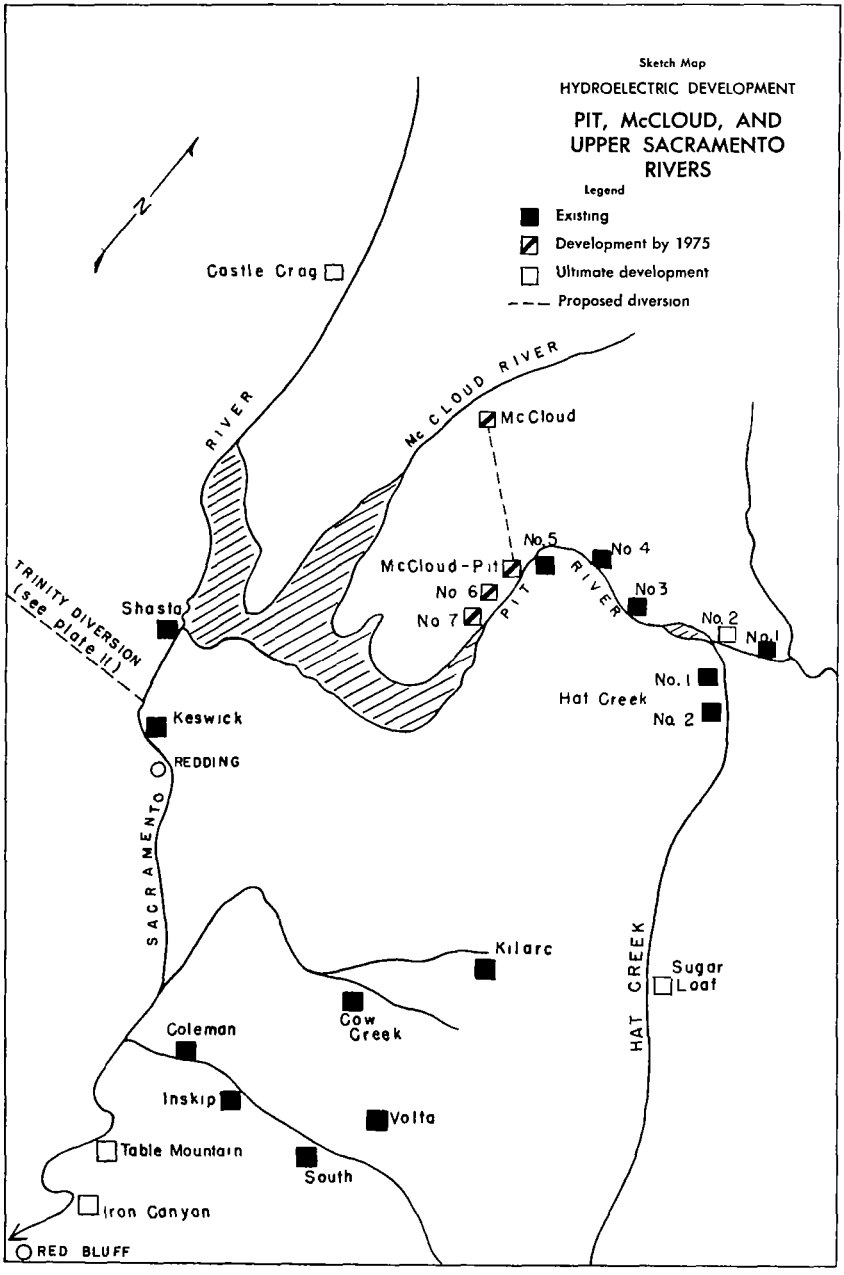
Sketch Map
HYDROELECTRIC DEVELOPMENT
PIT, McCLOUD, AND UPPER SACRAMENTO RIVERS
Legend
Existing
Development by 1975
Ultimate development
Proposed diversion
N
Castle Crag
McCLOUD RIVER
McCloud
McCloud-Pit
No 5
No 4
No 6
No 7
No 3
No 2
No 1
PIT RIVER
TRINITY DIVERSION (see plate II)
Shasta
Keswick
REDDING
SACRAMENTO
No. 1
Hat Creek
No 2
HAT CREEK
Kilarc
Sugar Loaf
Cow Creek
Coleman
Inskip
Volta
Table Mountain
South
Iron Canyon
RED BLUFF

PLATE III

No. 7 plants. Since this McCloud-Pit diversion plan appears to offer a more favorable prospect for integrated development of the upper Sacramento area than does the McCloud River proposal of COPCO, and has at least an equal chance of being chosen by the FPC, the diversion plan has been chosen to represent the development of the McCloud River potential by 1975 .

Bonner suggested the possibility on constructing a major storage work at Big Valley, in the upper Pit Basin 30 miles above Fall Creek. This development would afford water control for the entire Pit River system and could accommodate a 47,000-kilowatt, low-load-factor installation No current plans for this development have been found, and the possibility of such a power installation was not included in the FPC 1953 estimate of undeveloped hydroelectric capacity. The economic feasibility of this installation may well be improved with additional hydroelectric development downstream and growing reliance on hydro capacity for peaking on the Northern California system. There are at present no active plans for development of the 14,000-kilowatt Pit No. 2 plant, which would develop the 103-foot head between the existing Pit No. 1 and No. 3, or the 5,000-kilowatt Sugar Loaf site, on Hat Creek.

Current plans for virtually full development of the hydroelectric potential of the Pit River indicate that increased power capacity will not depend on economic development within the basin Nevertheless, the nature and rate of general basin development will determine the amount of electricity available for export into the Northern California power grid.

Industrial Development in the Pit River Basin

The Pit River Basin includes sections of Modoc, Lassen, Shasta, and Tehama Counties. Basic population and economic data for these four counties are presented in the following table:

POPULATION AND INDUSTRIAL RESOURCE BASE OF THE PIT AND UPPER SACRAMENTO RIVER BASINS, 1950-1975

	Lassen	*Modoc*	*Shasta*	*Tehama*	*Total*
Population					
1956	16,900	9,500	45,000	20,300	91,700
Estimated increase 1956-1960	---	1,700	4,000	-	6.2%
1975 (estimate)					106,900
Industrial Base					
1. Timber (million board feet)					
Total resource	8,200	5,500	15,000	7,304	36,004
1952-54 average production	202	104	377	92	775
Ultimate sustained yield	133	94	303	166	696
2. Lumber and allied manufacturing					
Total employment, 1950	1,894	664	2,373	451	5,382
Ultimate employment	1,636	1,156	8,108	4,263	15,073
3. Mining (thousand dollars)					
Gold	---	$2	$26	---	$28
Pumice	---	$51		---	$51
Sand and gravel	---	$44	$184	---	$228
Electric Power (billion kilowatt-hours)					
Net export 1956 (estimate)					1
Net export 1975 (estimate)					2

SOURCES Population 1956-1960, California State Department of Finance total timber resource and mining "California Blue Book, 1954," lumber and allied manufacturing, study prepared for State Water Resources Board by Harold F Wise and Associates (Sacramento, 1956), electric power, infra , Chapters 2 6, and 8

The estimated 1956 population figure represents an average increase over the 1950 census of about 20 percent. Logging and timber products manufacture have accounted for over 85 percent of the economic activity in the basin since World War II. With an estimated sustained annual timber yield only slightly lower than present levels of output, it is expected that this sector of manufacture will predominate in the region over the long run. The major development in prospect is the addition in Shasta and Tehama Counties of a pulp and paper industry that is expected ultimately to account for over one third of the manufacturing employment in those counties.

For example, by late 1957 the pulp products section of a new Diamond Match Company plant in Red Bluff, Tehama County, will be in operation, employing 130 workers. The entire integrated forest products processing operation is planned for completion in 1958, providing a total payroll of over 600.

Although pulp and paper manufacture requires a relatively large amount of electricity per man-hour, the addition of this industry will not alter the general nature of electric power demand in the area. Thus, on the assumption that population in Shasta, Modoc, and Lassen Counties will almost double, and that electric power consumption per capita will rise from 3,000 to 8,000 kilowatt-hours per annum, electric energy consumption in the Pit River Basin may be expected to exceed one billion kilowatt-hours a year by 1975. If presently planned hydroelectric plants are constructed by that time, net exports of electric energy from the basin will increase by approximately one billion kilowatt-hours, despite this fivefold increase in consumption within the basin.

UPPER SACRAMENTO RIVER

Power development of the Sacramento River will be restricted to the upper portion. The mean seasonal flow near Red Bluff, which is below all proposed hydroelectric developments on the main stream, is 8,470,000 acre-feet. The water supply is drawn from the relatively small flow of the headwaters of the Sacramento plus the more substantial contributions of the McCloud and Pit Rivers and Cow and Battle Creeks, which are tributary above Red Bluff. Present power development includes the 378,000-kilowatt Shasta Plant, the largest hydroelectric installation in the State, and the 75,000-kilowatt Keswick afterbay installation. The six small hydroelectric plants on Cow and Battle Creeks, which enter the Sacramento River below Redding, fully utilize the power potential of those streams. One single-purpose hydro plant above Shasta Reservoir and three multiple-purpose developments below have been proposed for development. Since, under coordinated water control, these large, multiple-purpose installations would be integral parts of the Central Valley Project, the general problem of development of California water resources will be reviewed prior to discussing the prospective feasibility of these three specific sites.

California's Water Problem

Control of the waters of the Sierra Nevada and the coastal range to meet California's constantly growing water requirements has been under consideration for almost a century. Since the presentation to the Legislature, in 1919, of the Marshall Plan for comprehensive water

development in the State there has been general agreement that solution of the problem would depend on the transfer of surplus, wasted water of the northern section of the State to the water-hungry central and southern areas.[4] In 1931 a formal State Water Plan, including specific details of programming and installations, was approved by the State Legislature.[5] However, not until federal funds were forthcoming, after 1935, did actual work on the Central Valley Project begin.

Central Valley Project

There are three main operational aspects of the Central Valley Project: generation of power, restraint of flood waters, and control and distribution of high summer stream flow. These functions are performed to the end of reconciling and maximizing five general water requirements: (1) salinity control in Suisun Bay; (2) irrigation use in the Sacramento-San Joaquin Delta area; (3) diversion by municipalities and irrigators along the Sacramento River; (4) operation of project pumps and supply of water to the Delta-Mendota and Contra Costa Canals, and (5) maintenance of the channel of the Sacramento at specified minimum depths to Chico Landing. Actual operation of the Central Valley Project along such lines may be considered to have begun, and the initial phase of the development of the Central Valley completed in 1951. At that time the initial units of the project were first placed in full, coordinated operation; and water pumped from the delta near Tracy, some of which had been released from Shasta Reservoir, was transferred southward along the Delta-Mendota Canal to replace water formerly taken from the San Joaquin River. San Joaquin River water could be transferred, in turn, down the east side of the San Joaquin Valley in the Friant-Kern Canal as far south as Bakersfield.

Although the main rationale for development of electric power in connection with the Central Valley Project is the low-cost power increment that can be used to subsidize irrigation, the power output net of project pumping requirements is an important addition to the energy resources of Northern California. By 1951, project installations provided approximately 13 percent of the region's generating capacity and 14 percent of output. With the addition of the Folsom and Nimbus units, in 1955, the total rated generating capacity of the Central Valley Project exceeded 600,000 kilowatts. Because of the minimum storage that would remain in Shasta Reservoir after a series of dry years, such as 1930-1933, and the limited amount of water that would be available for release during the winter season, the dependable capacity of Shasta and Keswick is only 87,000 kilowatts. However, dependable peaking capacity is approximately 300,000 kilowatts. Their importance in the regional energy picture stems from both annual output and peaking capacity. The timing of the electric energy contribution of the multiple-purpose units of the Central Valley Project must be expected to be altered over the years as consumptive water requirements make increasing demands on the scheduling of water release. Under the

[4] For a summary of water planning in California between 1873 and 1935, see Albert N Williams, *The Water and the Power* (1951), pp. 142-148.
[5] California Department of Public Works, *Report to Legislature of 1931 on State Water Plan, 1930* (1931), Bulletin No. 25.

long-run development schedule of the California Water Plan, the electric energy required to lift water over the Tehachapi Mountains to Southern California would make public agencies in California net consumers of electricity.

Future Development—Bureau and State Plans

Completion of the initial development phase of the Central Valley Project leaves unserved the very dry southwest section of the San Joaquin Valley, in which severe overdrafts of ground water have occurred in the past decade, and the east side of the valley north of Chowchilla. Future plans of the Bureau of Reclamation include the San Luis Reservoir and San Luis-West Side Canal, the possible addition of a canal running southeast from Mendota Pool with a 70-foot pump-lift that would make additional water available for movement in the existing Frint-Kern Canal, and an addition to the Folsom-Newman and Folsom-Ione-Mendota Canals that would carry water from the South Fork of the American River to the southern San Joaquin Valley. Additional irrigation would be provided on both sides of the Sacramento River by the proposed Sacramento Valley canals. Federal funds were authorized for such development in 1954, and construction on one of the canals was begun by the Bureau of Reclamation. However, initiation of construction of the other has been delayed pending formation of public water districts with which repayment contracts can be signed. Further action on the project may be indefinitely delayed pending appeal of the California State Supreme Court's 1957 decision outlawing application of the Federal Government's 160-acre limitation in state water resource development.

Because of the added withdrawals from the Sacramento River, the feasibility of the Sacramento canals will be appreciably affected over the long run by the completion of several upstream water-control and diversion projects.[6] Suggestions and plans for solving California's persistent water problem range from the diversion of water southward from the Columbia River [7] to the somewhat less ambitious, but in many respects similar, proposal of the State of California to transfer water from the Feather River to the southernmost part of the State.[8] While there are presently no active proponents of state ownership of the Central Valley Project,[9] implementation of the State's proposal and the long-run coordinated development of the Central Valley will hinge

[6] For a complete treatment of the concept and scope of the Central Valley Project see U. S. Department of the Interior, Bureau of Reclamation, *Central Valley Basin, A Comprehensive Report on the Development of the Water and Related Resources of the Central Valley Basin for Irrigation, Power Production, and Other Beneficial Uses in California, and Comments by the State of California and Federal Agencies* (1949).

An analysis of the power aspect of the Central Valley Project is presented in Federal Power Commission, *Report on Plan of Development, Central Valley Basin as Proposed by the Bureau of Reclamation* (1946) prepared by Robert H Griffin This unpublished report was prepared as a commentary on the original draft of the above-cited publication of the Bureau of Reclamation

[7] U. S. Department of the Interior, Bureau of Reclamation, *Interim Report on Reconnaissance, United Western Investigation* (1951)

[8] California Department of Water Resources, *The California Water Plan*, Bulletin No 3 (May, 1957) Chapter 6 presents a summary of the State's water plan which has been officially termed the California Water Plan since 1951

[9] Water Project Authority of the State of California, *Feasibility of State Ownership and Operation of the Central Valley Project of California* (1952), Bulletin No. 2, prepared pursuant to Senate Concurrent Resolution No. 48, Legislature of 1951 For a full analysis of this issue, see Hugh G. Hansen, *Central Valley Project Federal or State?* Report prepared for Assembly Interim Committee on Conservation, Planning, and Public Works (Sacramento, 1955).

to a considerable extent on resolution of political-institutional questions discussed in the final chapter. Sinking land, steadily falling underground water tables, and steadily rising demand for water provide indications that real strides toward solution of the problem of water supply in California cannot be postponed without appreciably affecting the economy of the State.

Multiple-purpose Sites on the Upper Sacramento River

The Flood Control Act of 1944 authorized the Corps of Engineers to prepare studies and proceed with development of a low-level dam at the Table Mountain site, on the main stream of the Sacramento River, between Redding and Red Bluff. Following topographic and foundation studies the Corps, under its authorization, recommended in 1946 that the smaller Iron Canyon site, 14 miles downstream from Table Mountain, be developed first, since it involved minimum flooding of existing improvements and would not preempt the Table Mountain site. Thus, the high dam could be erected there if the need should develop for additional storage on the Sacramento River.[10] Assuming the development of the Trinity Diversion and the Table Mountain Project within a decade, a 50,000-kilowatt power installation at Iron Canyon was considered most feasible, with no provision for additional capacity in the event of future upstream development. The Iron Canyon Reservoir would inundate the Table Mountain site to depths between 16 and 78 feet, hence its use as afterbay for Table Mountain would be limited by some reduction in storage potential. In 1950 the State of California objected to development of the Iron Canyon site on grounds that the projects for storage and control on several of the tributaries of the Sacramento should be developed prior to any further construction of storage on the main stream. Such storage prospects include both the several minor tributaries that drain the Sacramento watershed between Shasta and the confluence of the Feather River and the State's Oroville Project, on the Feather River.[11] Although action on the Iron Canyon site has been indefinitely postponed by the action of the State, the project remains a part of the Corps of Engineers' basin-wide flood-control program.[12] The ultimate feasibility of the Table Mountain Project is rendered somewhat doubtful by the extent of development of the prospective reservoir site The larger reservoir proposed for the site would inundate two towns and the 15,000-acre Anderson-Cottonwood Irrigation District.

The 70,000-kilowatt Rice Creek site was listed in the 1953 FPC summary of U. S. hydroelectric potential as the best of several somewhat questionable prospects for power development in connection with the Sacramento canals project of the Bureau of Reclamation. Construction plans for the Sacramento canals diversion dam on the Sacramento River below Redding now omit electric power features, so Rice Creek has been eliminated as a unit of undeveloped hydroelectric capacity.

[10] U S. Army, Corps of Engineers, *Definite Project Report, Iron Canyon Dam Reservoir and Power Plant, Sacramento River, California* (1946).
[11] California Department of Water Resources, Bulletin No. 3, *op. cit.*
[12] Details of this program are presented in U S Army, Corps of Engineers, *Sacramento-San Joaquin Basin Streams, California* (1950), H. Doc. 367, 81st Cong., 1st Sess For a summary of power elements see p. 32.

Trinity Diversion Project

The general features of the Trinity Diversion Project have not changed since Bonner's study and the formulation of the State Water Plan, in 1930. The FPC in its 1944 study considered two alternatives, which may be identified as the Fairview and the Steiner's Flat plans: the former was found to present better prospects for power, especially in the short run, while the latter was preferable in terms of irrigation credits to power over the long run. The main elements of the former are included in the Bureau of Reclamation's proposal, which was accepted by Congress in 1955.[13] The major units in the bureau plan are: the Trinity and Lewiston Dams, with an adjoining powerhouse at Trinity rated at 98,000 kilowatts; and the Clear Creek and Spring Creek tunnels, with adjoining powerhouses rated at 130,000 and 143,000 kilowatts. The annual power benefit from the 371,000 kilowatts of added capacity is estimated at 1,110,000,000 kilowatt-hours, plus 60 million kilowatt-hours to be realized from the added flow through the existing Keswick plant. Operation of the system is based on the assumed annual storage and diversion of 865,000 acre-feet. The benefit-cost ratio of the project unit is slightly more than three to one.

In a letter dated January 13, 1955, from N. R. Sutherland, Vice President of P. G. & E., to C. H. Spencer, Regional Director of the Bureau of Reclamation, P. G. & E. presented a formal proposal for partnership construction of the project, which would include an annual payment to the Federal government of $3,500,000 for the use of falling water developed by the project, in addition to the construcion of power generation and transmission facilities. Early in 1957 the Secretary of the Interior went on record as favoring partnership development. Since the majority of California's representatives in the national capital oppose ownership and operation of the project power facilities by P. G. & E., the matter is still undecided. The contract for construction of the $49 million Trinity Dam was awarded early in 1957, and preliminary steps in construction have been taken. Despite some prospect for continued delays, it seems certain that the favorable economics of the project plus the need for additional water in the Central Valley will assure its development by 1975.

THE FEATHER RIVER BASIN

The Feather River has its origin on the snow-clad slopes of Mount Lassen and joins the Sacramento River some 15 miles above the City of Sacramento. The portion of the basin lying above Oroville includes all the major tributaries and branches: the North, Middle, and South Forks, the East and West Branches, and Indian Creek. There are no existing or planned power developments on the Feather River below Oroville. The area of the upper basin is 3,611 square miles and the mean annual flow at Oroville is 2,286,000 acre-feet. The North Fork makes the greatest single contribution to the total runoff in draining almost 2,000 square miles of the watershed, with the Middle Fork Basin accounting for most of the remainder. The upper section of the watershed is a high, broad, plateau-like basin with fairly heavy stands

[13] U. S. Department of the Interior, Bureau of Reclamation, *Trinity River Division Central Valley Project (Ultimate Plan) California* (1952), H. Doc. 53; 83d Cong., 1st Sess.

of timber interspersed with several large meadows. One of these, the former Big Meadows, was inundated in 1913 to form Lake Almanor Reservoir, which is the major storage unit in the basin.

Hydroelectric Development—North Fork

Existing power developments on the main stream are limited to the North Fork, where there are six plants with a total capacity of 373,900 kilowatts. There are, in addition, four smaller plants in the basin area, two on Butte Creek, and two on the West Branch of the North Fork. Their total capacity is 21,800 kilowatts. Construction is currently under way on an improvement of the existing diversion from the West Branch to Butte Creek that will increase the output of the two Butte Creek installations. Construction also has begun on the 124,200-kilowatt Poe Plant, which will be located two miles downstream from the existing Cresta Powerhouse and just above the maximum reservoir level of the proposed Oroville project. Features of the Poe unit include a diversion dam, 33,700 feet of pressure tunnel and penstock, and two vertical Francis turbines that will operate under a 477-foot head.

Plans have been proposed to develop virtually all the remaining potential of the Feather River. Present applications of P. G. & E. will fully develop the North Fork from its source to the existing Big Bend Plant, which would be inundated by the reservoir of the State of California's Oroville project. Under FPC Project No. 2105 two power plants, Butt Valley and Caribou No. 2, will be constructed. The 380-foot head between Lake Almanor Reservoir and Butt Valley Reservoir will be developed by an 11,000-foot tunnel, paralleling the existing Caribou No. 1 tunnel and leading to the 36,000-kilowatt Butt Valley plant. Caribou No. 2, rated at 109,800 kilowatts, will operate under a 1,149-foot head developed through 9,200 feet of tunnel. Estimated construction time for the project is three and one-half years. The third proposed project on the upper North Fork is the Belden plant, which will be developed as FPC Propect No. 2108. The main features of this 117,000-kilowatt station are a diversion dam that will back water up to the existing Caribou No. 1 Plant, 33,750 feet of pressure tunnel, a 1,700-foot penstock, and two 78,000-horsepower vertical Francis turbines that will operate under a 770-foot head.

There is a considerable undeveloped hydroelectric potential on the East Branch of the North Fork of the Feather River, and on the Middle and South Forks. In January, 1953, an individual, Robert P. Wilson, filed for a preliminary permit to investigate the development of a two-plant, 11,800-kilowatt project on Lights Creek, a tributary of Indian Creek, under FPC Project No. 2125. In February, 1953, Mr. Wilson filed for a preliminary permit under FPC Project No. 2126 to investigate the possibility of a four-plant development involving the Indian, Spanish, and Yellow creek tributaries of the East Branch. Under his tentative plan, power head would be developed by dams and tunnels at each installation to develop a total capacity of some 92,500 kilowatts.

Pursuant to the State Legislature's Budget Act of 1954, the State Division (now Department) of Water Resources was authorized to evaluate the ultimate water needs of those counties falling within the Feather River drainage area, predicated on full development of all their natural resources. The resulting study included a survey of the

undeveloped hydroelectric potential of the Feather River, as an element in full multiple-purpose development.[14] The following table summarizes the State's tentative hydroelectric estimate. This data will almost certainly be revised, to some extent, by detailed feasibility studies currently being conducted by the Department of Water Resources.

ESTIMATED HYDROELECTRIC POTENTIAL IN THE UPPER FEATHER RIVER SERVICE AREA

	Water source	Installed capacity (kw.)	Average annual output (millions kwhr.)
Squaw Queen	Last Chance Creek (East Branch of North Fork)	14,000	85.0
Indian Falls	Indian Creek (East Branch of North Fork)	25,000	203.0
Meadow Valley	Spanish Creek (Middle Fork)	125,000	812.3
Grizzley Valley	Big Grizzley Creek (Middle Fork)	10,000	37.7
	South Fork	75,000	354.0

SOURCE "Northeastern Counties Investigation," Table 63, p 287
In Table 34, p 165, a summary of plans for hydroelectric development on the Feather River is presented which includes those not advanced to the stage of proposals to the Federal Power Commission

The 1953 FPC data indicate a total potential on Indian and Yellow Creeks of 65,000 kilowatts while the State, as indicated in the table, estimated 39,000 kilowatts. In view of the range of capacity estimates, and the absence of detailed feasibility studies, no capacity will be assumed for completion by 1975 and the 65,000-kilowatt estimate of the FPC will be considered as the ultimate potential of the area.

Middle Fork

Three proposals have been made before the Federal Power Commission for development of the Middle Fork of the Feather River, which was estimated by the FPC in 1953 to have a power potential of 177,100 kilowatts. The first application for a preliminary permit was made in January, by Mr. Robert P. Wilson. His proposed development would include several upstream storage units, diversion dams and tunnels, and eight power plants with total capacity of 348,000 kilowatts. In April the Richvale Irrigation District filed for a preliminary permit under FPC Project No. 2134. The primary elements in their proposed development are two large storage dams, which would create Clio and Nelson Point Reservoirs, and five power plants with total capacity of 189,000 kilowatts. Additional storage would be provided upstream at Gold Lake, Grizzley Valley, and other sites if further study proves them to be feasible. The third application for the same area of development was submitted by P. G. & E., one week after the Richvale application, under FPC Project No. 2136. The company proposed a four-plant development totaling 198,750 kilowatts and providing storage at much the same points as the Richvale plan. The lowest plant in the P. G. & E. proposal would have a tailwater elevation of 900 feet, which is the maximum reservoir elevation of the proposed Oroville Project. It may be assumed that the State

[14] California Division of Water Resources, *Northeastern Counties Investigation, Report on Upper Feather River Service Area* (April, 1955), Table 63, p. 287.

will submit a formal proposal to the FPC upon completion of detailed studies in process, which will approximate the 135,000 kilowatts capacity provided by the Meadow Valley and Grizzley Valley plants listed in the preceding table. In the State's proposal, some power benefits will be foregone in favor of maximizing fish, wildlife, and general recreation benefits Water releases for power generation would be regulated so as to maintain a maximum feasible stream flow and to avoid the recurrent surges that reduce fishing benefits from the Klamath River.

These proposals would appear to assure the development of the Middle Fork by 1975. Since the capacity proposed in the plans of the Richvale Irrigation District, P. G. & E., and the State approximates the estimate of the FPC, the last will be incorporated into the summary data for the Feather River presented in Table IX, on the following page.

South Fork

Development of the South Fork of the Feather River for irrigation and power has been under consideration by the Oroville-Wyandotte Irrigation District for many years. The district's present plan of development, under FPC Project No. 2088, is for storage at four reservoirs: Grass Valley, Slate Creek, Sly Creek, and the Lost Creek Reservoir, constructed in 1924. Water from Slate Creek, a tributary of the Yuba River, would be diverted to the South Fork system. Two power plants are included in the plans: the 34,600-kilowatt Woodleaf and 19,400-kilowatt Forbestown installations. Water diverted for power and irrigation would be returned to the Feather River above the proposed Oroville Reservoir The State contemplates a development on the South Fork that would provide 75,000 kilowatts capacity. Since the irrigation districts' plan is more advanced, it is chosen to represent the hydroelectric capacity assumed for development on the South Fork of the Feather River by 1975.

Oroville and the State's Feather River Project

For many years the existence of three multiple-purpose sites on the Feather River Basin have been recognized as possible means of increasing water control and the power output of the stream. In 1931 the Oroville site, located on the main stream 1.7 miles below the junction of the North and Middle Forks, was selected by the State of California as possessing the most attractive prospect and was included in the State Water Plan. The Oroville Project was included in the plan as passed by the State Legislature in 1941. In 1945 the Bureau of Reclamation and Corps of Engineers presented a joint report that recommended the other two sites, Big Bend on the lower North Fork and Bidwell Bar on the lower Middle Fork, as having superior characteristics. The resulting conflict was resolved in favor of the Oroville site, in 1949, after further joint studies revealed a smaller reservoir capacity at the Big Bend site than had been originally estimated. However, the bureau indicated in the mid-1950's, that it considered an alternate to Oroville worthy of investigation.

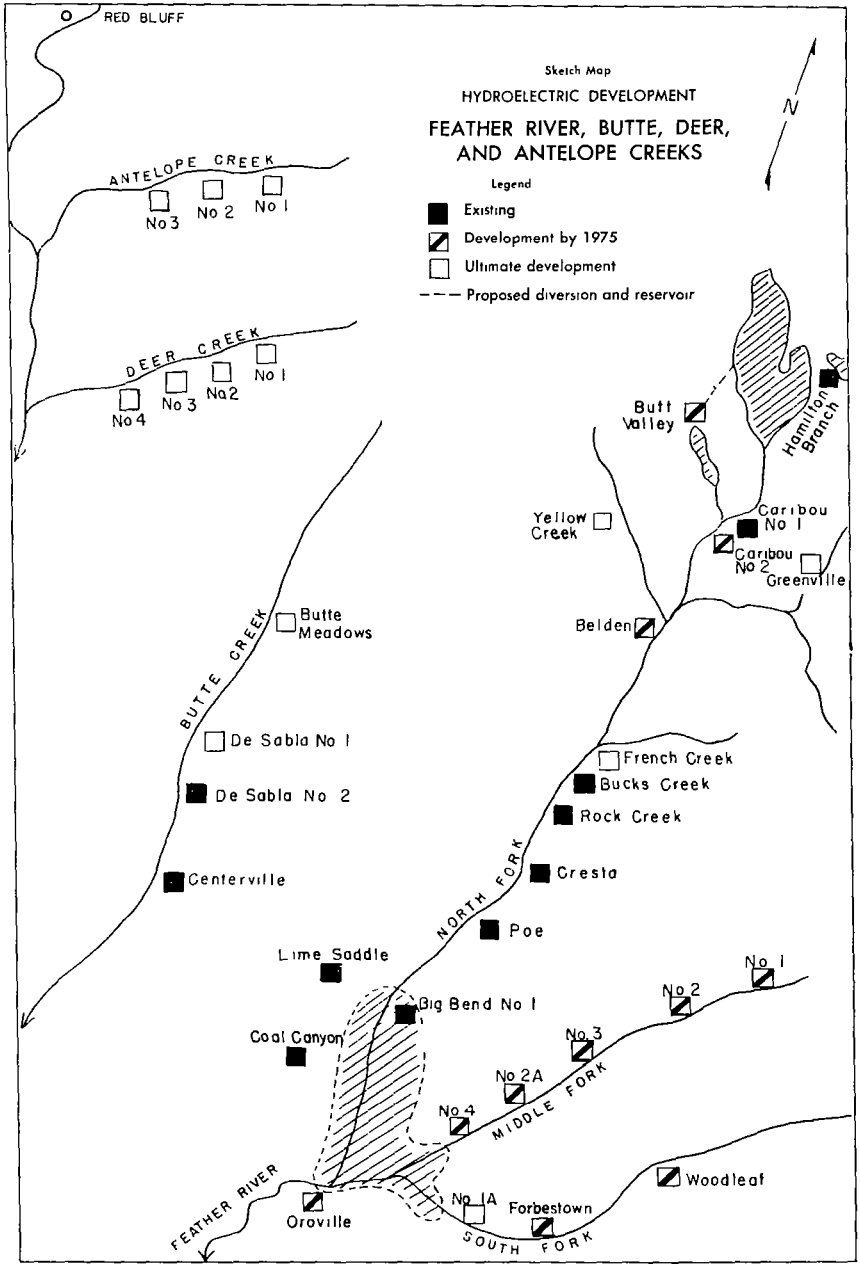
RED BLUFF
Sketch Map
HYDROELECTRIC DEVELOPMENT
FEATHER RIVER, BUTTE, DEER, AND ANTELOPE CREEKS
Legend
Existing
Development by 1975
Ultimate development
Proposed diversion and reservoir
N
ANTELOPE CREEK
No 3
No 2
No 1
DEER CREEK
No 4
No 3
No 2
No 1
Butt Valley
Hamilton Branch
Yellow Creek
Caribou No 1
Caribou No 2
Greenville
Belden
BUTTE CREEK
Butte Meadows
De Sabla No 1
De Sabla No 2
Centerville
French Creek
Bucks Creek
Rock Creek
Cresta
NORTH FORK
Poe
Lime Saddle
Big Bend No 1
Coal Canyon
No 1
No 2
No 3
No 2A
No 4
MIDDLE FORK
FEATHER RIVER
Oroville
No 1A
Forbestown
SOUTH FORK
Woodleaf

PLATE IV

TABLE IX

EXISTING AND ULTIMATE HYDROELECTRIC DEVELOPMENT OF THE FEATHER RIVER BASIN, INCLUDING BUTTE, DEER, AND ANTELOPE CREEKS

Plant	Water source	Installation capacity (kw.)	Average annual generation (million kw hr.)	In service	Owner
Existing:					
Hamilton Branch	North Fork Feather	4,800	15	1921	P. G. & E.
Caribou No. 1	North Fork Feather	60,000	451	1921	P. G. & E.
Bucks Creek	North Fork Feather	66,000	198	1928	P. G. & E.
Rock Creek	North Fork Feather	113,400	454	1950	P. G. & E.
Cresta	North Fork Feather	67,500	298	1949	P. G. & E.
Poe*	North Fork Feather	124,200	--	1957	P. G. & E.
Big Bend No. 1†	North Fork Feather	52,000	454	1908	P. G. & E.
Lime Saddle	West Branch Feather	1,600	11	1906	P. G. & E.
Coal Canyon	Dry Creek	800	8	1907	P. G. & E.
De Sabla	Butte Creek	13,000	83	1903	P. G. & E.
Centerville	Butte Creek	6,400	36	1900	P. G. & E.
Total		491,500	2,008		
Completion assumed, 1975:					
Butte Valley*	North Fork Feather	36,000	170	----	P. G. & E.
Caribou No 2*	North Fork Feather	109,800	345	----	P. G. & E.
Beldon	North Fork Feather	117,000	390	----	P. G. & E.
Middle Fork No. 1	Middle Fork Feather	19,800	117	----	--
Middle Fork No. 2	Middle Fork Feather	26,000	157	----	--
Middle Fork No. 3	Middle Fork Feather	65,000	415	----	--
Middle Fork No. 2A	Middle Fork Feather	24,300	164	----	--
Middle Fork No. 4	Middle Fork Feather	42,000	290	----	--
Woodleaf	South Fork Feather	34,600	128	----	O&WID
Forbestown	South Fork Feather	19,400	77	----	O&WID
Oroville, Main	Feather	440,000	1,646	----	State
Oroville, Aftby	Feather	25,000	136	----	State
Total		969,700	4,035		
Ultimate development:					
French Creek	North Fork Feather	20,000	90	----	--
Yellow Creek	Yellow Creek	25,000	164	----	--
Greenville	Indian Creek	40,000	150	----	--
South Fork No. 1A	South Fork Feather	10,500	38	----	--
Centerville‡	Butte Creek	15,600	94	----	--
De Sabla No 1	Butte Creek	8,000	45	----	--
De Sabla No. 2‡	Butte Creek	24,000	133	----	--
Butte Meadows	Butte Creek	16,000	96	----	--
Deer Creek No 1	Deer Creek	18,000	109	----	--
Deer Creek No 2	Deer Creek	13,000	78	----	--
Deer Creek No 3	Deer Creek	15,000	93	----	--
Deer Creek No 4	Deer Creek	18,000	107	----	--
Antelope Creek No 1	Antelope Creek	6,500	46	----	--
Antelope Creek No 2	Antelope Creek	4,000	22	----	--
Antelope Creek No. 3	Antelope Creek	5,700	32	----	--
Total		239,300	1,297		

* Under construction

† The future status of Big Bend No 1 is uncertain It will be inundated by the Oroville development, or if that project is not constructed, the capacity of Big Bend No. 1 might be increased by some 20,000 kilowatts

‡ Additional possible capacity and corresponding incremental average annual output at existing plant

SOURCE Federal Power Commission, "Hydroelectric Power Resources of the United States Developed and Undeveloped, 1953" (1954).

The main units of the Feather River Project which have been approved by the State Legislature are: Oroville Dam, 730 feet high and 6,860 feet in length, providing storage for 3½ million acre-feet of water; an adjacent power plant that will provide 440,000 kilowatts of capacity at the main dam and 25,000 kilowatts at the afterbay installation; the 65-mile Santa Clara-Alameda diversion, which will lift the water 703 feet with two pumping plants; and the 570-mile San Joaquin Valley-Southern California diversion, which will lift the water a total of 3,530 feet with six pumping plants, and drain into the Tia Juana River in San Diego County.

Two alternative methods of operating the project were considered in the State's study. First, under conditions where power and irrigation would be given approximately equal priority, the total dependable power capacity would be 348,000 kilowatts with a firm annual irrigation supply of 500,000 acre-feet in excess of 1947 downstream requirements. Under the alternative condition, where continuous diversion from the Sacramento-San Joaquin Delta is assumed, the dependable power capacity would be reduced to 232,000 kilowatts. After the annual 970,000-acre-feet requirement of the Feather River service area had been met, release from Oroville reservoir would contribute to the 2,845,000 acre-feet that would be continuously available at the delta for diversion to Santa Clara Valley, San Joaquin Valley, and Southern California.[15] On January 31, 1952, the State Water Resources Board applied for license of its Feather River Project under Project No. 2100. The FPC license was granted December 1, 1956.

Butte, Deer, and Antelope Creeks

Butte, Deer, and Antelope Creeks, which drain directly into the Sacramento River below Red Bluff, are included in discussion of the Feather River Basin. The ultimate power potential of Butte Creek has been estimated by the FPC at 63,600 kilowatts, which would be developed by increasing the capacity of the two existing plants and adding two more installations, De Sabla No. 1 and Butte Meadows, which would be rated at 8,000 and 16,000 kilowatts, respectively. The present construction program of P. G. & E. will increase the output of the existing stations by increasing both the head and the quantity of water passing through the turbines. This will be effected by replacing portions of the diversion from the West Branch of the North Fork of the Feather (some of which are early mining ditches) with new tunnel sections. Deer and Antelope Creeks have an estimated power potential of 64,000 and 16,200 kilowatts, respectively. Details of these possibilities are presented in Table IX. There are presently no plans for further development on these three streams.

Industrial Resource Base of the Feather River Basin

The Feather River Basin includes all of Plumas County, and more than one half of Butte County. Basic population and industrial-resource data for these two counties are presented in the following table.

[15] California State Water Resources Board, *Report on Feasibility of Feather River Project and Sacramento-San Joaquin Delta Diversion Projects Proposed as Features of the California Water Plan* (1951).

POPULATION AND INDUSTRIAL RESOURCE BASE OF THE FEATHER RIVER BASIN, 1950-1975

Population	*Butte* *	*Plumas*	*Total*
1956	69,300	11,800	81,100
Estimated increase 1956-1960	7,100	----	8.2%
1975 (estimate)	----	----	95,400
Industrial Base			
1. Timber (million board feet)			
Total resource	3,857	16,898	22,271
1952-54 average production	147	366	550
Ultimate sustained yield	135	295	457
2. Lumber and allied manufacturing			
Total employment, 1950	1,761	1,527	3,313
Ultimate employment	4,151	3,215	7,598
3. Mining (thousand dollars)			
Gold	$300	$4	$304
Sand and gravel	$424	$52	$476
Electric Power (billion kilowatt-hours)			
Net export 1956 (estimate)	----	----	1.7
Net export 1975 (estimate)	----	----	5.4

* Approximately one-half of Butte County is located in the Feather River Basin, and one-half in the Yuba River Basin Data here include entire county

SOURCES Population, 1956-1960, California State Department of Finance, total timber resource and mining, "California Blue Book, 1954", lumber and allied manufacture, study prepared for State Water Resources Board by Harold F Wise and Associates (Sacramento, 1956), electric power, infra, Chapters 2, 6, and 8

The most important economic activities in the basin are logging and timber-products manufacture, mineral extraction, and recreation. Future industrial development will be based, to a large extent, on development of the timber resource in Butte and Plumas Counties. The anticipated ultimate doubling of employment will be based mainly on the development of a new pulp and paper industry. In addition to the minerals listed in the table, other valuable undeveloped minerals in the basin include crystalline, limestone, lead, zinc, copper, chromium, cadmium, and manganese. Large amounts of gold were produced before World War II. Dredging operations in the vicinity of Oroville were especially important. Altered market conditions in the past decade have significantly reduced the output of gold in the Feather River Basin.

Though population will probably exceed 100,000 and manufacturing employment more than double by 1975, such expansion will not have a significant effect on the rate of development of electric power in the basin. As has been indicated, the full development of the North Fork of the Feather by P. G. & E. is virtually assured within the next decade. Construction of a major storage unit on the main stream, such as the Oroville unit of the State's Feather River Project, will depend upon total development of the State's water resource rather than economic development in the Feather River Basin. Thus, it is anticipated that, while basin consumption of electricity will double by 1975, additions to electric power capacity on the Feather River will allow net exports of electricity to more than triple by that year.

THE YUBA RIVER BASIN

The Yuba River Basin covers 1,194 square miles in the mountainous watershed lying above Smartsville. The North and South Forks are the main branches of the Yuba River. Deer Creek, an important tributary,

empties into the main stream near Smartsville. The mean annual flow at that point is 2,415,000 acre-feet The Bear River Basin, covering 295 square miles, adjoins the Yuba River Basin to the south. The Bear River has a mean runoff of 346,000 acre-feet and empties into the Feather River some 10 miles above the confluence of the latter with the Sacramento. The interrelationship of the waters of the Yuba and Bear Rivers has been established in over a century of coordinated use: first, in the extensive placer mining development that was centered in the Yuba River Basin; and second, in a development of hydroelectric power that made extensive utilization of the abandoned water-transfer works of the early mining operations. Because of this interrelationship, discussion here will follow the established classification of the North and South Yuba systems. The former includes power plants that operate from the natural flow of the North and South Forks of the Yuba, while the South Yuba system consists of hydroelectric stations that use water diverted from the South Fork and Deer Creek as well as the natural flow of Bear River.

Hydroelectric Development

Existing power development of the North Yuba system is limited to four plants with a total capacity of 30,530 kilowatts One of these, the 30-kilowatt Sierra City plant of P G. & E., has not been included in Table X (see next page), which presents the details of existing and prospective hydroelectric development of the Yuba River Basin. The ultimate development of the North Fork would include the construction of five new plants and additions to the three main existing installations This would yield a total added capacity of 226,800 kilowatts Both the Bureau of Reclamation and California water planning agencies have suggested future multiple-purpose development of the existing Bullards Bar, Colgate, and Narrows installations

The South Yuba system, with its extensive water-diversion works, extends from the Middle Fork of the Yuba southward to the Wise Power Plant, located adjacent to the upper American River. The nine power plants presently operating in this system present a total capacity of 109,950 kilowatts

The State Department of Water Resources has presented a plan for development in the South Yuba system.[16] Two alternative plans are under consideration, which would provide a greater water and electric power yield from the South Yuba system The Lake Valley Project would store and divert water from a branch of the North Fork of the American River, from the South Fork of the Yuba, Fordyce Lake, and Rattlesnake Creek. A 17,500-kilowatt powerhouse would be located on the flow line of Lake Spaulding to the Drum hydroelectric power system of P. G. & E. The alternative development would include two powerhouses, Cisco No. 1 and Cisco No. 2, rated at 4,600 and 28,000 kilowatts capacity

Two other developments in this area are under consideration by the State The Chicago Park plant would be rated at 25,000 kilowatts and located on the Bear River Finally, a development is being considered that would utilize water released from the existing Wise Powerhouse.

[16] California State Water Resources Board, *Placer County Investigation*, Bulletin No 10 (June, 1955), pp 65-133 (Hereafter referred to as *Placer County Investigation*).

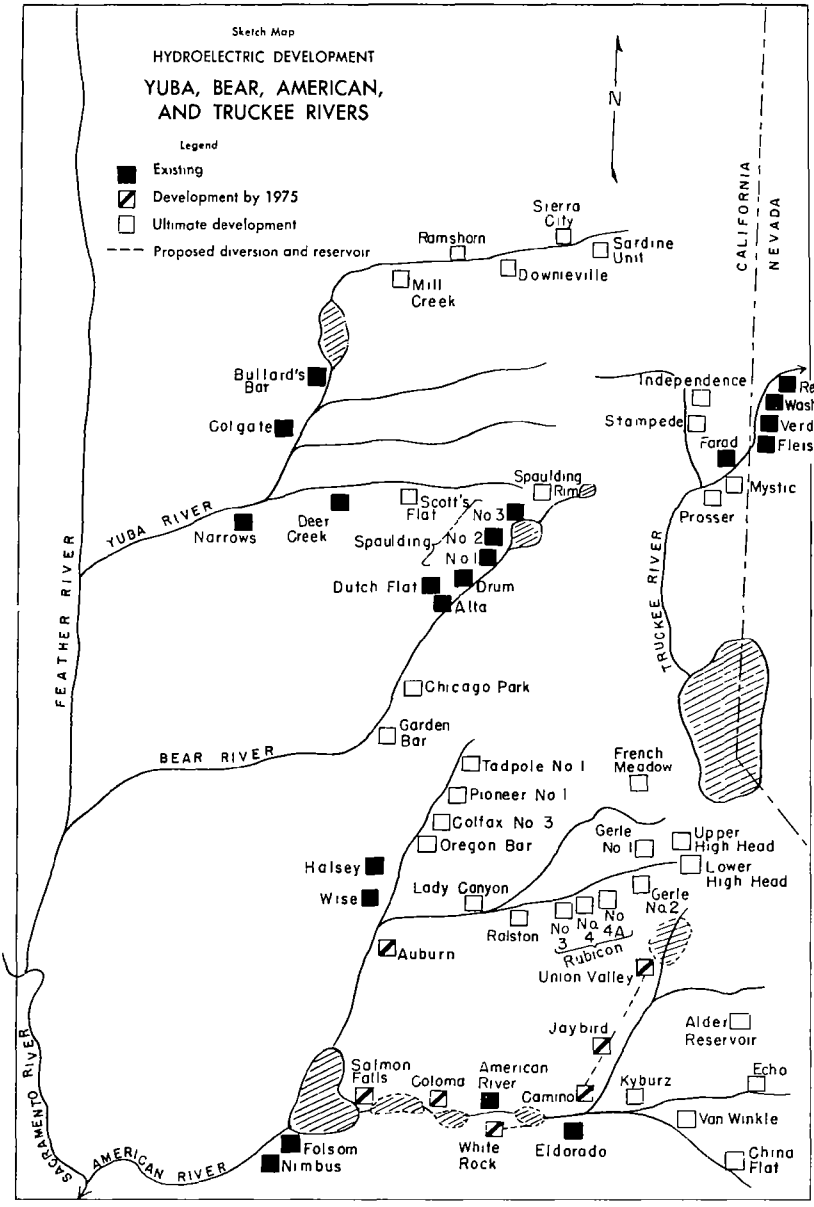
Sketch Map
HYDROELECTRIC DEVELOPMENT
YUBA, BEAR, AMERICAN,
AND TRUCKEE RIVERS
Legend
Existing
Development by 1975
Ultimate development
Proposed diversion and reservoir
N
CALIFORNIA
NEVADA
Sierra City
Ramshorn
Sardine Unit
Downieville
Mill Creek
Bullard's Bar
Colgate
Independence
Stampede
Farad
Reno
Washoe
Verdi
Fleish
Spaulding Rim
Scott's Flat
No 3
No 2
No 1
Spaulding
Mystic
Prosser
Narrows
Deer Creek
YUBA RIVER
Dutch Flat
Drum
Alta
FEATHER RIVER
TRUCKEE RIVER
Chicago Park
Garden Bar
BEAR RIVER
Tadpole No 1
French Meadow
Pioneer No 1
Colfax No 3
Oregon Bar
Gerle No 1
Upper High Head
Lower High Head
Halsey
Wise
Lady Canyon
Gerle No 2
Ralston
No 3
No 4
No 4A
Rubicon
Auburn
Union Valley
Jaybird
Alder Reservoir
Salmon Falls
Coloma
American River
Camino
Kyburz
Echo
Van Winkle
White Rock
Eldorado
China Flat
Folsom
Nimbus
SACRAMENTO RIVER
AMERICAN RIVER

PLATE V

TABLE X

EXISTING AND ULTIMATE HYDROELECTRIC DEVELOPMENT OF THE YUBA AND BEAR RIVER BASINS

Plant	Water source	Installation capacity (kw.)	Average annual generation (million kwhr)	In service	Owner
Existing:					
Bullards Bar	North Fork Yuba	6,500	39	1924	P. G. & E.
Colgate	North Fork Yuba	24,000	154	1941	P. G. & E.
Narrows	Yuba	9,350	89	1942	P. G & E.
Spaulding No. 3	South Fork Yuba	6,300	29	1929	P. G. & E.
Spaulding No 1	South Fork Yuba	6,400	42	1917	P. G. & E.
Spaulding No. 2	South Fork Yuba	3,750	20	1920	P. G. & E.
Deer Creek	Deer Creek	5,500	31	1908	P. G. & E.
Drum	Bear	44,000	283	1913	P. G. & E.
Alta	Bear	2,000	6	1902	P. G. & E.
Dutch Flat	Bear	22,000	147	1943	P. G & E.
Halsey	Dry Creek	10,000	69	1916	P. G. & E.
Wise	Dry Creek	10,000	91	1917	P. G. & E.
Total		149,800	1,000		
Ultimate development:					
Bullards Bar*	North Fork Yuba	38,500	210	----	--
Colgate*	North Fork Yuba	26,000	148	----	--
Sardine Unit	North Fork Yuba	13,000	102	----	--
Sierra City	North Fork Yuba	2,100	7	----	--
Downieville	North Fork Yuba	32,800	135	----	--
Ramshorn	North Fork Yuba	14,800	82	----	--
Mill Creek	North Fork Yuba	39,000	218	----	--
Narrows*	Yuba	60,600	289	----	--
Spaulding Rim	South Fork Yuba	5,200	30	----	--
Scotts Flat	Deer Creek	4,000	26	----	--
Chicago Park	Bear	22,000	152	----	--
Garden Bar	Bear	4,000	20	----	--
Total		262,000	1,408		

* Additional possible capacity and corresponding incremental average annual output at existing plant

SOURCE Federal Power Commission, "Hydroelectric Power Resources of the United States Developed and Undeveloped, 1953" (1954).

The proposal tentatively presented by the State would be to divert the water from the South Canal which is presently spilled into the American River. Such a diversion would pass the water through the proposed 11,000 kilowatt Auburn Plant, into Auburn Ravine, and thence into the Natomas Cross Canal and Sacramento River.

Industrial Development in the Yuba River Basin

The Yuba River Basin includes Nevada, Sierra, Sutter, and Yuba Counties as well as approximately one-half of Butte County. Resource data concerning Butte County have been included in the preceding Feather River Basin section. Population of the four counties has been estimated at approximately 77,000 as of July 1, 1956. It is estimated that the population will reach 83,000 by 1975.

The most important raw material resources of the Yuba River Basin are timber and gold. The total timber resources for the basin is estimated at over 9 billion board feet. The average output for the period 1952-54 for Sierra and Yuba Counties was 138 million acre-feet. It is estimated that the ultimate sustained yield from these two counties will

approximate 182 million acre-feet. While some chromite was mined in the basin during World War II, gold has continued to be the primary mineral resource of the region. Sutter County is almost exclusively devoted to agriculture.

Future industrial development in the basin will depend, for the most part, upon continued exploitation of the timber resource. Employment in lumber and allied manufacturing in Sierra and Yuba Counties in 1950 totaled 813 It is estimated that ultimate employment in this sector will total over 3,000 workers. The greatest part of such increased employment is expected to result from the development of a pulp and paper industry in Yuba County

The discussion of the existing and ultimate hydroelectric development of the Yuba River Basin has indicated that no additional hydroelectric capacity is currently planned for development by 1975. It is estimated that electric power consumption within the basin will more than double by that year However, such demand could be met with existing capacity and still allow an export of electricity of approximately 5 billion kilowatt-hours. Future hydroelectric development of the basin may thus be expected to depend on construction of the several multiple-purpose projects whose primary purpose will be that of water control rather than hydroelectric power.

THE AMERICAN RIVER BASIN

The American River, draining 1,921 square miles of watershed above Fair Oaks (near Folsom), yields a mean annual runoff of some 2,774,000 acre-feet at that point. The river system consists basically of the North, Middle, and South Forks; however, only the last two present significant power prospects. The portion of the main stream that lies between its confluence with the Middle Fork, near Auburn, and the South Fork is commonly considered an extension of the North Fork. The South Fork, the only section of the basin in which power development has occurred, presents the best prospects for future development. The famous gold discovery of 1848 was made near Coloma, on the South Fork, and led to the early importance of mining in the American River Basin. This industry has dwindled in importance, and present economic activities include limited amounts of lumbering and agriculture, and some grazing in the upper basin.

Present Development

The four hydroelectric plants in the basin have a total capacity of 201,230 kilowatts. The Central Valley Project's multiple-purpose Folsom and Nimbus units, with a total capacity of 175,500 kilowatts, went into operation in 1955. The original Folsom station, previously enlarged to 3,000 kilowatts, was put out of service in 1954. The only other major water development in the American River Basin is the Sly Park unit of the Central Valley Project, which was placed in operation in 1956. This project has only indirect significance for power development It will divert water from a tributary of the Cosumnes River, whose watershed adjoins that of the American River to the south, and will provide irrigation and municipal water supply in the vicinity of Placerville, above Folsom. Though legally and financially a part of the Central Valley Project, the Sly Park unit will be operated by the El Dorado Irrigation

District. There is no present hydroelectric power development in the Cosumnes River Basin, and small future prospect; hence, the increased water supply provided by the diversion will minimize the reduction in water supply for the power installations on the lower American River without affecting energy output elsewhere.

Prospective Hydroelectric Power Development

Future power development in the American River Basin will most likely be concentrated on the Middle and South Forks since the steep gradient of the North Fork is accompanied by a relatively small flow of water and by inadequate storage sites. There are an estimated 113,500 kilowatts of undeveloped potential on the Middle Fork. The proposal of Placer County, for which a preliminary permit has been issued by the FPC under Project No. 2079, involves coordinated development of the upper watersheds of both the Middle and South Forks. Details of this plan will be presented in the following discussion of future development of the South Fork.

In addition to the Placer County plan, proposals for development of the upper portion of the South Fork of the American River have been made by the Sacramento Municipal Utility District (SMUD), the Bureau of Reclamation, and the State Department of Water Resources.[17] The early municipal-water-supply plan of the City of Sacramento, as described in Bonner, included storage and power elements similar to those in the current plans of SMUD and the bureau. Under the plan of the Bureau of Reclamation the waters of the South Fork of Silver Creek would be diverted into Union Valley Reservoir, to be regulated there with waters from Silver Creek and then passed down the South Fork to the American River.[18] The main units in this development would be: Ice House Diversion Dam and Tunnel, on the South Fork of Silver Creek; Union Valley Dam and Reservoir, plus 4,780 feet of tunnel and a 27,000-kilowatt powerhouse; Summerfield Diversion Dam, with 23,000 feet of tunnel leading to a 57,000-kilowatt powerhouse; and Brush Creek Diversion Dam, with 29,900 feet of tunnel that would develop 1,172 feet of head for a 72,000-kilowatt plant. A total of 2,652 feet of head would be developed in the 156,000-kilowatt proposal.

The SMUD plan, for which a preliminary permit has been issued under FPC Project No. 2101, differs from that of the bureau primarily in the inclusion of additional storage capacity, provided by the Rubicon River at Loon Lake and three small reservoirs. From these points in the upper Middle Fork Basin the water would be diverted in a manner similar to that proposed by the bureau. Under the SMUD plan, power would also be developed in three plants: Union Valley, Jaybird, and Camino, rated at 18,000, 85,000, and 57,000 kilowatts, respectively. Under FPC Project No. 2155 SMUD has filed for the White Rock Project. The water-control unit in this proposal would be a diversion

[17] See the preliminary study of the California State Water Resources Board, *American River Basin Investigation*, Bulletin No. 21 (June, 1955), for a detailed statement of the manner in which multiple-purpose development of the American River may be integrated into the California Water Plan. In some respects the State's proposals are supplementary to, rather than competitive with, plans of other organizations.

[18] U. S. Department of the Interior, Bureau of Reclamation, *Union Valley Unit American River Division Central Valley Project (Ultimate Plan) California* (1952). This study is a full-dress presentation of the bureau's proposal.

dam located just above the mouth of Slab Creek, some three miles above the existing American River Plant. This diversion dam would back water four miles upstream, to SMUD's Camino Plant. Power would be developed from a six-mile pressure tunnel that would supply a 46,000-kilowatt installation operating under an 860-foot head at the mouth of White Rock Creek.

In the development of the Middle and South Forks of the American River proposed by Placer County, the waters of Silver Creek would be collected in Union Reservoir, as in the plans of SMUD and the bureau, but would then be diverted to the Rubicon and upper Middle Fork of the American instead of passing down the South Fork. In addition to the Union Valley Reservoir, three other major reservoirs would be utilized: Loon Lake, on Gerle Creek; Upper Hell Hole, on the Rubicon River; and French Meadows, on the Middle Fork. The network of reservoirs and tunnels would develop a 7,500-foot head between Loon Lake and the confluence of the Rubicon and the Middle Fork. Power would be developed in seven powerhouses with a total capacity of 346,700 kilowatts.

In April, 1957, the California State Water Rights Board issued power permits to SMUD for its proposed Upper American River Project. A few days later the FPC announced that it had completed its study of SMUD's proposal and had forwarded its recommendations to Washington, D. C. On this basis the four-plant 206,000-kilowatt-capacity proposal of SMUD has been assumed for development by 1975.

Prospective development of the North, Middle, and Lower South Forks of the American River is indicated by the long-run plans of the Bureau of Reclamation and the State Department of Water Resources, and application for preliminary permit filed by SMUD under FPC Project No. 2193. The last project would include four major units, each involving a major storage facility and a powerhouse. The Auburn unit would be located on the North Fork, one mile east of Auburn and one and one-half miles downstream from the confluence of the Middle Fork with the North Fork. This unit would provide 514,000 acre-feet of storage and 45,000 kilowatts of electric power capacity. The Kelsey, Coloma, and Salmon Falls units would all be located on the Lower South Fork of the American River. These three units would provide a total storage capacity of approximately 529,000 acre-feet and 69,000 kilowatts of hydroelectric capacity. Total electric power capacity of the SMUD proposal would be 114,000 kilowatts.

The plans of the State Department of Water Resources include study of multiple-purpose development of the Middle Fork and North forks that would include at least six hydroelectric plants. The French Meadows Project, a phase of the overall development, presents an estimated hydroelectric capacity of 52,000 kilowatts.[19]

The Bureau of Reclamation includes in its long-run plans the continued study of one project on the North Fork and another on the Lower South Fork of the American River. The Auburn unit, located on the North Fork of the American at the headwaters of Folsom Reservoir, would provide 900,000 acre-feet of storage and 180,000 kilowatts of electric power capacity. The bureau expects to finish its present program of test drilling and other field work soon enough to present

[19] Placer County Investigation, *op. cit.*, pp. 66, and 85-94.

a complete cost estimate by the end of 1957. The Bureau of Reclamation's Coloma unit, located above the high-water level of Folsom Reservoir, on the South Fork of the American River, is essentially the same as that of SMUD. Since the plans of the bureau and SMUD in this area overlap and since current federal policy tends to favor local development, the SMUD proposal will be assumed for development by 1975.

The Bureau of Reclamation is continuing to study the economic feasibility of adding a 15,000-kilowatt-capacity powerhouse at the recently completed Monticello Dam. This project controls Putah Creek, which runs off the eastern slope of the Coast Range. The primary purposes of this project are irrigation and flood control. Power from this installation will eventually be available only during the period March-to-October. However, in the early years of its operation, significant amounts of this energy will be dependable, pending full use of the stored water for irrigation. This unit is assumed for ultimate development in the summary of hydroelectric capacity of the American and Lower Sacramento Rivers presented in Table XI.

The Upstream-downstream Issue in Coordinated Basin Development

The problem of coordinated river basin programming is highlighted by the upstream-downstream developmental issue that exists in the American, San Joaquin, and Kings River Basins. This issue is essentially a question of whether coordinated construction and operation of a river basin can exist with more than one development agency involved. In its most direct form the problem is posed as the reconciliation of private, single-purpose, hydroelectric-power development upstream with public, multiple-purpose-project development downstream. In the case of the American River, the problem is simplified to some extent by the fact that all three proposals for upstream development have been made by public agencies and are multiple-purpose in nature. If the proposals of SMUD are approved, its activities must be closely coordinated with those of the bureau in order to realize optimum use of the American River's flow. Agreement on such coordination was a prerequisite to water-rights clearance on SMUD's Upper South Fork Project.

The Bureau of Reclamation's comprehensive plan for development of the Central Valley includes diversion of a portion of the water of the American River to meet increased consumptive requirements in that basin and to relieve the water-shortage areas to the south. The capacity of Delta-Mendota Canal is generally recognized as inadequate for future needs and the bureau proposes constructing the Folsom-Newman and Folsom-Ione-Mendota Canals to carry water to the San Joaquin River by gravity flow, rather than enlarging the Delta-Mendota Canal or constructing a new canal parallel to the latter on the west side of the San Joaquin Valley. The two new canals proposed by the bureau would ultimately be connected with the Sacramento River by pump-lift canals from a point between the delta and the City of Sacramento. A system of three main canals would serve the American River Basin from the newly constructed Folsom project. Except for the two power plants included in the proposed Folsom-Newman and Folsom-Ione-Mendota Canals, the electric power implications of these diversion

TABLE XI

EXISTING AND ULTIMATE HYDROELECTRIC DEVELOPMENT OF THE AMERICAN AND LOWER SACRAMENTO RIVER BASINS

Plant	Water source	Installation capacity (kw.)	Average annual generation (million kwhr.)	In service	Owner
Existing:					
El Dorado	South Fork American	20,000	98	1924	P. G. & E.
American River	South Fork American	5,730	30	1903	P. G. & E.
Folsom	American	162,000	620	1955	BR
Nimbus	American	13,500	67	1955	BR
Total		201,230	815		
Completion assumed, 1975:					
Union Valley	Silver Creek	18,000	--	----	SMUD
Jaybird	Silver Creek	85,000	--	----	SMUD
Camino	South Fork American	57,000	--	----	SMUD
White Rock	South Fork American	46,000	--	----	SMUD
Kelsey	South Fork American	12,000	--	----	--
Coloma	South Fork American	45,000	--	----	--
Salmon Falls	South Fork American	12,000	--	----	--
Auburn	North Fork American	45,000	--	----	--
Total		320,000			
Ultimate development:					
Echo	South Fork American	4,000	18	----	--
Van Winkle	Silver Fork	10,000	54	----	--
China Flat	Silver Fork	15,000	73	----	--
Kyburz	South Fork American	20,000	120	----	--
Alder Reservoir	Alder Creek	4,000	21	----	--
Tadpole No. 1	North Fork American	4,500	18	----	--
Pioneer No. 1	North Fork American	15,000	59	----	--
Colfax No. 3	North Fork American	25,000	99	----	--
Oregon Bar	North Fork American	100,000	427	----	--
French Meadow	Middle Fork American	3,000	11	----	--
Ralston	Middle Fork American	56,000	318	----	--
Upper High Head	Rubicon	16,000	63	----	--
Lower High Head	Rubicon	1,200	5	----	--
Gerle No 2	Rubicon	33,000	180	----	--
Gerle No. 1	Gerle Creek	5,000	28	----	--
Rubicon No. 3	Rubicon	80,000	439	----	--
Rubicon No. 4	Rubicon	62,000	348	----	--
Rubicon No. 4A	Rubicon	46,000	262	----	--
Lady Canyon	Middle Fork American	35,000	165	----	--
Monticello	Putah Creek	15,000	--	----	--
Total		549,000	2,708		

SOURCE Federal Power Commission, "Hydroelectric Power Resources of the United States Developed and Undeveloped, 1953" (1954).

proposals are limited to the reduction of total stream flow through hydroelectric installations on the lower American River.

Industrial Resource Base of the American and Lower Sacramento River Basins

This region includes Eldorado, Placer, Sacramento, Colusa, and Yolo Counties. The last two, primarily devoted to agriculture, will therefore not be considered in detail here. Resource data for the first three counties are included in the table on the following page. The economies

of El Dorado and Placer Counties are devoted primarily to exploitation of their considerable timber resource. Ultimate sustained yield data comparable to those included in the preceding river basin discussions are not available for the Lower Sacramento and San Joaquin Valley areas. In light of the estimates made for the Coastal area and the Northern Sierra, it is assumed that sustained yield, at least for the next several decades, will approximate the average timber cut of re-

POPULATION AND INDUSTRIAL RESOURCE BASE OF THE AMERICAN AND LOWER SACRAMENTO RIVER BASINS, 1950-1975 *

Population	*El Dorado*	*Placer*	*Sacramento*	*Total*
1956	17,100	47,400	403,700	468,200
Estimated increase 1956-1960	300	2,200	81,100	17.9%
1975 (estimate)	--	--	--	601,700
Industrial Base				
1. Timber (million board feet)				
Total resource	9,319	5,065	--	14,384
1955 cut	220	99	--	328
Ultimate sustained yield †				
2 Lumber and allied manufacturing				
Total employment, 1952	1,809	863	969	3,641
Ultimate employment †				
3. Other manufacturing employment, 1952				
Food processing	--	--	7,375	7,375
Printing-publishing	--	--	965	965
Fabricated metals	--	--	1,003	1,003
4. Mining (thousand dollars)				
Clay	--	$250	--	$250
Gold	$207	$19	$2,567	$2,793
Limestone	$499	--	-	$499
Natural gas	--	--	$15,556	$15,556
Sand and gravel	--	--	$2,017	$2,017
Electric power (billion kilowatt-hours)				
Net import 1956 (estimate)	--	--	--	.6
Net import 1975 (estimate)	--	--	--	3 3

* Since Colusa and Yolo Counties are primarily agricultural areas they are not included in this table
† See text for comment on ultimate sustained yield and manufacturing employment estimates for this region

SOURCES Population, 1956-1960, California State Department of Finance, total timber resource, mining, and manufacturing employment, "California Blue Book, 1954", timber cut, 1955, State Division of Forestry, electric power, infra, Chapters 2, 6, and 8

cent years. The forest resource in Eldorado County is presently subjected to controlled cutting within the national forest area and to continuous growth and harvest management in the privately owned forest lands. Extensive cutting of the virgin timber stands in Placer County was not initiated until after World War II

Led by the rapidly expanding metropolitan area of Sacramento, this region may be expected to experience extensive growth in manufactures in the coming decades. Ultimate employment in lumber and allied manufacturing, based on the projections developed for the preceding basins, may be expected to increase between two and threefold over the current level. Employment in food processing, presently the region's most important industry, may be expected to increase in similar degree. Over-all development of the area will be accelerated by the fulfillment of present plans to make Sacramento a deep-water port. In view of its location, adjacent to the major natural resources of Northern California and closer to eastern markets, it seems likely that

achievement of water transport competitive with the San Francisco Bay area will accelerate development of the Sacramento area in even greater degree than indicated here.

In any event, the adjacent American River hydroelectric resource will continue to prove inadequate for local electric power demand. Currently SMUD is receiving a large block of firm energy from the CVP. In 1955 SMUD contracted for an additional 300,000 kilowatts of firm capacity from P. G. & E. in lieu of constructing additional steam capacity in the Sacramento area. Even if the assumed 320,000 kilowatts of hydroelectric capacity is constructed by 1975, the region's electric energy deficit could well increase more than fivefold by that year. Such increased local demand for electric energy will doubtless create pressure for construction of the remaining undeveloped hydroelectric capacity on the American and Rubicon Rivers as well as the construction of steam capacity in or near Sacramento.

CHAPTER 7

HYDROELECTRIC DEVELOPMENT: SOUTHERN SIERRA AND SAN JOAQUIN VALLEY

The San Joaquin River originates in the rough and rugged expanse of the Sierra Nevada region from Yosemite National Park south to the Kings River. The entire basin covers 32,464 square miles. The upper watershed above Friant comprises about five percent of the total basin area. The main tributaries of the San Joaquin River are the Merced, Tuolumne, Stanislaus, and the Mokelumne Rivers. Estimated mean seasonal runoff of the San Joaquin at the delta is 11,246,000 acre-feet. In addition to the drainage of the San Joaquin Valley, this chapter will cover the Kings, Tule, Kaweah, and Kern Rivers, which empty into the lower San Joaquin Valley floor, as well as the major streams draining the eastern slope of the Sierra Nevada. The latter group includes the Truckee, Walker, Carson, and Owens Rivers.

THE MOKELUMNE RIVER BASIN

The Mokelumne is one of the smallest of the major streams draining the western slope of the Sierra Nevada. Its long, narrow watershed, lying south of the American River Basin, covers 630 square miles above Clements, where the river leaves the foothills. Measured at that point its mean annual flow is 780,000 acre-feet. Of the three branches of the Mokelumne—the North, Middle, and South Forks—the first is the only one that is significant for power development. The main stream is joined by Dry Creek and the Cosumnes River a short distance above its discharge into the tidal channels of the Sacramento-San Joaquin Delta. Parts of the Mokelumne watershed are well timbered, but development of the basin has been limited largely to the construction of hydroelectric projects.

Hydroelectric Development

Existing hydroelectric development consists of five plants operated by P. G. & E. and the Pardee installation of the East Bay Municipal Utility District (EBMUD) on the main stream. The total developed capacity is 207,750 kilowatts. Details of these installations are presented in Table XII, on page 111.

Two developments have been proposed for the Cosumnes River Basin: the 16,000-kilowatt Sloughhouse installation, proposed by the Bureau of Reclamation for construction on the Folsom-Newman Canal; and the 17,000-kilowatt Nashville Plant, which would be developed in the upper basin. The bureau's long-term plans include a preliminary study of the 500,000-acre-foot Nashville site in 1959.

The major plan for future development of the Mokelumne River is that proposed by EBMUD, designated FPC Project No. 2128 in the

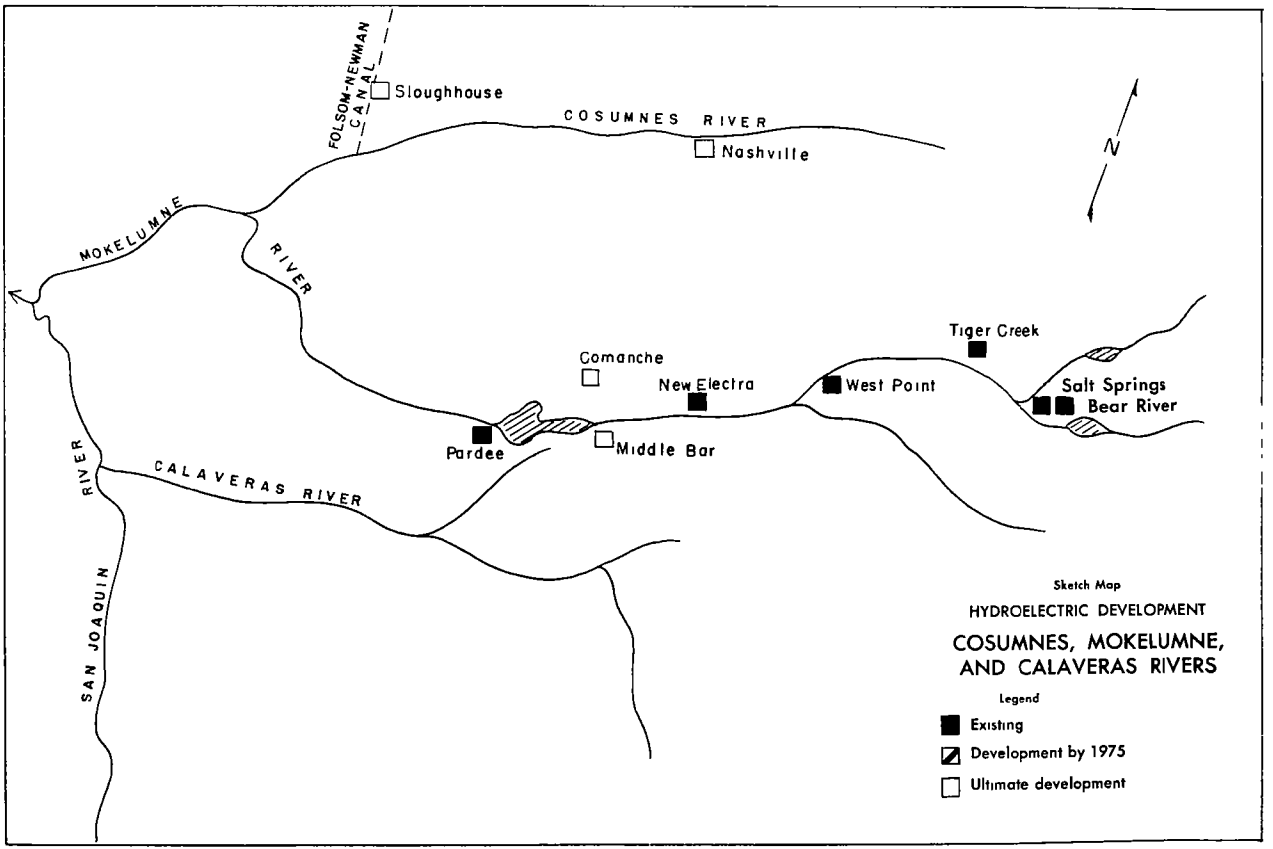
FOLSOM-NEWMAN CANAL
Sloughhouse
COSUMNES RIVER
Nashville
N
MOKELUMNE
RIVER
Tiger Creek
Comanche
New Electra
West Point
Salt Springs
Bear River
Pardee
Middle Bar
RIVER
CALAVERAS RIVER
SAN JOAQUIN
Sketch Map
HYDROELECTRIC DEVELOPMENT
COSUMNES, MOKELUMNE, AND CALAVERAS RIVERS
Legend
Existing
Development by 1975
Ultimate development

PLATE VI

TABLE XII

EXISTING AND ULTIMATE HYDROELECTRIC DEVELOPMENT OF THE COSUMNES, MOKELUMNE, AND CALAVERAS RIVER BASINS

Plant	Water source	Installation capacity (kw.)	Average annual generation (million kwhr.)	In service	Owner
Existing:					
Bear River	North Fork Mokelumne	29,700	141	1932	P. G. & E
Salt Springs	North Fork Mokelumne	9,350	43	1932	P. G & E.
Tiger Creek	North Fork Mokelumne	51,000	353	1931	P. G. & E
West Point	North Fork Mokelumne	13,600	91	1948	P. G. & E.
New Electra	Mokelumne	89,100	364	1948	P G. & E.
Pardee	Mokelumne	15,000	90	1930	EBMUD
Total		207,800	1,082		
Ultimate development:					
Nashville	Cosumnes	17,000	57	----	--
Sloughhouse	Folsom-Newman-Canal	16,000	60	----	BR
Middle Bar*	Mokelumne	18,000	--	----	EBMUD
Camanche*	Mokelumne	6,000	--	----	EBMUD
Pardee*	Mokelumne	20,000	--	----	EBMUD
Total		77,000			

* These data are from East Bay Municipal Utility District's application for preliminary permit designated FPC Project No 2128 Ultimate development of the Pardee installation is an addition to the existing plant

SOURCE (except as otherwise noted above) "Federal Power Commission, Hydroelectric Power Resources of the United States Developed and Undeveloped, 1953" (1954)

application for preliminary permit that was filed in 1953. Although the main purpose of this development is to augment municipal water supply on the east side of San Francisco Bay, a total of 39,000 kilowatts of electric power capacity would be developed by the three powerhouses included in the project. The first plant would be located adjacent to a dam and reservoir, near Middle Bar on the main stream, that would back water up to the existing Electra Plant. The Comanche Powerhouse would be located below a proposed dam and reservoir on the North Fork of the Mokelumne. A 20,000-kilowatt addition to the existing Pardee Plant completes the power phase of the development. A third new dam and reservoir would be located on the South Fork below its confluence with Licking Fork. Since all plans for future electric power development of the Mokelumne River are rather tentative, no additions appear to be assured of completion by 1975.

Industrial Resource Base of the Cosumnes, Mokelumne, and Calaveras River Basins

These three minor river basins include Amador, Calaveras, and San Joaquin Counties. Characteristic of the southern Sierra and the San Joaquin River Basin region, this area is divided into two major economic sections—the mountains and the valley. Amador and Calaveras Counties, located in the upper river basins, comprise a small portion

of the total population and economic activity in the area. As indicated in the table below, the dominating economic activity there is exploitation of the timber resource. Logging and related activity will continue, for the foreseeable future, to dominate the upper-basin economy.

POPULATION AND INDUSTRIAL RESOURCE BASE OF THE COSUMNES, MOKELUMNE, AND CALAVERAS RIVER BASINS, 1950-1975

Population	*Amador*	*Calaveras*	*San Joaquin*	*Total*
1956	8,900	9,500	232,900	251,300
Estimated increase 1956-1960	300	100	20,500	8.2%
1975 (estimate)	--	--	--	306,400
Industrial Base				
1. Timber (million board feet)				
Total resource	1,665	3,725	--	5,390
1955 cut	34	113	--	147
Ultimate sustained yield *				
2. Lumber and allied manufacturing				
Total employment, 1952	737	951	1,343	3,031
Ultimate employment *				
3. Other manufacturing employment, 1952				
Fabricated metals	--	--	957	957
Food processing	--	--	8,389	8,389
Machinery	--	--	1,499	1,499
Primary metals	--	--	714	714
Transportation equipment	--	--	752	752
4. Mining (thousand dollars)				
Clay	$547	--	--	$547
Gold	$242	$66	--	$308
Sand and gravel	--	--	$1,824	$1,824
Natural gas	--	--	$1,491	$1,491
Zinc	--	$275	--	$275
Electric Power (billion kilowatt-hours)				
Net export 1956 (estimate)				.4
Net import 1975 (estimate)				.7

* See text for comment on ultimate sustained yield and manufacturing employment estimates for this region

SOURCES Population, 1956-1960, California State Department of Finance, total timber resource, mining, and manufacturing employment, "California Blue Book, 1954", timber cut, 1955, State Division of Forestry, electric power, infra, Chapters 2, 6, and 8

San Joaquin County, lying in the valley, is a rich, agricultural area that includes the City of Stockton, a growing manufacturing center. Employment in the leading industries—food processing, machinery, and fabricated metals—may be expected to grow at a more rapid rate than the increase in the general population in San Joaquin County. Considering the rate of increase in manufacturing employment in 1947-1953 it is likely that manufacturing employment in the county will at least double by 1975.

Population and general economic growth in this area will cause a shift by 1975 to a net import requirement of electric energy of more than one-half billion kilowatt-hours. This increased demand will place additional pressure on the growth of steam electric capacity in the Sacramento area, to the north.

THE STANISLAUS RIVER BASIN

The Stanislaus River Basin covers some 983 square miles above Knights Ferry, where the river leaves the mountains. Its main branch, the Middle Fork, originates from glacial streams along the Sierra crest, which gives a relatively steady character to the 1,210,000-acre-feet mean annual runoff. In addition to the South and Middle Forks, the Stanislaus River tributaries include the Clark Fork, a tributary to the Middle Fork; and Angel Creek, which empties into the main stream above Melones Reservoir.

The existing power development of the Stanislaus Basin consists of four single-purpose hydroelectric plants on the tributaries, and the single-purpose Stanislaus and multiple-purpose Melones installations on the main stream. The power potential of the Angels and Murphys Plants, in the North Fork Basin, is developed by a network of water works that links four storage units in the upper basin. In 1954 the capacity of the Murphys Station was increased from 1,500 to 3,600 kilowatts. The highly seasonal runoff of the South Fork is controlled by Strawberry Dam. Four miles below this dam, the 4.7-mile Philadelphia Ditch diverts water to the Spring Gap Plant, located on the Middle Fork This water also passes through the Stanislaus Plant, located on the main stream just below its confluence with the Middle Fork. The 1,600-kilowatt Phoenix Plant fully develops the power potential of the South Fork. The Melones Station is located one mile below the Melones Reservoir and is operated on a cooperative basis by P. G. & E. and the Oakdale and South San Joaquin Irrigation District (O&SSJID), with the latter having control of water release during the irrigation season.

Hydroelectric Power Development Plans

Although there is an undeveloped power potential on the North Fork, current plans for further development of the basin are limited to the Middle Fork and the main stream. The Tri-Dam Project, constructed jointly by the South San Joaquin and Oakdale Irrigation Districts, will be completed in 1957. Donnells, the uppermost unit in the project, will store 64,500 acre-feet of water and provide 54,000 kilowatts of electric power capacity. The Beardsley unit, located 12 miles downstream, will provide 97,500 acre-feet of storage and a powerhouse rated at 10,000 kilowatts The Tullock development will be located 45 miles downstream from the Beardsley unit and will provide capacities of 68,400 acre-feet and 17,000 kilowatts, respectively.

The project was financed by revenue bonds based upon a 50-year contract, under which P. G. & E will purchase all power from the project. In addition, P. G & E. will pay for use of some of the newly-stored water which will flow through several of its own plants. The private utility will pay the irrigation districts approximately $115,000,000 over the 50-year period.

The Corps of Engineers is proceeding with advance engineering studies on the enlargement of the existing Melones Reservoir to a total capacity of 1,100,000 acre-feet. Since the amount of added electric power capacity to be built in is presently uncertain, no power increment has been assumed for development by 1975.

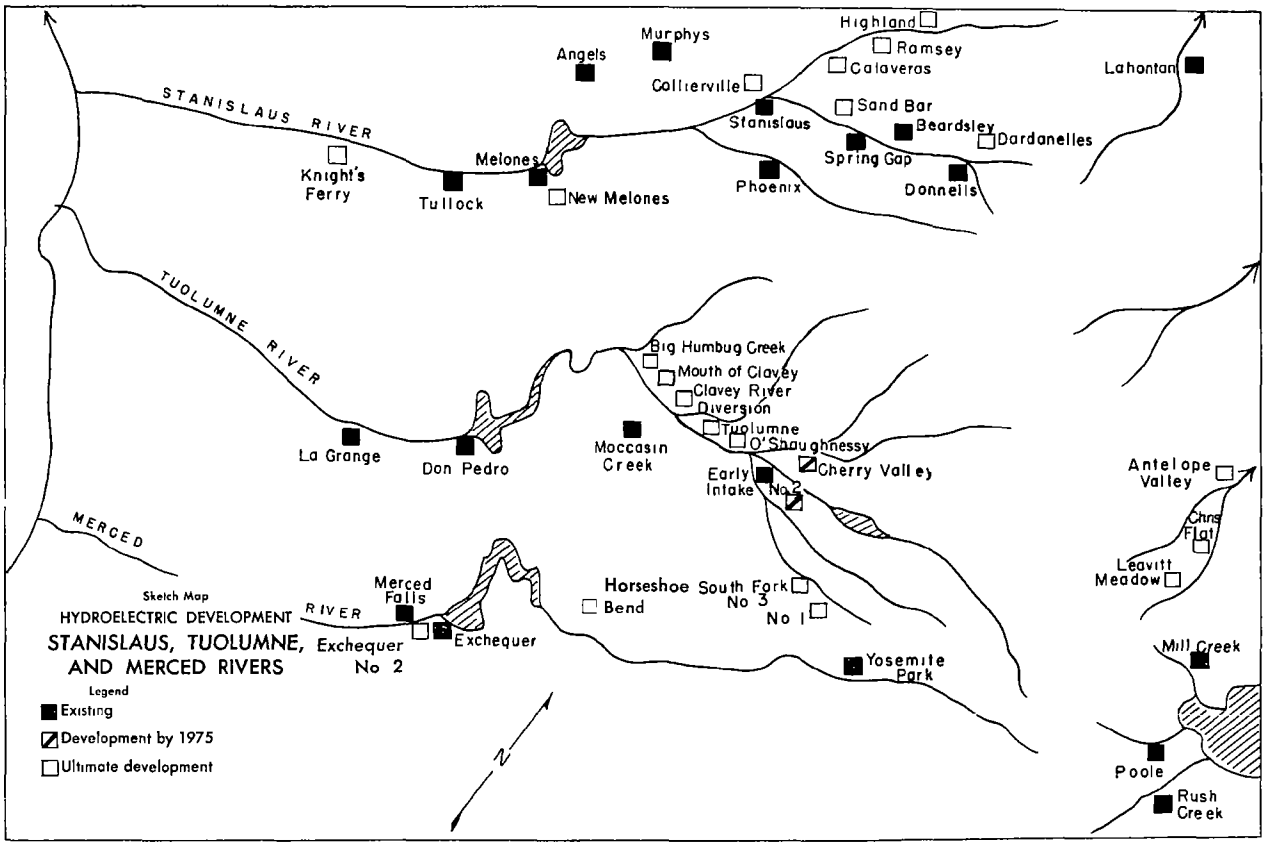
STANISLAUS RIVER
TUOLUMNE RIVER
MERCED
RIVER
Angels
Murphys
Highland
Ramsey
Calaveras
Lahontan
Collierville
Stanislaus
Sand Bar
Beardsley
Dardanelles
Spring Gap
Donnells
Phoenix
Knight's Ferry
Melones
Tullock
New Melones
Big Humbug Creek
Mouth of Clavey
Clavey River Diversion
Tuolumne
O'Shaughnessy
Cherry Valley
Early Intake
No 2
Moccasin Creek
La Grange
Don Pedro
Antelope Valley
Chris Flat
Leavitt Meadow
Merced Falls
Exchequer
Horseshoe Bend
South Fork No 3
No 1
Yosemite Park
Mill Creek
Poole
Rush Creek
Sketch Map
HYDROELECTRIC DEVELOPMENT
STANISLAUS, TUOLUMNE, AND MERCED RIVERS
Legend
Existing
Development by 1975
Ultimate development
N

PLATE VII

TABLE XIII

EXISTING AND ULTIMATE HYDROELECTRIC DEVELOPMENT OF THE STANISLAUS RIVER BASIN

Plant	Water source	Installation capacity (kw.)	Average annual generation (million kwhr.)	In service	Owner
Existing:					
Murphys*	Angels Creek	3,600	--	1954	P. G. & E.
Angels	Angels Creek	1,400	7	1920	P. G. & E.
Spring Gap	Middle Fork Stanislaus	6,000	48	1921	P. G. & E.
Stanislaus	Stanislaus	28,900	234	1908	P. G. & E.
Phoenix	South Fork Stanislaus	1,600	9	1898	P. G. & E.
Melones	Stanislaus	24,300	95	1927	P. G. & E.
Donnells†	Middle Fork Stanislaus	54,000	--	1957	O&SSJID
Beardsley†	Middle Fork Stanislaus	10,000	--	1957	O&SSJID
Tulloch†	Stanislaus	17,000	--	1957	O&SSJID
Total		146,800	393		
Ultimate development:					
Highland	North Fork Stanislaus	13,000	91	----	--
Ramsey	North Fork Stanislaus	7,000	43	----	--
Calaveras	North Fork Stanislaus	21,000	154	----	--
Dardanelles	Middle Fork Stanislaus	6,000	43	----	--
Sand Bar	Middle Fork Stanislaus	10,000	78	----	--
Colherville	Stanislaus	36,000	255	----	--
Stanislaus‡	Stanislaus	41,000	198	----	P. G. & E.
New Melones	Stanislaus	23,700	216	----	--
Knights Ferry	Stanislaus	6,000	26	----	--
Total		163,700	104		

* Original capacity 1,500 kilowatts increased to 3,600 in 1954

† Under construction, to be completed in 1957. Data are from Oakdale and South San Joaquin Irrigation District applications to FPC under FPC Project Nos. 2005 and 2018

‡ Additional possible capacity and corresponding incremental average annual output at existing plant

SOURCE: Federal Power Commission, "Hydroelectric Power Resources of the United States Developed and Undeveloped, 1953" (1954)

THE TUOLUMNE RIVER BASIN

Originating with the glacial melt on the south slopes of Mount Lyell, the Tuolumne River drains some 540 square miles of the western slope of the Sierra Nevada lying between the Stanislaus and Merced River watersheds above La Grange. The Tuolumne River has a mean annual runoff of 1,900,000 acre-feet and enters the San Joaquin River some 10 miles west of Modesto. Most of the upper basin lies within Yosemite National Forest, and its rugged nature is exemplified by the Grand Canyon of the Tuolumne, through which the river flows between Tuolumne Meadows and Hetch Hetchy Reservoir. Below Hetch Hetchy the river is joined by several tributaries: the South and Middle Forks, Cherry Creek, and Clavey River.

The Tuolumne may be characterized as the "public power" stream of California. Under the provisions of the Raker Act of 1913 the City of San Francisco has proceeded with some development of the upper watershed. In providing the city with municipal water supply, the Moccasin Creek and Early Intake Power Plants have been constructed with a total capacity of 73,600 kilowatts. Storage for the system is developed in the Hetch Hetchy Reservoir and several smaller reservoirs on Eleanor and Cherry Creeks. Downstream development has been carried out by the Turlock and Modesto Irrigation Districts, which constructed the Don Pedro Reservoir and two power plants with a total capacity of 30,980 kilowatts under water rights established in 1890. Output from these two plants is distributed by the two districts to cities and rural consumers in their respective territories. Details of these installations are presented in Table XIV, below.

Although no formal proposals for additional power development in the Tuolumne River Basin are presently before the FPC, current interest in several sites makes their completion by 1975 seem assured. Recent interest of Tuolumne Water District No. 2 in development of electric

TABLE XIV

EXISTING AND ULTIMATE HYDROELECTRIC DEVELOPMENT OF THE TUOLUMNE AND MERCED RIVER BASINS

Plant	Water source	Installation capacity (kw.)	Average annual generation (million kwhr.)	In service	Owner
Existing:					
Early Intake	Cherry Creek	3,600	28	1918	SF
Moccasin Creek	Moccasin Creek	70,000	508	1925	SF
Don Pedro	Tuolumne	26,990	200	1924	T-MID
LaGrange	Tuolumne	3,900	25	1924	T-MID
Yosemite	Merced	2,000	11	1918	NPS
Exchequer	Merced	25 000	128	1926	MID
Merced Falls	Merced	3,440	16	1930	P. G. & E.
Total		134,930	916		
Completion assumed, 1975:					
Early Intake No 2	Tuolumne	42,000	252	----	--
Cherry Valley	Tuolumne	75,000	680	----	--
Moccasin Creek*	Moccasin Creek	42,000	250	----	SF
*Don Pedro**	*Tuolumne*	70,000	160	----	T-MID
Total		229,000	1,342		
Ultimate development:					
O'Shaughnessy	Tuolumne	11,200	90	----	--
Tuolumne	Tuolumne	61,000	475	----	--
South Fork No 1	South Fork Tuolumne	13,000	32	----	--
South Fork No 3	Tuolumne	22,500	99	----	--
Clavey River diversion	Tuolumne	13,500	100	----	--
Mouth of Clavey	Tuolumne	9,500	62	----	--
Big Humbug Creek	Tuolumne	8,000	55	----	--
Exchequer No 2	Merced	5,000	25	----	--
Horseshoe Bend	Merced	64,000	--	----	--
Total		207,700	938		

* Additional possible capacity and corresponding incremental average annual output at existing plant
SOURCE Federal Power Commission, "Hydroelectric Power Resources of the United States Developed and Undeveloped, 1953" (1954).

power in the upper Middle Fork, the area reserved for development by the City of San Francisco under the Raker Act, has stimulated the city to renewed activity and interest in such development Growth of Northern California (particularly the San Francisco Bay area) combined with the prodding of local interests in the Tuolumne Basin should prove sufficient pressure to occasion further development of the upper Tuolumne within the next two decades. Similarly, increasing water needs in the San Joaquin Valley should assure construction of the addition to Don Pedro Reservoir and power plant within this period.

Industrial Resource Base of the Stanislaus and Tuolumne River Basins

The upper basins of the Stanislaus and Tuolumne Rivers are located in Tuolumne County. Economic activity in the upper basins is dominated by the region's timber resource, which provided a cut of 155 million board feet in 1955. Almost 2,000 workers were engaged in lumber and allied manufacturing in 1952. It is expected that ultimate employment in lumber-products manufacture will rise somewhat above this figure.

The total population of these two river basins was 159,600 on July 1, 1956. Of this total 144,300 were located in Stanislaus County, which includes two urban areas—Modesto and Turlock, both in the valley. The economy of Stanislaus County is based upon agriculture. Food processing, the major manufacturing activity, employed almost 8,000 workers in 1952.

Growth in population and general economic activity in this area is expected to increase the demand for electric energy almost threefold by 1975. Still, additional hydroelectric development assumed for completion by that year will allow the area to export almost one million kilowatt hours, an increase of more than two times the estimated export in 1956.

THE MERCED RIVER BASIN

The Merced River, like the Tuolumne to the north and the San Joaquin to the south, has as its source the glacier system of Mount Lyell The area of the Merced River Basin lying above Exchequer is 1,035 square miles, and the annual mean flow of the stream is 1,027,000 acre-feet. The South Fork is the main branch. Several smaller tributaries, including Yosemite, Tenaya, and Illilouette Creeks, join the main stream in the vicinity of Yosemite Valley, which is the outstanding feature of the basin.

The main development in the Merced River Basin is the Exchequer Reservoir and the 30,000-kilowatt power plant of the Merced Irrigation District (MID). Additional development is limited to the 2,000-kilowatt plant operated by the National Park Service and the Merced Falls plant of P. G. & E., rated at 3,500 kilowatts of capacity. None of these plants has dependable capacity, because of water control at Exchequer Reservoir for irrigation purposes.

Plans for future development on the Merced River are limited to a project proposed by MID, to be located above the present Exchequer Reservoir. In August, 1955, an order issuing preliminary permit for FPC Project No. 2179 was issued to the district for a proposed Horseshoe Bend Reservoir and hydroelectric plant, to be located in the

vicinity of Coulterville. The main units of the proposed project are a dam 460 feet high, a 900,000-acre-foot reservoir, and a powerhouse rated at 64,000 kilowatts. This would be a multiple-purpose project, with the power used in the MID works and sold for distribution in the Northern California power grid. The irrigation, power, and flood-control features would be operated in connection with the existing Exchequer Reservoir and powerhouse.

Several sites above Yosemite Valley are technically feasible, but development is unlikely because of the detraction from scenic values that any water diversion or control would entail. There are no active plans for development of the prospective 5,000-kilowatt Exchequer No 2 Plant, which would be located approximately three miles above Merced Falls. Details of the three existing plants and the single prospective plant in the Merced River Basin are included in Table XIV, page 116.

THE SAN JOAQUIN RIVER BASIN

Power development of the San Joaquin River will be limited to the upper basin, above Friant Reservoir. The area of the basin above Friant is approximately 1,640 square miles, and the mean annual flow at that point is 1,816,000 acre-feet. The San Joaquin River is formed by the junction of the Middle and South Forks, which together drain some 60 miles of the crest of the Sierra south of Mount Lyell. The North Fork, a branch of the Middle Fork, rises on Mount Lyell. Joining the main stream below the forks are several major tributaries, including Granite, Jackass, Chiquito, and Big Creeks.

Despite the extensive power development of the San Joaquin, considerable undeveloped capacity remains. Present developments are concentrated on the lower portion of the main stream and on the North Fork. The former is the famous Big Creek development, of the Southern California Edison Company (SCE), in which many developments in hydroelectric generation and transmission were pioneered. With the construction of Big Creek No 4, in 1951, the Big Creek development was completed except for a possible addition to Big Creek No. 3. It presents a total of 449,250 kilowatts of capacity in six plants. The Willow Creek system of the San Joaquin was fully developed with construction of the Kerckhoff Plant on the main stream, in 1920. Details of these installations are presented in Table XV, on page 120. The 520,000-acre-foot-capacity Friant Reservoir, operated by the Bureau of Reclamation, controls the runoff of the upper basin. The 125,000-acre-foot-capacity Vermillion Reservoir, located on Mono Creek, a tributary of the South Fork of the San Joaquin, was completed by SCE in 1954. It provides water control for downstream power operations in the San Joaquin Basin as well as a one-mile conduit that utilizes the natural channel of Mono Creek to put water into the existing Mono Creek Diversion to the Ward Tunnel from Florence Lake to Huntington Lake.

The SCE has had under consideration for many years the development of the so-called West Side Project, which includes 10 plants in the upper basin of the Middle Fork and several tributaries, with a total capacity of 230,800 kilowatts. There is presently no evidence of active plans for this development. The company has made proposals for two

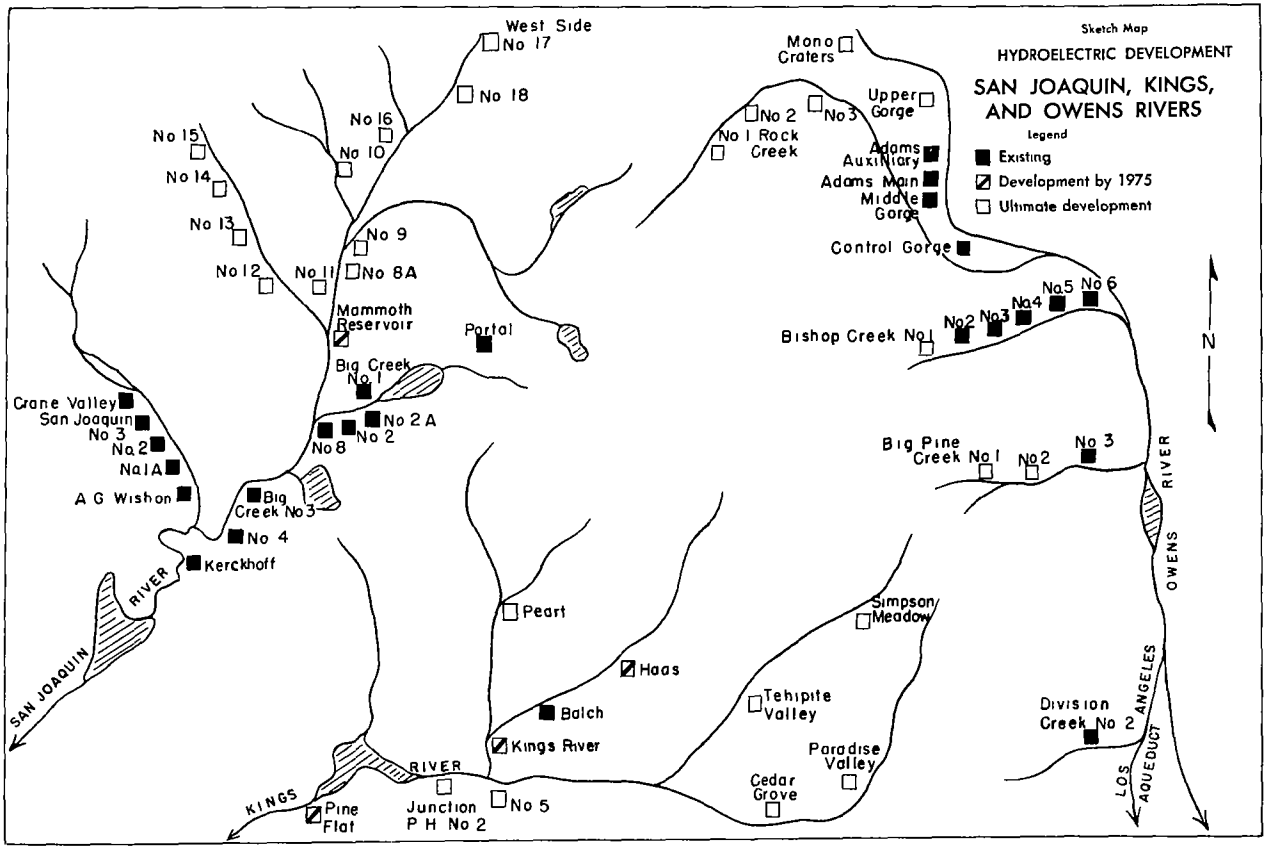
Sketch Map
HYDROELECTRIC DEVELOPMENT
SAN JOAQUIN, KINGS, AND OWENS RIVERS
Legend
Existing
Development by 1975
Ultimate development
West Side No 17
No 18
No 16
No 10
No 15
No 14
No 13
No 12
No 11
No 9
No 8A
Mammoth Reservoir
Portal
Big Creek No 1
Crane Valley
San Joaquin No 3
No 2
No 1A
A G Wishon
No 8
No 2A
No 2
Big Creek No 3
No 4
Kerckhoff
SAN JOAQUIN RIVER
Mono Craters
No 2
No 3
Upper Gorge
No 1 Rock Creek
Adams Auxiliary
Adams Main
Middle Gorge
Control Gorge
No 5
No 6
No 4
No 3
No 2
Bishop Creek No 1
N
Big Pine Creek No 1
No 2
No 3
OWENS RIVER
Peart
Haas
Balch
Kings River
Tehipite Valley
Simpson Meadow
Paradise Valley
Cedar Grove
Division Creek No 2
LOS ANGELES AQUEDUCT
KINGS RIVER
Pine Flat
Junction P H No 2
No 5

PLATE VIII

TABLE XV

EXISTING AND ULTIMATE HYDROELECTRIC DEVELOPMENT OF THE SAN JOAQUIN RIVER BASIN

Plant	Water source	Installation capacity (kw)	Average annual generation (million kwhr)	In service	Owner
Existing:					
Big Creek No. 8	San Joaquin	54,000	309	1921	SCE
Big Creek No. 1	Big Creek	67,000	584	1913	SCE
Big Creek No 2	Big Creek	57,750	507	1913	SCE
Big Creek No. 2A	Big Creek	80,000	239	1928	SCE
Big Creek No. 3	Big Creek	106,500	744	1923	SCE
Big Creek No. 4	San Joaquin	84,000	490	1952	SCE
Crane Valley	Willow Creek	800	3	1918	P G & E.
San Joaquin No. 3	Willow Creek	4,800	20	1918	P. G & E.
San Joaquin No 2	Willow Creek	2,400	11	1917	P G & E.
San Joaquin No. 1A	Willow Creek	340	1	1906	P. G & E
A G Wishon	Willow Creek	12,800	86	1910	P. G & E.
Kerckhoff	San Joaquin	34,080	275	1920	P G & E.
Portal	Wapas Tunnel	10,000	52	1956	--
Total		514,470	3,321		
Completion assumed, 1975:					
Mammoth reservoir	San Joaquin	126,000	550	----	SCE
Total		126,000	550		
Ultimate development:					
West Side PP No 17	Middle Fork San Joaquin	12,700	55	----	--
West Side PP No 18	Middle Fork San Joaquin	13,400	43	----	--
West Side PP No 16	Middle Fork San Joaquin	35,000	147	----	--
West Side PP No 9	Middle Fork San Joaquin	61,900	316	----	--
West Side PP No 10	Jackass Creek	23,100	97	----	--
West Side PP No 11	Jackass Creek	19,400	82	----	--
West Side PP No 15	Power House Creek	23,100	95	----	--
West Side PP No 14	Power House Creek	16,400	75	----	--
West Side PP No 13	Mugler Creek	15,700	77	----	--
West Side PP No 12	Chiquito Creek	10,100	26	----	--
West Side PP No 8A	San Joaquin	36,000	315	----	--
Big Creek No. 3*	San Joaquin	25,500	--	----	--
Total		292,300	1,328		

* Additional possible capacity and corresponding incremental average annual output at existing plant

SOURCE (except as otherwise indicated above) "Federal Power Commission, Hydroelectric Resources of the United States Developed and Undeveloped, 1953" (1954).

projects in the lower portion of the San Joaquin River Basin. Application for preliminary permit for development of the Mammoth Pool Project has been designated FPC Project No. 2085. This project would include the main dam and reservoir, of over 100,000 acre-feet of capacity; the Rock Creek diversion dam and tunnel, which would divert water into the 39,665-foot Mammoth Pool Tunnel; and a powerhouse of approximately 126,000 kilowatts of capacity, which would be located one mile upstream from the existing Big Creek No. 8 plant. Since 1952 a joint study has been conducted by SCE and the Bureau of Reclamation to determine the proper regime for water control in the system. Early in 1957 an agreement in principle was reached by these parties.

Construction has begun, with final approval obtained from the water-rights holders. About three years will be required to complete the project.

Solution of this problem will resolve to considerable extent the upstream-downstream water-control issue in the San Joaquin River Basin. Ultimate development of this portion of the San Joaquin Basin will include the construction of Chiquito and Jackass Creek Reservoirs. In December, 1954, SCE filed application for preliminary permit for development of the 10,000-kilowatt Portal Power Plant under FPC Project No. 2174. The project was completed in 1957. It utilizes the head provided by the existing Ward Tunnel, which carries water diverted from the South Fork to Huntington Lake. The operation is remotely controlled from the existing Big Creek No. 1 plant. The Mammoth Pool Project is assumed for completion by 1975.

The Bureau of Reclamation includes in its long-run plans the study of a 1,800-kilowatt installation immediately below Friant Dam. The plant would utilize water released to maintain normal stream flow.

Industrial Resource Base of the Merced and San Joaquin River Basins

The Merced and San Joaquin River Basins include Madera, Mariposa, Merced, and Fresno Counties. The first two counties are located primarily in the Sierra Nevada and its foothill regions, while Merced

POPULATION AND INDUSTRIAL RESOURCE BASE OF THE MERCED AND SAN JOAQUIN RIVER BASINS, 1950-1975

Population	*Madera*	*Mariposa*	*Merced*	*Fresno*	*Total*
1956	38,100	4,200	83,600	324,900	450,800
Estimated increase 1956-1960	700	--	7,600	34,300	9.4%
1975 (estimate)	--	--	--	--	565,150
Industrial Base					
1. Timber (million board feet)					
Total resource	3,975	3,321	--	6,412	13,708
1955 cut	56	9*	--	68	133
Ultimate sustained yield†	--	--	--	--	--
2. Lumber and allied manufacturing					
Total employment, 1952	329	30	56	1,133	1,548
Ultimate employment†	--	--	--	--	--
3. Other manufacturing employment, 1952					
Chemical products	--	--	--	660	660
Food processing	372	--	1,717	6,756	8,845
Machinery	--	--	--	663	663
Transportation equipment	--	--	--	1,947	1,947
4. Mining (thousand dollars)					
Gold	--	$23	--	--	$23
Natural gas	$460	--	--	$6,524	$6,984
Petroleum	--	--	--	$95,259	--
Sand and gravel	--	$145	$487	--	$649
Electric Power (billion kilowatt-hours)					
Net export 1956 (estimate)					2.1
Net import 1975 (estimate)					.5

* Mariposa and Merced, combined total

† See text for comment on ultimate sustained yield and manufacturing employment estimates for this region.

SOURCES Population, 1956-1960, California State Department of Finance, total timber resource, mining, and manufacturing employment, "California Blue Book, 1954", timber cut, 1955, State Division of Forestry, electric power, infra, Chapters 2, 6, and 8.

County is located entirely in the San Joaquin River Basin, and Fresno County encompasses portions of both the upper and lower basins of the San Joaquin River.

As indicated in the table on page 121, the region's timber resource and lumber and allied manufacturing activity are located for the most part in Madera, Mariposa, and Fresno Counties. It is expected that the ultimate sustained yield of the timber resource will approximate the level of the 1955 cut Employment in timber-products processing may be expected to increase significantly by 1975.

Considerable diversified manufacturing activity has developed since World War II in the vicinity of the city of Fresno. Based on the extensive agricultural activity in the lower San Joaquin Basin, food processing has been increasing and may be expected to increase, as the area's most important single manufacturing activity. While petroleum and natural gas provided a value product of over 100 million dollars in Fresno County in 1952, these resources must be expected to decline in relative importance in the coming decades.

In 1956, the extensive hydroelectric development on the San Joaquin River allowed a net export of over 2 billion kilowatt-hours of electric energy. Additional hydroelectric development assumed for 1975 will be insufficient to meet the region's growing electric energy requirements, based on rising population and increasing economic activity. Thus, by 1975 it is estimated that the region will require from elsewhere approximately one half billion kilowatt-hours of electric energy.

THE KINGS RIVER BASIN

The Kings River has as its source the snow fields on some 50 miles of the western slope and crest of the Sierra Nevada The watershed covers 1,694 square miles, over one half of which is above 8,000 feet in altitude. The mountain section of the watershed is roughly triangular in shape, with the apex located where the river enters the San Joaquin Valley. The mean annual runoff of the Kings River is 1,715,000 acre-feet The entire normal flow is taken by the irrigation requirements of one of the largest irrigation developments in the world. Excess water during flood periods flows into Tulare Lake Basin or into the San Joaquin River via Fresno Slough. The main river is formed by the junction of the South and Middle Forks, about 28 miles west of the Sierra crest The North Fork is tributary to the main stream some 15 miles above Pine Flat Reservoir. Dinkey Creek is tributary to the North Fork, which is sometimes called the West Fork.

Hydroelectric Power Development

The only power plant presently in operation on the Kings River is P. G. & E.'s 31,000-kilowatt single-purpose Balch Plant The 1,000,000-acre-foot Pine Flat Reservoir was completed by the Corps of Engineers in 1953. Three 13-foot-diameter penstocks were built into the dam and have been blocked off pending future power development.

Plans for development of additional power in the basin have been advanced by P. G. & E., the Bureau of Reclamation, an individual, Francis N. Dlouhy, and Fresno Irrigation District (FID). The last organization filed with the FPC in 1943 for a preliminary permit for a three-plant development under Project No. 1925. In 1948 P. G. & E.

filed for a somewhat similar development, under FPC Project No. 1988, and in the same year was granted a license to proceed with construction. The Bureau of Reclamation filed suit to overrule the FPC decision, holding that the Kings River Basin should be developed as a unit in the Central Valley Project. In 1953, after the change in federal administration, this suit was dismissed by the Federal Circuit Court of Appeals. The FPC gave P. G. & E. final clearance to proceed with the development, in April, 1955, following the company's compliance with conditions involving water rights that were set forth by several water-control organizations in the Kings River Basin.

P. G. & E.'s plan includes construction of the Haas and Kings River Plants, rated at 135,000 and 44,100 kilowatts, and construction of storage that will allow an increase of 97,200 kilowatts in the existing Balch station. Construction of these additional storage facilities began in 1956.

The Haas Powerhouse is of special interest, for it will be the first large underground powerhouse in the United States. Its location, 500 feet vertically below the surface and 2,000 feet inside the mountain, will provide greater power output than would a surface unit at approximately the same location.

The plan of the Fresno Irrigation District included development of power at Pine Flat Reservoir. Since this was not included in the P. G. & E. proposal, the district's interest in that power development was not affected. In December, 1953, FID was granted preliminary permit, under FPC Project No. 1925, for a 150,000-kilowatt powerhouse with penstocks extended downstream from the dam to the powerhouse. On January 15, 1957, FID filed an application with the Federal Power Commission for license of this project. It will be assumed for completion by 1975, in addition to P. G. & E.'s program for the upper basin.

On November 2, 1955, an order was issued for a preliminary permit to Francis N. Dlouhy for Project No. 1990, which would be located upstream from the confluence of the North Fork with the main Kings River. This proposed project includes two major developments. First, the Eagle Mountain Dam and the Rough Spur Powerhouse of 320,000-horsepower capacity would be located downstream from the confluence of the Middle and South forks of the Kings River. Second, Kings Canyon Dam and the 60,000-horsepower Mill Creek Powerhouse would be located three and one half miles downstream from Rough Spur Powerhouse. This essentially single-purpose hydroelectric project is not assumed for development by 1975. Details of the developed and undeveloped potential of the basin are presented in Table XVI, on the following page. Aside from Mr. Dlouhy's proposal, there are presently no active plans for development of the considerable remaining power potential of the upper Kings River Basin. The Bureau of Reclamation includes in its long-run plans a study of the prospective 216,000-kilowatt Kings Junction Project.

The upstream-downstream development issue, the solution of which is more or less in sight for the American and San Joaquin river basins, is still alive in the Kings River Basin. Final clearance of P. G. & E.'s proposal for a large additional development enlarges the area of assured conflict between a multiplicity of interested agencies. This

TABLE XVI

EXISTING AND ULTIMATE HYDROELECTRIC DEVELOPMENT OF THE KINGS RIVER BASIN

Plant	Water source	Installation capacity (kw.)	Average annual generation (million kwhr.)	In service	Owner
Existing:					
Balch	North Fork Kings	31,000	179	1927	P. G. & E.
Completion assumed, 1975:					
Haas*	North Fork Kings	135,000	357	----	P. G. & E.
Balch*	North Fork Kings	97,200	228	----	P. G. & E.
Kings River*	Kings	44,100	120	----	P. G. & E.
Pine Flat	Kings	120,000	289	----	--
Total		396,300	1,050		
Ultimate development:					
Simpson Meadow	Middle Fork Kings	60,000	368	----	--
Tehipite Valley	Middle Fork Kings	80,000	525	----	--
Paradise Valley	South Fork Kings	40,000	219	----	--
Cedar Grove	South Fork Kings	140,000	665	----	--
Junction PH No. 5	Kings	130,000	613	----	--
Helms	Helms Creek	41,000	166	----	--
Peart	Dinkey Creek	30,000	100	----	--
Junction No. 2	Dinkey Creek	40,000	200	----	--
Total		561,000	2,856		

* Capacity data from application for FPC Project No 1988, amended September 17, 1956.

SOURCE Federal Power Commission, "Hydroelectric Power Resources of the United States Developed and Undeveloped, 1953" (1954).

will provide a continuing case study of the problems of water resource administration, similar to those of the Pacific Northwest and elsewhere in the country. For example, the construction and operation of Pine Flat Reservoir by the Corps of Engineers constituted, in the eyes of the Bureau of Reclamation, a significant break in the continuity of development and unity of operation of the Central Valley Project. This reservoir, located above the point where the Friant-Kern Canal crosses the Kings River, together with Isabella Reservoir, on the Kern River about 50 miles east of Bakersfield, will supply water to the same area as the service area of the Bureau of Reclamation. These two reservoirs will be operated by the Corps for water conservation and flood control, the same functions provided by the Central Valley Project system, but will be operated as separate units not directly coordinated with the Bureau of Reclamation. Violation of the principle of unity of water development and control is obvious and will almost inevitably be compounded by the increase in number of parties involved in development of the basin.

MINOR DRAINAGE BASINS OF THE SOUTHERN SIERRA NEVADA

The Kaweah River Basin

The Kaweah River drains 520 square miles of the Great Western Divide, the secondary range above the upper Kern River Basin. One of the minor tributaries of the San Joaquin River, its annual average flow

at the Three Rivers gauge is 416,000 acre-feet. Its main branch, the Middle Fork, originates in Lion Lake near the 12,651-foot Triple Divide Peak. After a very steep drop it is joined by the East Fork, at elevation 1,300, to form the main stream. The North and South forks enter below that point, but are not important for power development.

The existing power development consists of three plants of the San Joaquin Valley Division of SCE, with a total capacity of 6,850 kilowatts. There are no active plans for development of the remaining 10,000-kilowatt site though the federally authorized Terminus Dam and Reservoir is in the planning stage. Details of these installations are presented in Table XVII, on page 127.

The Tule River Basin

The Tule River, originating in the mountain range lying between the Kern River, on the south, and the Kaweah Basin, to the north, drains into Tulare Lake Basin. The Tule Basin includes 390 square miles above Pioneer Ditch Diversion, much of which is low-foothill country. The river system consists of the Middle Fork, which is the main branch, and the North Fork, which joins the main stream about 10 miles below that point. The annual mean runoff at Porterville is 416,000 acre-feet. There is some irrigation diversion, but no storage has been constructed. The major storage prospect is the Success Reservoir which is now being constructed by the Corps of Engineers. The feasible hydroelectric potential is fully developed by the two existing plants, details of which are included in Table XVII.

The Kern River Basin

The Kern River has its source high in the southern end of the Sierra, in the vicinity of Mount Whitney. Unlike the streams discussed heretofore, it flows in a southerly rather than westerly direction. The Kern Basin, above Bakersfield, covers 2,420 square miles The river system consists basically of the main stream, which has cut a large canyon in its upper reaches, and the South Fork, which by contrast traverses gently sloping mountain meadows. The annual mean flow of the river at Bakersfield is 736,000 acre-feet. The portion of the runoff that is not diverted for irrigation purposes in the vicinity of Bakersfield drains into Buena Vista Lake, where further irrigation drafts are made.

The most favorable power sites on the Kern River have been developed in four plants having a total capacity of 64,680 kilowatts. Completion of Isabella Reservoir by the Corps of Engineers, in 1954, provided water control that will improve the output characteristics of the existing power installations No provision for power was incorporated in the Isabella Dam, although a capacity of 62,000 kilowatts with a relatively low annual output was included in the 1953 ultimate-power-development summary of the Kern River published by the FPC. Although the City of Los Angeles and SCE have indicated interest in the future development of the undeveloped potential of the Kern River, there are no active plans for development at present. Details of the developed and undeveloped potential of the Kern River are presented in Table XVII, page 127.

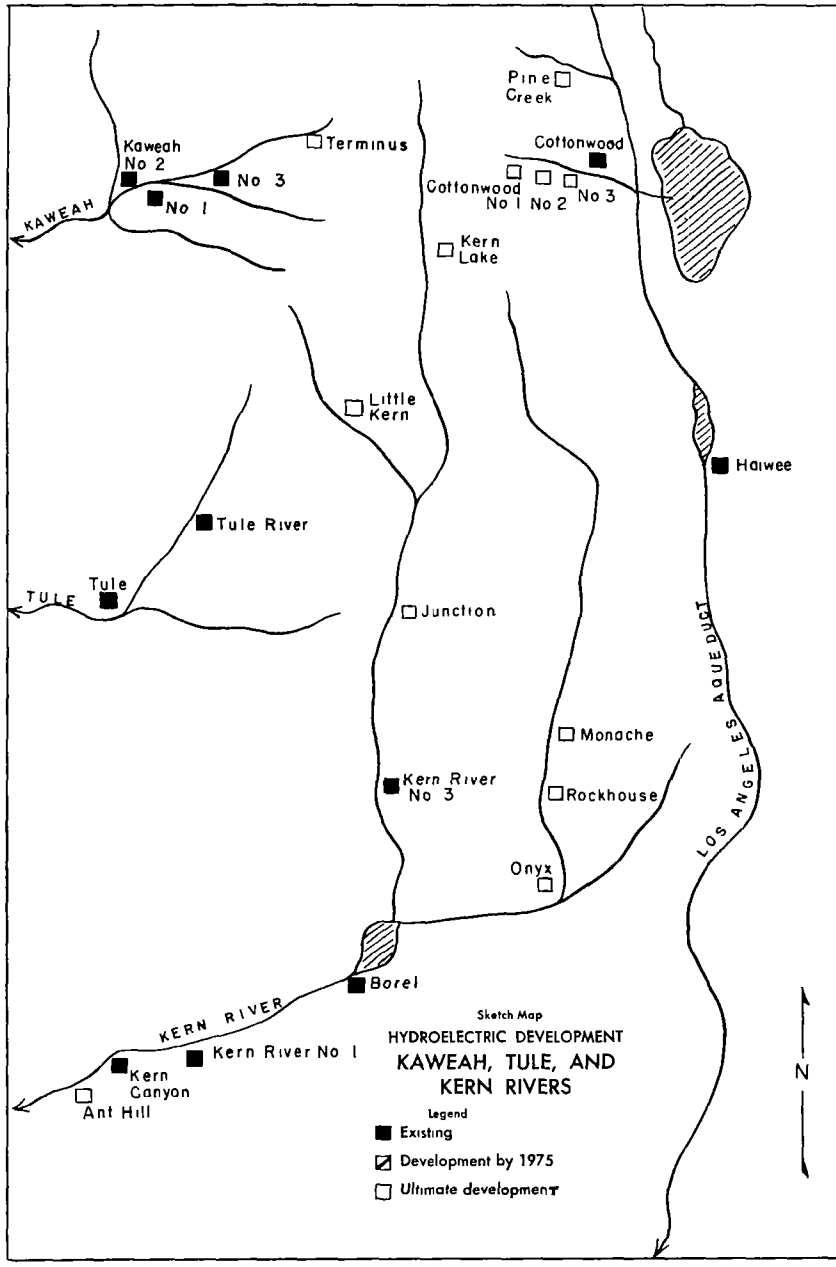
Pine Creek
Cottonwood
Cottonwood No 1 No 2 No 3
Kern Lake
Terminus
Kaweah No 2
No 3
No 1
KAWEAH
Little Kern
Haiwee
Tule River
TULE
Tule
Junction
LOS ANGELES AQUEDUCT
Monache
Kern River No 3
Rockhouse
Onyx
Borel
KERN RIVER
Kern River No 1
Kern Canyon
Ant Hill
Sketch Map
HYDROELECTRIC DEVELOPMENT
KAWEAH, TULE, AND KERN RIVERS
Legend
Existing
Development by 1975
Ultimate development
N

PLATE IX

TABLE XVII

EXISTING AND ULTIMATE HYDROELECTRIC DEVELOPMENT OF THE KAWEAH, TULE, AND KERN RIVER BASINS

Plant	Water source	Installation capacity (kw.)	Average annual generation (million kwhr.)	In service	Owner
Existing:					
Kaweah No 3	Kaweah	2,800	25	1913	SCE
Kaweah No. 1	Kaweah	2,250	14	1929	SCE
Kaweah No. 2	Kaweah	1,800	11	1905	SCE
Tule River	Middle Fork Tule	4,800	25	1909	P G. & E.
Tule	Tule	2,000	17	1914	SCE
Kern River No. 3	Kern	32,000	198	1921	SCE
Borel	Kern	8,200	64	1904	SCE
Kern River No 1	Kern	16,000	173	1907	SCE
Kern Canyon	Kern	8,480	60	1921	P G. & E.
Total		78,330	587		
Ultimate development:					
Terminus	Kaweah	10,000	40	----	--
Kern Lake	Kern	25,000	158	----	--
Little Kern	Kern	40,000	236	----	--
Junction	Kern	60,000	250	----	--
Kern River No 3*	Kern	28,000	154	----	SCE
Monache	South Fork Kern	10,000	53	----	--
Rockhouse	South Fork Kern	5,000	18	----	--
Onyx	South Fork Kern	25,000	131	----	--
Kern River No. 1*	Kern	94,000	330	----	SCE
Kern Canyon	Kern	24,000	80	----	P. G. & E.
Ant Hill	Kern	17,000	70	----	--
Total		338,000	1,520		

* Additional possible capacity and corresponding incremental average annual output at existing plant.

SOURCE Federal Power Commission, "Hydroelectric Power Resources of the United States Developed and Undeveloped, 1953" (1954).

Industrial Resource Base of the Kings, Tule, Kern, and Kaweah River Basins

These river basins include Kern, Kings, and Tulare Counties. Tulare County presents a diverse topography and economy. Its mountain section includes a major peak in Mount Whitney, while considerable of its area is in the lowlands. As indicated in the table on the following page, its timber resource may be expected over the long run to maintain a sustained yield approximating the cut of recent years. On the basis of studies cited in Chapters 5 and 6, employment in lumber and allied industries may be expected to show considerable increase in the coming decades. Similarly, the food-processing industry may be expected to maintain its position as the single most important sector of manufacturing in Tulare County.

The major economic activity in Kern County is the extraction of petroleum and natural gas. The county has experienced rapid growth in the past decade in terms of population and resource exploitation. Any future decline in employment based on depletion of the petroleum and natural gas resource may be expected to be more than counteracted by increases in such manufacturing sectors as food processing, transportation equipment, and stone, clay, and glass manufacture.

POPULATION AND INDUSTRIAL RESOURCE BASE OF THE KINGS, TULE, KERN, AND KAWEAH RIVER BASINS, 1950-1975

Population	*Kern*	*Kings*	*Tulare*	*Total*
1956	267,600	47,100	144,900	459,600
Estimated increase, 1956-1960	23,000	100	1,600	5.4%
1975 (estimate)	--	--	--	524,200
Industrial Base				
1. Timber (million board feet)				
Total resource	806	--	7,994	8,800
1955 cut	--*	--	54*	54
Ultimate sustained yield†	--	--	--	--
2. Lumber and allied manufacturing				
Total employment, 1952	--	--	769	--
Ultimate employment†	--	--	--	--
3. Other manufacturing employment, 1952				
Food processing	812	403	2,065	3,280
Petroleum production	1,590	333	--	1,923
Transportation equipment	880	--	--	880
Stone, clay, glass	673	--	267	940
4. Mining (thousand dollars)				
Natural gas	$10,445	$4,336	$1,160	$15,941
Natural gasoline	$17,105	--	--	$17,105
Petroleum	$190,506	$9,524	--	$200,030
Electric Power (billion kilowatt-hours)				
Net export, 1956 (estimate)	--	--	--	1.3
Net import, 1975 (estimate)	--	--	--	.4

* Kern and Tulare total combined
† See text for comment on ultimate sustained yield and manufacturing employment estimates for this region.
SOURCES Population, 1956-1960, California State Department of Finance; total timber resource, mining, and manufacturing employment, "California Blue Book, 1954", timber cut, 1955, State Division of Forestry, electric power, infra, Chapters 2, 6, and 8

Electric power production in the region in the past has been almost double its requirement. However, the nature of the runoff in the adjacent streams has been such that hydroelectric development has been supplemented by the construction of a steam plant in Bakersfield. Considering the projection of population for 1975 and a per capita consumption of electric energy of approximately 8,000 kilowatt-hours per year, it is expected that the anticipated expansion of hydroelectric capacity on the Kings River will be insufficient to meet the 1975 demand. By that year it is estimated that the electric power requirement of the region will exceed local supply by almost one-half billion kilowatt-hours.

THE LAHONTAN AREA

The Truckee River Basin

The Truckee River drains some 928 square miles of the eastern slope of the Sierra Nevada above Farad, with Lake Tahoe, the outstanding feature of the basin, as its source. The major tributaries are Little Truckee River and Prosser Creek, which drain the northern portion of the basin. The mean annual runoff of the river at Iceland is 455,000 acre-feet. Since the forest cover of the basin has been logged off, the main activity of the basin in recent years has been recreation. The discharge from Lake Tahoe has been regulated for many years by the Bureau of Reclamation between elevations 6,224 and 6,230, the summer flow being used extensively for irrigation in the vicinity of Reno, Nevada.

Existing power development consists of five small plants of 8,760 kilowatts of total capacity. Only the 2,800-kilowatt Farad Plant is located in California. The Truckee Power Company has an annual right to 480,000 acre-feet of storage from Lake Tahoe, which the Bureau of Reclamation releases in a manner favorable to power generation. Details of the existing development and the estimated undeveloped potential are presented in Table XVIII, below.

The Carson and Walker River Basins

These two small streams drain the eastern slope of the Sierra between Lake Tahoe and Mono Lake. The area of the Carson River Basin is 449 square miles, of which 22 fall inside the Nevada boundary. The Carson River has two main branches, the East and West forks, which yield an annual mean runoff of approximately 400,000 acre-feet. The two main branches of the Walker River are called the East and West Walker Rivers. Their combined watershed covers approximately 910

TABLE XVIII

EXISTING AND ULTIMATE HYDROELECTRIC DEVELOPMENT OF THE TRUCKEE, CARSON, WALKER RIVERS, AND MONO LAKE BASIN

Plant	Water source	Installation capacity (kw)	Average annual generation (million kwhr.)	In service	Owner
Existing:					
Farad	Truckee	2,800	17	1933	Sierra Pacific
Fleish	Truckee	2,000	19	1914	Sierra Pacific
Verdi	Truckee	2,400	18	1911	Sierra Pacific
Washoe	Truckee	1,500	13	1904	Sierra Pacific
Reno	Truckee	700	5	1910	Sierra Pacific
Lahontan	Carson	1,640	12	1913	TCID
Mill Creek	Mill Creek	2,400	8	1899	California Electric
Poole	Leeviming Creek	10,000	26	1924	California Electric
Rush Creek	Rush Creek	8,400	44	1916	California Electric
Total		31,840	162		
Ultimate development:					
Prosser	Truckee	5,000	33	----	--
Independence	Lower Truckee	6,000	20	----	--
Stampede	Lower Truckee	4,000	20	----	--
Mystic	Truckee	28,000	112	----	--
Woodfords	West Fork Carson	40,000	204	----	--
Diamond Valley	West Fork Carson	8,600	48	----	--
Leavitt Meadow	West Walker	4,200	22	----	--
Chris Flat	West Walker	6,400	42	----	--
Antelope Valley	West Walker	21,000	140	----	--
Total		123,200	641		

SOURCE Federal Power Commission, "Hydroelectric Power Resources of the United States Developed and Undeveloped, 1953" (1954).

square miles and they yield a mean annual runoff of some 600,000 acre-feet.

Except for the 1,640-kilowatt plant of the Truckee-Carson Irrigation District, power development in the Carson and Walker River Basins has been limited to small plants operating in connection with mining installations. No operations with generating plants of greater capacity than 100 kilowatts are currently active. Details of the estimated undeveloped potential of these two basins are included in Table XVIII.

The Mono Lake Basin

The Mono Lake Basin covers some 685 square miles, of which 116 are in Nevada. It is rimmed on the west by the Sierra Nevada, on the south by a series of extinct volcanic craters, and on the north and east by low desert hills Water is supplied to Mono Lake by several streams originating in the glacier system of the eastern slopes of the Sierra. The most important of these are Rush, Leevining, and Mill Creeks, and Parker and Walker Creeks, tributary to lower Rush Creek. Records maintained since 1898 indicate that the level of Mono Lake is stationary, wtih inflow equaling evaporation over the long run. It has been estimated that between 150,000 and 170,000 acre-feet would be available for diversion to Southern California.

The power potential of the basin has been fully developed by the three existing installations, having 20,800 kilowatts of total capacity. Details of these plants are summarized in Table XVIII, page 129.

The Owens River Basin

The Owens River, flowing in a southerly direction along the eastern side of the Sierra Nevada, has its origin in volcanic formations on the eastern slopes of San Joaquin Mountain and drains into Owens Lake, a distance of some 100 miles. Bounded by the Sierra on the east and the high desert range of the Inyo and White Mountains on the west, Owens Valley proper is some 70 miles long and 4 to 12 miles wide. The basin above Big Pine covers 3,133 square miles, of which 64 are in Nevada. Bishop and Big Pine Creeks are the major tributaries. The mean annual runoff measured at Big Pine is 246,900 acre-feet. The flow of the Los Angeles Aqueduct is supplemented by water from Division and Cottonwood creeks. Much of the range drained by the Owens River is above 10,000 feet in altitude, and 10 peaks, including Mt. Whitney, rising above 14,000 feet. Precipitation in the lower levels of the valley is negligible, hence most of the water flow comes from melting snow. This means that the Owens River has the normal California peak drainage in May through July, but the special characteristics of considerable volcanic cover on the northern portion of the basin, as well as the porous detrital cones of the tributaries, make for a remarkably constant and uniform flow for the remainder of the year. This creates a water supply regime that is unique for California.

The outstanding development in the basin is the 225-mile Los Angeles Aqueduct, which was completed in 1913 [1] Several power installations on the aqueduct system are subsidiary to the project's primary purpose of meeting the domestic water requirements of the City of Los Angeles.

[1] See Frank E Bonner, *Water Powers of California* (1928), pp 158-9, for details of this development

TABLE XIX

EXISTING AND ULTIMATE HYDROELECTRIC DEVELOPMENT OF THE OWENS RIVER BASIN, INCLUDING BISHOP CREEK

Plant	Water source	Installation capacity (kw)	Average annual generation (million kwh)	In service	Owner
Existing*					
Adams Auxiliary	Owens	2,400	17	1921	City of Los Angeles
Adams Main	Owens	5,000	26	1924	City of Los Angeles
Middle Gorge	Owens	37,500	155	1952	City of Los Angeles
Control Gorge	Owens	37,500	158	1952	City of Los Angeles
Bishop Creek No 2	Bishop Creek	6,320	39	1908	California Electric
Bishop Creek No 3	Bishop Creek	6,600	35	1913	California Electric
Bishop Creek No 4	Bishop Creek	6,300	44	1905	California Electric
Bishop Creek No 5	Bishop Creek	3,500	18	1909	California Electric
Bishop Creek No 6	Bishop Creek	1,800	11	1913	California Electric
Big Pine No 3	Big Pine Creek	3,200	15	1925	City of Los Angeles
Division Creek No 2	Division Creek	600	3	1909	City of Los Angeles
Cottonwood	Cottonwood Creek	1,500	6	1908	City of Los Angeles
Haiwee	Los Angeles Aqueduct	5,600	34	1927	City of Los Angeles
San Francisquito No 1	Los Angeles Aqueduct	58,875	210	1917	City of Los Angeles
San Francisquito No 2	Los Angeles Aqueduct	42,000	115	1920	City of Los Angeles
San Fernando	Los Angeles Aqueduct	5,600	30	1922	City of Los Angeles
Franklin Canyon	Los Angeles Aqueduct	2,030	9	1921	City of Los Angeles
Total		226,295	943		
Ultimate development*					
Rock Creek No. 1	Rock Creek	6,500	41	----	--
Rock Creek No 2	Rock Creek	12,500	78	----	--
Rock Creek No 3	Rock Creek	4,500	26	--	--
Mono Craters	Owens	4,000	24	----	--
Upper Gorge	Owens	37,500	155	----	--
Bishop Creek No 1	Bishop Creek	3,500	28	----	-
Big Pine No 1	Big Pine Creek	3,000	23	----	-
Big Pine No 2	Big Pine Creek	5,400	34	-	
Powerhouse No 1	Cottonwood Creek	4,000	24	-	--
Powerhouse No 2	Cottonwood Creek	5,000	32	-	-
Powerhouse No 3*	Cottonwood Creek	0	8	---	-
Pine Creek	Pine Creek	9,000	50	--	
Total		94,900	523		

* Additional possible average annual generation at existing plant resulting from future construction of additional upstream storage

SOURCE Federal Power Commission, Hydroelectric Power Resources of the United States Developed and Undeveloped 1953" (1954)

The five plants on the aqueduct have a total capacity of 114,135 kilowatts. In addition, the City of Los Angeles operates four small plants in the Owens Valley with a total capacity of 7,470 kilowatts. The remaining power development in the Owens River Basin consists of five plants on Bishop Creek having a total capacity of 24,220 kilowatts. Details of these installations are presented in Table XIX, on the preceding page.

Industrial Resource Base of the Owens River Basin

The Owens River Basin encompasses Alpine, Mono, and Inyo Counties. The estimated population of these three counties as of July 1, 1956, was 14,000. With an increase of 3.4 percent anticipated between 1956 and 1960, it is expected that total population will approximate 16,300 by 1975. This region has a very modest known resource endowment. In 1955 a total of 7 million board feet of timber was cut in Alpine and Mono Counties. In 1952 mining activities in Inyo County yielded over $3,000,000 worth of lead and almost $2,000,000 worth of zinc. Tungsten was mined in Inyo County during World War II.

The major resource of the region is its hydroelectric potential, over one-third of which has already been developed by the City of Los Angeles and California Electric Power Company. It is estimated that in 1956 almost 1 billion kilowatt-hours of hydroelectric energy were exported from the region to Southern California. Increased population and electric power demand growth will moderately decrease the amount of electric energy available for export by 1975.

CHAPTER 8

ELECTRIC POWER GENERATION AND TRANSMISSION SYSTEM

The three main components in a regional electric power grid are the generation, transmission, and distribution systems. The long-run cost of electric energy will depend on the vision and imagination with which technical developments are anticipated and integrated into the expanding system. Since the hydroelectric turbine is one of the most efficient machines now in use, the long-run potential of the hydro resource is fixed in the sense that we may expect no significant additions to the efficiency with which it is utilized. As has been indicated in the three preceding chapters, future utilization of the hydroelectric resource will depend on a complex of economic, as well as political, factors. However, electric power system planning will continue to be oriented to several basic principles. Thus, by subtracting the anticipated hydroelectric development in 1975 from projected demand for electric energy in that year, the total steam electric capacity requirement may be estimated. Full coordination of hydro and steam generating facilities will depend on the skill with which the expanding electric power transmission system is managed.

SUMMARY OF HYDROELECTRIC POTENTIAL OF NORTHERN CALIFORNIA

The hydroelectric power of the capacity of the individual river basins is summarized in Table XX, on the following page. The total developed hydroelectric power capacity in Northern California of over 3,100,000 kilowatts, plus approximately 3,000,000 assumed for completion by 1975, yields a total capacity figure of over 6,000,000 by that year. However, some 772,000 kilowatts are capacity for Southern California. Comparing the net figure of almost 5,300,000 kilowatts with the total capacity requirement of 11,300,000 kilowatts estimated for 1975 (Table III, page 42), it is apparent that over 6,000,000 kilowatts of thermal-electric generating capacity will be required in Northern California by that year.

The problem of retirement or replacement of obsolete hydroelectric capacity is summarized in Table XX, on the following page. Assuming a 50-year life for hydroelectric stations, such a decision will be required for almost one-half of the existing plants by 1975. For most stations, retirement from service for such reasons as siltage of reservoirs or deterioration of site foundations does not seem likely; hence, replacement of working units, rather than retirement, appears to be the dominating alternative. Doubtless a number of the smaller plants will be put out of service; however, for general planning purposes this will be a negligible amount, and new hydro capacity will be considered a net addition to the existing total hydroelectric capacity figure.

TABLE XX

EXISTING AND ULTIMATE HYDROELECTRIC CAPACITY FOR NORTHERN CALIFORNIA (INCLUDING RETIREMENT TO 1975) *

(Kilowatts)

Basin	Existing total	Capacity in service 1924†	Development assumed 1975	Ultimate development	Total hydroelectric resource 1956
Klamath	58,080	29,470	105,000	968,500	1,131,580
Eel, etc	8,800	8,800	----------	471,400	480,200
Pit, McCloud, Upper Sacramento	854,750	110,850	783,000	253,000	1,890,750
Feather	491,500	138,600	969,700	239,300	1,700,500
Yuba, Bear	149,800	88,150	----------	262,000	411,800
American	201,230	25,730	320,000	549,000	1,070,230
Cosumnes, Mokelumne	207,800	----------	----------	77,000	284,800
Stanislaus	146,800	36,300	----------	163,700	310,500
Tuolumne, Merced	134,930	36,490	229,000	207,700	571,630
San Joaquin	514,470	340,470	126,000	292,300	932,300
Kings	31,000	----------	396,300	561,000	988,300
Kaweah, Tule, Kern	78,330	76,600	----------	338,000	416,330
Truckee, Walker, Carson	31,840	29,040	----------	123,200	155,040
Owens	226,295	83,620	----------	94,900	321,195
Total	3,135,625	1,603,610	2,929,000	4,601,000	10,665,625

* Twelve plants located outside Northern California are included three on the Klamath River in Oregon, five on the Truckee River in Nevada, and four on the City of Los Angeles Aqueduct in Southern California

† Assuming a 50-year life for a hydroelectric plant, those stations placed in service prior to 1925 will be out of service, or their main working units replaced, by 1975

SOURCE Tables VI-XIX, infra.

Long-run Thermal Capacity Requirements

The estimated annual average output of the existing hydroelectric plant plus that assumed for completion by 1975 is approximately 27 billion kilowatt-hours Comparing this with the total estimated requirement of some 57 billions presented in Table III, page 42, a balance of over 30 billion kilowatt-hours remains to be provided by thermal-electric generation. This output requirement would mean that the thermal generation capacity requirement of 6,000,000 kilowatts suggested for 1975 would be required to produce at a unit rate of some 5,000 kilowatt-hours per year Based on the FPC assumption of an average plant factor of 51 percent for steam-electric stations, or 4,500 kilowatt-hours annual output per installed kilowatt, the estimated 6,000,000 kilowatt thermal-electric capacity requirement is on the conservative side

PRESENT THERMAL-ELECTRIC GENERATION IN NORTHERN CALIFORNIA

As in most large systems, steam propulsion has dominated thermal-electric generation in Northern California from the earliest years of the industry. All evidence points to the continued pre-eminence of steam turbines as the prime mover for electric generators in the foreseeable future. A few small-scale diesel-electric and gas-turbine stations are likely to be used over the long run in circumstances for which they are uniquely fitted, but the structure of thermal-electric generation may be expected to continue as has been indicated in Table V, page 57

While steam-electric generation may be expected to make an increasingly important contribution to the satisfaction of future electric power demand in the region, if the various plans for hydroelectric development are realized, the proportionate increase in steam-electric generation during the next two decades will level off, and perhaps disappear As new hydro units are scheduled for completion, proper balance within the power grid will be maintained by decisions concerning the optimum scale and location of additional steam capacity.

The basic characteristics of current thermal-electric generation in the region are summarized in Table XXI, below. The trend to large-scale base-load steam plants in Northern California began with construction of the 80,000-kilowatt Oleum station, in 1941, and was epitomized by the 625,000-kilowatt Pittsburg plant, which went into full operation in October, 1954. The only break in this postwar trend was the 4,925-kilowatt Donbass Plant, near Eureka. In this case the stern section of a dismantled tanker was beached and its power plant utilized for electric power generation. In 1954 four obsolete steam-electric stations, two in San Francisco and two in Kern County, ranging in capacity from 16,000 to 25,000 kilowatts, were put out of service. By 1957 all remaining small-scale (under 40,000 kilowatts) steam plants were retired, except for the 19,300-kilowatt Eureka Station.

TABLE XXI

THERMAL-ELECTRIC GENERATION PLANTS, NORTHERN CALIFORNIA, IN SERVICE AND UNDER CONSTRUCTION, 1957

Plant	Location (county)	Capacity*—(kw.)		Date of installation†
		Installed	Dependable	
Steam-Electric:				
Eureka	Humboldt	19,300	14,100	1900
Potrero	San Francisco	100,000	115,000	1901 (1931)
Oakland	Alameda	93,500	104,200	1908 (1937)
Hunters Point	San Francisco	252,100	248,100	1929 (1951)
Avon	Contra Costa	40,000	38,000	1940
Martinez	Contra Costa	40,000	41,000	1941
Oleum	Contra Costa	80,000	94,000	1941
Kern	Kern	165,500	179,000	1948
Moss Landing	Monterey	551,050	551,050	1952
Contra Costa	Contra Costa	558,000	545,000	1953
Pittsburg	Contra Costa	625,000	630,000	1954
Humboldt Bay	Humboldt	51,200	46,000	1956
Morro Bay	San Luis Obispo	338,236	315,000	1956
Vallecitos	Alameda	4,925	5,000	1957
Total		2,918,811	2,919,300	
Diesel-Electric:				
Crescent City‡	Del Norte	625	625	1939
Yurok‡	Trinity	160	160	1950
Trinity Center	Trinity	200	200	1953
Total		985	985	

* As defined in FPC Form 12
† Dates in parentheses indicate completion of addition to an existing plant
‡ Out of service, summer, 1957.

SOURCES Data from Pacific Gas and Electric Company, and California Oregon Power Company All diesel-electric stations are owned and operated by COPCO

Assuming a 35-year life for steam-electric stations, the 297,300 kilowatts of existing capacity put in service before 1941 will be retired to reserve status, or put out of service, by 1975 The existing dependable capacity of almost 3,000,000 kilowatts is about one-half the estimated steam-electric requirement for 1975, assuming that the additions to hydroelectric capacity posited in Chapters 5-7 are realized. It is expected that P. G. & E. will approximately double the capacity of its Pittsburg plant within the next five years. The assumption of a 35-year steam-plant life appears to understate considerably the actual replacement that may be expected in view of anticipated changes in steam-electric generation technology.

Recent Improvement in Steam-electric Technology

With the completion of the Humboldt and Morro Bay Stations, in 1956, a total of 2,660,350 kilowatts of steam-electric capacity had been added to the Northern California system since 1948. The technological elements in this rapid growth have been, in essence, new solutions to old problems: the achievement of greater fuel efficiency through the development of higher temperatures and pressures with a minimum of heat loss. Coordinated development of boilers, prime movers, and generators, led by improvements in steam-turbine design, has resulted in a fivefold increase in operating efficiency since 1900. In the period since World War II, the equivalent heat rate (British thermal units per kilowatt-hours) has decreased from an average figure of 11,000 to 9,000 in a few of the most efficient large-scale plants in the United States.[1]

This increased efficiency is indicated in the following data, which shows an approximate doubling of fuel consumption in the steam-generating plants of the P. G. & E. system between 1945 and 1953, while output in that period rose over five times.

ANNUAL FUEL CONSUMPTION AND ELECTRIC GENERATION, PACIFIC GAS AND ELECTRIC COMPANY, 1937-1953

Year	*Gas (billion cubic feet)*	*Oil (thousand barrels*)*	*Total generation by fuels (billion kwhr.)*
1937	----	----	447
1939	----	----	815
1941	----	----	466
1943	----	----	1,976
1945	25,452	3,370	1,211
1947	----	----	3,715
1949	31,162	8,954	5,092
1951	44,607	7,362	5,034
1953	55,685	6,061	6,829

* Forty-two-gallon barrels

SOURCES Fuel consumption for electric generation, FPC Form 4, total generation by fuels, FPC Form 12

With the increased availability of off-peak supplies of natural gas in recent years the relative importance of this fuel in electric power generation has risen significantly. The limited long-run prospects for use of both natural gas and petroleum products in the industry are indicated by the provision of storage space for pulverized coal at all

[1] Theodore Baumeister, "Steam and Electric Power—Its Past and Its Future," Lenox R Lohr, ed. *Centennial of Engineering 1852-1952* (1953), p. 898

steam-electric plants constructed in Northern California since the second world war.

Thermal-electric sources in Northern California, other than steam generation plants, are limited to small-scale diesel installations. The four plants in operation at the end of 1954 represented a total capacity of 885 kilowatts. The main advantage of an internal combustion engine in electric power generation is that its water requirement is only 3 to 5 percent that of steam. Thus, their use has been limited to areas that are remote from the power grid, have very limited amounts of accessible fresh water, or have a very small electric energy requirement.

THE REGIONAL TRANSMISSION SYSTEM

The major components in the Northern California grid system are presented schematically in Plate X, which was derived from FPC Regional Transmission Map No. 11, "Principal Electric Utility Generating Stations and Transmission Lines, Pacific Southwest Region" (1954). The actual grid system, which is presented in full detail on the source map, is, of course, infinitely more complex than the summary presentation developed from it. For example, actual transmission voltages range from 22 to 230 kilovolts in Northern California, with numerous intermediate voltages, while for illustrative and analytical purposes only the three most common—60, 110, and 220—have been included in Plate X. The P. G. & E. transmission system, consisting of more than 12,000 miles of line, comprises over 95 percent of the total line mileage in Northern California. The following data provide a summary of the main components of the P. G. & E. system in 1952:

Voltage (Kv.)	*Type of construction*	*Circuit miles*
220	Steel towers	2,239
220	Wood poles and some towers	74
165	Steel towers	197
100-110	Steel towers	2,495
100-110	Wood poles and some towers	958
100-110	Underground	29
60-70	Steel towers	343
60-70	Wood poles and some towers	4,239
	Total	10,574

SOURCE Pacific Gas and Electric Company, "Prospectus," June 10, 1952, p 16

The average age of electric transmission equipment was 11 years at that time. By 1954 an additional 1,455 miles had been added: 453 miles rated at 220 kilovolts; 455 miles at 110 kilovolts; and 547 miles at 60 and 70 kilovolts.

Major Transmission Lines

The backbone of the Northern California electric power grid is provided by several 220-kilovolt lines running north and south. The Pit River generation system, tied in with the Shasta-Keswick Stations by two 220-kilovolt circuits, forms the present northern terminus of the region's primary high-voltage system. Interconnection with the 220-kilovolt lines of SCE at the Midway substation, north of Bakersfield, links the two major high-voltage systems of the State. With completion

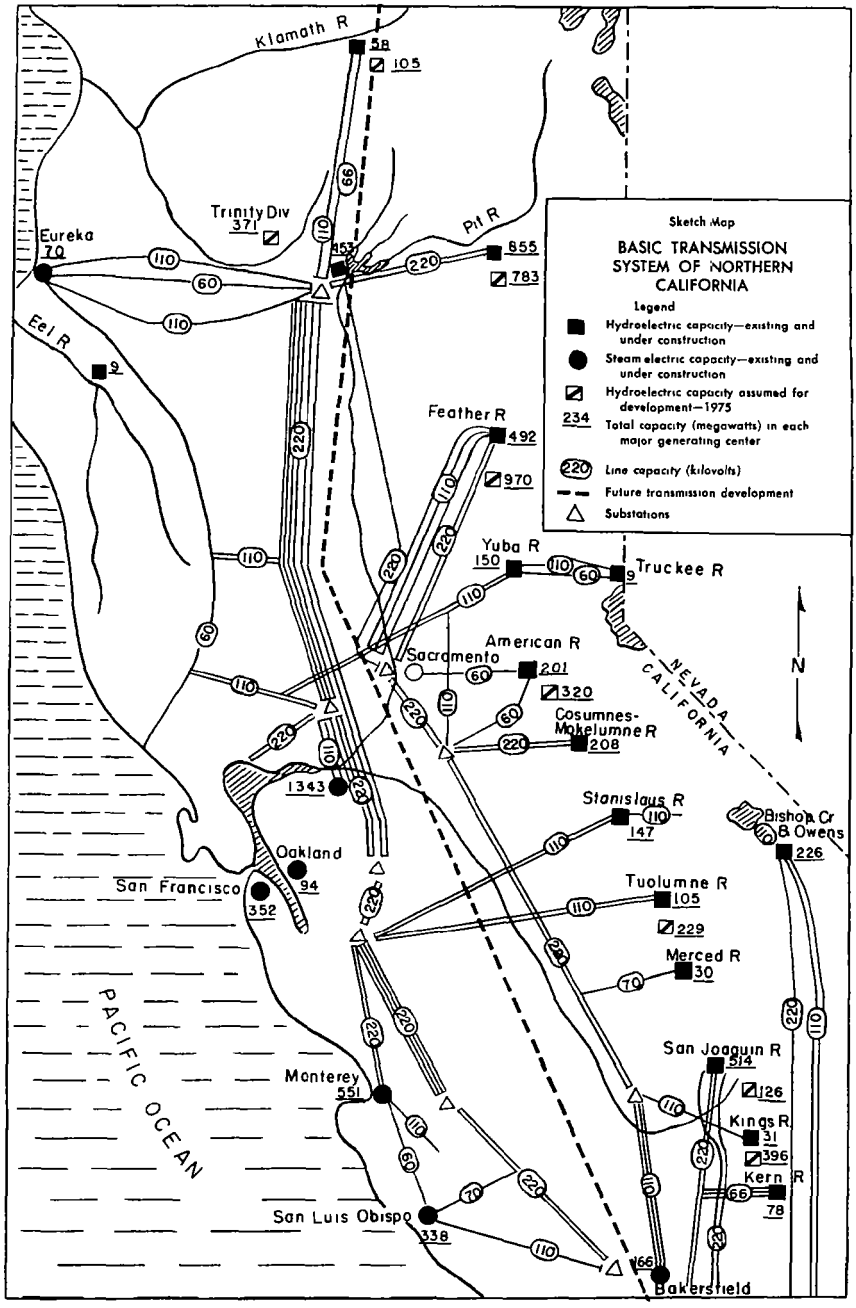
Klamath R
58
105
Trinity Div
371
Eureka
70
Pit R
855
783
453
Eel R
9
Feather R
492
970
Yuba R
150
Truckee R
9
American R
Sacramento
201
320
Cosumnes-
Mokelumne R
208
1343
Stanislaus R
147
Bishop Cr
& Owens
226
Oakland
San Francisco
94
352
Tuolumne R
105
229
Merced R
30
San Joaquin R
514
126
Kings R
31
396
Kern R
78
Monterey
551
San Luis Obispo
338
166
Bakersfield
PACIFIC OCEAN
NEVADA
CALIFORNIA
N
Sketch Map
BASIC TRANSMISSION
SYSTEM OF NORTHERN
CALIFORNIA
Legend
Hydroelectric capacity—existing and under construction
Steam electric capacity—existing and under construction
Hydroelectric capacity assumed for development—1975
234 Total capacity (megawatts) in each major generating center
220 Line capacity (kilovolts)
Future transmission development
Substations

PLATE X

of the 230-kilovolt line now under construction by COPCO, high-voltage interconnection with the Pacific Northwest power pool will be established at Klamath Falls, Oregon. In addition to the P. G .& E. system, the Bureau of Reclamation operates approximately 320 miles of 230-kilovolt line.[2] Lines on both the east and west sides of the Sacramento Valley connect Shasta to the Tracy substation, and tap lines connecting the new Folsom-Nimbus Project with SMUD and the existing Central Valley Project lines were energized early in 1955. Tap lines from Shasta to P. G. & E.'s nearby Cottonwood substation link the Central Valley Project with the remainder of the Northern California grid. The 220-kilovolt lines of SCE that connect the hydroelectric generating stations on the eastern side of the Sierra with the Southern California market are not directly connected with the Northern California system.

Lower transmission voltages supplement the basic 220-kilovolt circuits over relatively short distances and serve as extensions from the basic long-distance lines to generating stations whose location and peak output do not justify a maximum-voltage line.[3] A number of lines, rated at 60 and 70 kilovolts for the most part, connect the hydroelectric stations of the several nonfederal public agencies to the primary grid, and a 69-kilovolt line connects the Central Valley Project substation adjoining the Tracy Pumping Plant with the pumping stations on the Contra Costa Canal and with the Port Chicago Depot.

Control Center of the Power Grid

Control of the complex supply and demand relationships in the mixed steam and hydro power system of Northern California is lodged with the system dispatcher. This operation is centered in Oakland, where frequency and voltage control and variations in demand are coordinated with the use of the latest communication equipment. This includes the telephone systems of P. G. & E. and Pacific Telephone and Telegraph Company, carrier-current telephone, field crews equipped with two-way radio-telephones, and, finally, microwave communication, which was installed in 1951.

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[2] There is no significant operational difference between the 220- and 230-kilovolt lines in the Northern California system. The United States standard rating is 230, but P. G. & E. had adopted the 220-kilovolt designation several years prior to establishment of the national standard On its basic transmission map, the FPC uses only the 220 figure.

[3] Quantity of energy and distance determine the appropriate voltage for a given section of transmission line 'An old 'rule-of-thumb' that frequently gives an acceptable answer is that the voltage should be 1,000 volts per mile of line This reflects present practice fairly well so long as the amount of power to be transmitted is neither very large nor very small in proportion to the distance. A better rule for a first approximation of the transmission voltage that should be employed to carry a specified block of power for distances in excess of 20 miles under average conditions is .

$$KV = 5.5 \quad D - \frac{KW}{100}$$

Where KV is the approximate transmission voltage in thousands of volts ,
D is the length of line in miles , and
KW is the amount of power in kilowatts to be transmitted "

Federal Inter-Agency River Basin Committee, Subcommittee on Benefits and Costs *Empirical Constants for Energy Conversion and Transmission* (1951), p 45

A balance must be achieved in a given system between use of an optimum voltage for a given line and keeping the number of voltage ratings to a minimum There is evidence of a trend toward minimizing the number of standard voltages In 1950 the USSR decided to use only 35, 110, and 220 kilovolts Concentration of 60, 70, 110 and 220 in Northern California has been indicated above The multiplicity of existing voltage ratings in this region is evidence, of course, of the evolutionary nature of the art of electric power transmission.

INTEGRATION OF PRIMARY DEMAND AND GENERATION CENTERS

Plate X presents a summary of the hydroelectric development that may be expected in the major river basins by 1975. The additional transmission facilities that will be required as new hydro stations are put into service have not been sketched in, since the general nature of the long-term requirement is readily apparent and the actual development will be established by technical and economic factors that are indeterminate in advance of the scheduling of construction. No additional steam-electric capacity has been indicated. The over-all pattern of development of the region indicates continued growth of the existing population centers. Thus, as existing steam-electric stations become worn or obsolete, replacements will be located, for the most part, in the same general area as existing plants. The location characteristics of atomic-fueled electric generating stations, which are discussed in the following chapter, are not substantially different from those of steam-electric plants. If base-load thermal-electric stations continue to be located near major population centers, few additional transmission lines will be required.

The only specific transmission development that is proposed for the next two decades is the addition of at least one ultra-high-voltage line running north and south and connected with lines of similar voltage from Southern California and the Pacific Northwest. This line, rated between 330 and 500 kilovolts, is indicated on Plate X by a heavy broken line. An additional line of similar voltage may connect Northern California with the Rocky Mountain area within the planning period as part of a network similar to that being studied by the Bureau of Reclamation. However, this possibility, depending as it does on such contingencies as the rate of development of new thermal energy sources, is considered too tentative to be assumed for development by 1975.

PART III

PROBLEMS IN FUTURE ELECTRIC POWER DEVELOPMENT

CHAPTER 9

THE TECHNOLOGICAL PROBLEM

The technology of electric power generation and transmission has progressed steadily on the basis of expanding knowledge in chemistry and physics and the related physical sciences. This progress has been so extensive that, in general, the efficiency limits of conventional fuels and metals are being approached. Thus, significant new developments in electric power techniques will derive, in large part, from presently unutilized energy sources, such as the atom and the sun, and from application of new developments in electronics and metallurgy. While new discoveries will hold great significance for thermal-electric generation and transmission, there is no prospect for material improvement in hydroelectric generation. The virtual limit of mechanical efficiency has been reached in present hydroturbine design.

FUTURE THERMAL-ELECTRIC DEVELOPMENT

For the next two decades large-scale steam-electric plants, located near major load centers and fueled primarily by petroleum products and natural gas, will remain predominant in thermal-electric generation. During this period three new developments seem likely: (1) construction of one or more economic atomic-fueled plants; (2) introduction of imported coal, or coal derivatives, and by-product electricity from solar sea water-conversion installations; (3) increased use of relatively small-scale steam-electric and diesel or gas-turbine stations in areas distant from the main load center.

Future Steam-electric Generation

The type, scale, and location of Northern California steam-electric plants in the next two decades will be controlled by operating characteristics that will be based on long-term technical and economic developments within the industry. Although the entry of atomic energy into this field makes predictions very uncertain, there are certain technical limits to what may be expected from steam-electric generation under any circumstances. Though thermal efficiency has improved steadily in past decades, the decreasing rate of such improvement is largely explained by the approach to

> The absolute limit * * * [which] is the mechanical equivalent of heat, or 3412 Btu. per kwhr. * * * On the basis of present day furnace temperatures of the order of 2,500 F. and atmospheric conditions of 40 F. the practical limit of a perfect thermal power plant is set by the Carnot cycle at 4,100 Btu. per kwhr. This is a goal toward which fuel burning plants can approach.[1]

[1] Theodore Baumeister, "Steam and Electric Power—Its Past and Its Future," Lenox R. Lohr, ed *Centennial of Engineering 1852-1952* (1953), p 899. The asymptotic nature of increased steam power fuel efficiency from 1600 to 1952 is revealed in Table 4, p 898. The equivalent heat rate (Btu per kilowatt-hour) of the Newcomen steam engine (1760) was between 500,000 and 600,000. By 1900 the first steam turbine plant achieved a figure of 50,000, which was reduced to 15,000 in 1925 and 9,000 in 1952 by successive improvements in the steam turbine and other pieces of equipment.

However, the temperatures attained in nuclear fission, which are of the order of 10^6 Fahrenheit, open the possibility of approaching the theoretical maximum of 3,412 Btu. per kilowatt-hour. Further progress will depend on continued improvement in the major variables of general steam turbine performance. high pressures, high temperatures, high vacuums, high boiler and combustion efficiency, and regeneration and resuperheat.

Role of the Steam Turbine

Since the nuclear reactor in steam generation will merely provide a substitute source of heat, the boiler may be taken, in principle, as the technological dividing line between nuclear and conventionally powered steam-electric generation stations. Over the long run, developments in turbines and generators will be equally applicable to plants based on either fuel source. The technological, or design trend, in steam turbines is "* * * toward the building of more compact turbine-generator units of larger capability which are designed to operate with improved performance."[2] In terms of scale of plant, this can work in both directions: there is the prospect of applying reheat cycles to units as small as 40,000 kilowatts, and there is the more basic trend to super pressures and super temperatures, which are applicable only to very large-scale installations.

> The steam power plant of the future is being studied with the thought of utilizing supercritical steam pressures, that is, pressures in excess of 3,200 psi. In order to gain the full advantage of the *superpressure* cycle, a parallel development of increased steam temperatures should be carried out simultaneously. With our present known materials, steam inlet conditions of 5,000 psi and 1,150 F. appear to be practical when applied to units of large capabilities.[3]

Thus, "* * * the 'steam turbine of tomorrow' will include the unit now being designed and built for supercritical conditions * * * a unit operating at 4,500 pounds initial pressure and 1,150 F. initial temperature with two resuperheats—the first at 1,050 and the second at 1,000 F."[4] The future role of nuclear energy in electric power generation suggests the possibility of substituting reactors for boiler units in existing steam-electric generating plants. Ultimately this may prove feasible, but to date nuclear reactors can develop neither the steam temperatures nor the pressures for which modern large-scale steam-electric turbines are designed.

Prospects for Improved Economy in Thermal Generation

Improvements in conventional steam-electric generating equipment in the coming decades cannot be expected to produce revolutionary reductions in costs per kilowatt-hour. As has been pointed out in Chapter 3, the cost of fuel for electric generation in Northern California will rise only gradually, if at all, for the next 5 or 10 years, while substantial increases seem likely thereafter. Thus, an optimistic prediction concerning the cost of electric energy from conventional existing plants

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[2] C D Wilson and E P Hansen, "Design Trends in Present-day Steam Turbines" *Proceedings,* American Power Conference (1954), 16 148

[3] Clarence C Frank, "Steam Turbine Developments," *ibid*, p 132.

[4] R S Neblett, "The Steam Turbine of Tomorrow," *ibid*, p 162. The world's first double-reheat steam turbine operating under initial steam conditions of 1,150 F. and 4,500 pounds per square inch, rated at 125,000 kilowatts, was completed by General Electric and installed at the Philo Plant of the Ohio Power Company in 1957

is that, over the long run, technical improvements will keep abreast of rising fuel costs. Coordination of thermal-electric generation and space heating through the use of hot water circuits holds considerable promise for fuel conservation and economy, but appears to have little chance of general application in Northern California. The use of by-product steam in the region is presently limited to four steam-electric stations that are directly connected with adjacent industrial establishments. The Eureka Steam Plant has supplied steam to the Hammond Lumber Company since 1927; and the Avon, Martinez, and Oleum steam plants were constructed adjacent to the Tidewater Associated, Shell, and Union Oil Company refineries in the early 1940's.[5] There is no present indication that by-product heat from electric generation will be coordinated with residential or general urban space heating requirements in Northern California. Because of heat losses in the circulation of hot water over long distances, the size of the residential area served by a single unit would be quite limited.

Two possibilities for development in this sector that bring together most of the variables in future thermal-electric development are

> * * * the evolutionary trend in the saving of energy for comfort heating (which) may result in the use of improved heat pumps * * * and the employment of small thermal stations using gas turbines to fulfill all of the electrical energy, heating, and cooling needs of residential areas.[6]

An example of the latter is provided by a self-contained suburban shopping and business center currently under construction in Dallas, Texas. Complete heat and air conditioning will be provided by three 5,000-kilowatt generators driven by gas turbines. These units will also supply the entire electric power requirement of the development.

Thermal-electrical development in Northern California is presently oriented toward large-scale steam plants, hence, the most likely future use of gas turbines would appear to be in hot rural areas in the Central Valley that are remote from both large-scale base-load steam plants and major hydroelectric installations. Since rising costs of conventional fuels may cancel technical gains, it appears that nuclear energy, particularly the development of the breeder reactor, presents the only genuine prospect for lower-cost energy in future electric power generation in Northern California.

Prospective Utilization of Internal Combustion Engines and Gas Turbines in the Northern California Electric Power Grid

Since diesel engines and gas turbines possess certain similarities in scale limitation and fuel-consumption characteristics, the same basic factors will govern their inclusion in the Northern California system over the long run. Given the general developmental environment outlined in Chapters 1-4, such units will continue to have an advantage over steam where capacity requirement is fairly small and the demand center is isolated from the power grid and from a plentiful water supply. Also, it is possible that as older, small-capacity steam units are retired from service, diesel and gas turbines will be used for peaking and to firm up the remaining large-scale steam (and hydro) generating

[5] V. F. Estcourt, "Interconnection of Industrial Plants With Steam Power Stations of the Pacific Gas and Electric Company," *ibid.*, pp. 333-334.

[6] Bertrand A. Landry, "The Unconventional Sources of Energy," *Battelle Technical Review*, November-December, 1952 (reprint).

units. Between diesel and gas turbines, it seems probable that the latter will find wider use.

Development of the gas turbine has moved rapidly in the past decade. Following the construction of an 1,800-kilowatt-capacity prototype unit in 1944, the first 5,000-kilowatt, Westinghouse-built, natural-gas-fueled unit was put in service in 1952, at Fort Stockton, Texas.[7] Since then many similar units have gone into service, and a 5,000-kilowatt, rail-mounted, mobile unit is being built for the United States Army. At present a 15,000-kilowatt unit is under construction, the largest yet attempted, although units twice that size are considered feasible in the near future.[8] In general, wherever low-cost gas or oil is available, gas turbines will out-value steam units up to 15,000-kilowatt capacity. To date, gas turbines have not been adapted to efficient use of coal. An important possibility in their utilization is to provide a method of maintaining old steam units to substitute for the widely accepted practice of adding a topping steam turbine. Gas turbines have been combined with the cycle of old steam plants to increase the overall plant economy by some 30 percent and gain added capacity at $76 per kilowatt.[9] In view of the infancy of the gas turbine in power generation, improvements can be anticipated that will make such hybridization appropriate in the economic improvement of the Northern California power system.

The small size of the diesel generating unit is one of the main impediments to its utilization for peaking on the Northern California grid. The largest unit presently in use in the United States is rated at 3,500 kilowatts (plus the 10 percent overload allowable in diesel engines).[10] However, since the principal advantage of diesel over steam for peaking purposes is its shorter warmup time, an advantage based on the lighter weight and more highly rated engines, the best engines for peaking purposes would likely be somewhat smaller than 3,500 kilowatts.[11] Maintenance, control, and administrative problems make multiplication of the number of small units in the system undesirable, so the prospects for diesel in Northern California do not seem bright.

Location Determinants for Steam-electric Plants

The basic location factors for steam-electric generating stations are an adequate supply of water, availability of fuel, and proximity to a primary electric power market. These have not been materially altered with the recent trend to large-scale generating units, for all steam-electric stations in Northern California are located within 30 miles of a major demand center and are adjacent to both a major body of water and railway facilities. Recent utilization of sea water in steam-electric generation has considerably broadened the range, or zone, of practicable steam plant sites for the demand centers near the Pacific Ocean. Otherwise, location requirements for conventionally fueled plants remain unaltered.

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[7] "The automatic control features of the complete plant has made it possible to operate the entire station with a single operator per shift * * * with additional supervisory control added this station could be remotely operated." T. G. Putz, "Gas Turbines for the Power Industry," *Proceedings,* American Power Conference (1954), 16 295

[8] *Ibid.*, p. 295

[9] Louis S. Gee, "A New Power Cycle Combines Gas Turbines With Steam Engines," *ibid.*, p. 299

[10] Maxwell Stanley and Sanford K. Fosholt, "Steam and/or Diesel," *ibid.*, p. 281

[11] Robert J. Daverman, James A. Dewinter, Jack H. Knol, "Toward a More Successful Operation of Diesel Generating Facilities," *ibid.*, p. 274.

It appears at present that atomic-fueled plants would be subject to much the same location factors as existing conventional installations. Since the transport of bulk fuel would be virtually eliminated in the case of the atomic-powered station, the problem of transporting heavy pieces of equipment in the course of construction and maintenance would make proximity to rail transport facilities desirable, though much less essential than is presently the case. The relevance of the problem of radioactivity to atomic plant location is still a somewhat open question. The recent decision of the Consolidated Edison Company of New York to locate a nuclear-powered station some 40 miles from New York City indicates that the distance from major population centers necessary for such plants may be no greater than that presently dictated for conventional plants by high urban land values.

TECHNOLOGICAL FACTORS IN FUTURE TRANSMISSION DEVELOPMENT

Higher transmission voltages and increasing use of electronics are the present trends most likely to have a significant effect on electric power transmission in the coming decades. For several years P. G. & E. has been investigating the possibility of adopting an additional standard voltage, in the range of 380-440 kilovolts. Several systems have already put such lines into operation: Sweden, 380 kilovolts; USSR, 400; and American Gas and Electric Company and Bonneville Power Administration, 330. A higher voltage system in Northern California would be integrated with the existing grid. Factors affecting its adoption include the nature of future expansion in generating plant, the desirability of energy exchange with the Pacific Northwest, and continued improvements in ultra-high-voltage operation. Although the continuing solution of technical problems is essential for lowering costs and improving performance, there appear to be no technical bottlenecks to development of transmission capacity to perhaps 500 kilovolts.

Circuit Breakers and Higher Transmission Voltages

For some years it seemed that circuit breakers would constitute a barrier to expansion to higher voltages. However, with recent developments in both conventional oil circuit breakers and in new types such as those using compressed air and low-oil-content interrupting media, this no longer appears to be a problem There is evidence of a trend toward compressed-air circuit breakers, especially for indoor use. In Europe they are replacing high-voltage oil breakers for outdoor use, to a considerable extent.[12] The most important general development in circuit breakers in recent years has been the development of much higher interrupting ability than was thought possible only a decade ago. The tenfold increase since that time, from 2.5 to 25 million kilovolt-amperes, makes possible more-widespread interconnection and larger generating units than have heretofore been possible.[13] For the future, the eco-

[12] Hans Meyer and Werner R Streuli, "High Voltage Airblast Breakers for High Interrupting Capacity," *ibid.*, pp. 483-484. The present use of air breakers of from 34 5- to 380-kilovolts interrupting capacity is indicated by the following data 45 in the United States; 82 in Canada; and 1,110 elsewhere, mostly in Europe.
[13] A. W. Hill, "Recent Developments in Power Circuit Breakers," *ibid.*, p. 497.

nomics and technics of 100-million-kilovolt-ampere, 440-kilovolt circuit breakers have been found feasible in studies by General Electric [14]

Standardization of Voltages and Equipment

The present state of electric power transmission development makes especially pertinent the issue of standardization. The advantage of industrywide agreement on either a single voltage or a minimum number of higher voltages are generally recognized and are being given careful consideration by the industry's standards committee. One example of the prospective gains from standardization is provided by the condenser bushing that is "* * * interchangeable between circuit breakers and transformers of the same voltage rating [and] provides the proper insulation and mechanical support for the interruptors." [15] Considering the present rate of production, the number of circuit breakers in service will double in the next 10 years. The timeliness of voltage standardization, with its ramifications for virtually all pieces of transmission equipment, is obvious.

Conductors

Higher voltages and increased line loading have led to increased size of conductors in order that maximum system economy might be attained.[16] An economic study by these authors, which assumed the use of copper or copper-equivalent wire, indicated that the cost of transmission increases at a slightly greater rate with small conductors than with large ones, as the distance increases. By the use of "bundled conductors" two or more small-diameter lines are strung with a small space between them. By this method the same transmission capacity is developed as is possible with a single line of several times the total diameter of the smaller "bundled" lines. The continued use of ACSR (aluminum cable, steel reinforced) for transmission lines seems assured since no competitive conductor is under consideration. Increased replacement of copper by aluminum or ACSR in distribution systems will minimize, over time, the problem of aluminum depletion that develops when aluminum and copper are joined.[17]

Line Construction and Maintenance

Although towers will continue to be constructed of either wood or steel, depending on local resources, economies from new design are likely to be most significant in the case of steel. Assuming that there is little risk of line failure, hence no need for designing extra stresses to meet that contingency, the Bonneville Power Administration has put into use a lightweight steel tower that reduces construction costs by 25 to 40 percent on the several types now in use.[18] Increasing use of the helicopter may result in additional transmission economies. It has been used in inaccessible mountain areas for stringing power lines—in constructing the Kitimatt Project in Canada—and for inspection of lines

[14] R M. Bennett, "Trend in the Development of Switchgear Equipment for High-voltage, High-capacity Transmission," *ibid*, pp 515-521.
[15] Hill, *op. cit*, p. 497.
[16] R. M. Butler and E M. Reilley, Jr, "Conductor Size—Its Technical and Economic Effect on Transmission," *ibid* (1952), p. 323.
[17] E V Sayles and C E Topping, "Trends to Aluminum to Conserve Copper in Overhead Distribution Systems," *ibid*, p. 203
[18] A A Osipovich and H L. Rorden, "Experiences and Developments in High-voltage Transmission on the Bonneville System," *ibid*, p. 318.

on the Bonneville system. Larger banks of transformers may continue to result in increased operating economies, based on the experience of the Bonneville Power Administration. A related possibility is the use of rail-mounted transformer units, which would eliminate the need for a spare unit for each station. Transmission economies over the long run will most likely result from the reduced number of lines in relation to volume of energy carried that is permitted by higher voltages.

Electronics and System Control

The application of electronics to electric power system control provides the second main avenue of development in the industry over the coming decades. Semiautomatic and remote-control operations are already coming into general use in electric systems in the United States, and the goal of automatic operation is much less visionary than it was even five years ago.[19] The rapid development and use of power-line carrier since 1940 is one of the most important recent phenomena in electric power system control.[20] Because of its wide use, and the general overcrowding of existing service channels, a new medium has developed, called microwave.[21] In addition to P. G. & E.'s microwave system, this type of communication was installed on the Bonneville transmission system between Portland, Oregon, and Seattle, Washington, in 1951. Solution of the problems involved in long-distance relaying is indicated by the 227-mile line put into service by the Illinois Power Company in 1953.[22] The P. G. & E. system is set up between Oakland and Newark Substation, some 30 miles south. Five channels link the central control system, via wire line or power-line carrier, with the following points in the regional grid: Cottonwood Substation, near Shasta; the Tiger Creek Hydro Station, in the mountains above Stockton; Moss Landing Steam-Electric Plant; Moffett Field; and the SCE system at Alhambra.

A new radio communication technique currently being developed by the United States Government, with the cooperation of private electrical equipment and communications firms, may be used in electric power system control in the near future. This development, called "forward propagation tropospheric scatter," consists basically of a series of large, slightly convex screens, similar in appearance to those used in drive-in movies. The screens serve as directional transmitting and receiving antennae for powerful radio signals. These relay stations can be spaced much farther apart than microwave relay towers and problems of interference may be greatly reduced.

[19] See, for example, Nathan Conn, "A New Method of Area-wide Generation Control for Interconnected Power Systems," *ibid.* (1953), pp. 316-344.

[20] Power-line carrier "* * * involves the superposition of one or more high-frequency channels on a power circuit without interference to, or from, the power system * * * transmission of signals is accomplished via the power conductors, rather than by radiation into free space * * * [it] is, as a rule, a single channel device, and is employed to provide voice communication, telemetering, load-frequency control, teletype, supervisory control and protective relaying facilities * * * two or more functions [may be] combined on the carrier channel to alleviate channel crowding * * *" C. W. Boadway, "Progress of Carrier and Microwave in Power System Operation," *ibid* (1954), p. 443.

[21] "Microwave refers generally to beamed radio transmission using frequencies of the order of 1,000 megacycles per second and above With elevated antennas, distances of the order of 30 miles, or more, may be spanned. Longer distances are covered by automatic relaying through spaced repeater stations * * * Telemetering, power relaying, as well as voice channels, may be applied to a microwave installation." *Ibid*, p. 445.

[22] *Idem.*

Electronics has a key role to play in the development of automatic electric power plant generation control as well as in the coordination of generation with demand. Automatic operation hinges to considerable extent on realization of the potentialities of the digital computer. It is felt that the impact of the digital computer in electric power will be comparable to that of the network analyzer, some 15 years ago.[23] The task of the network analyzer was, in general, to schedule generation in such a manner that the condition of equality of incremental production costs of the several generating plants in a given system would be achieved. The problem that has been posed for electronic calculators has been made considerably more complicated by the addition to the equation of electric power system losses. Recognition of the economic relevance of losses has been stimulated by growth in the number of power exchange agreements, which has stemmed from the trend toward greater coordination of adjacent systems.[24] In establishing the terms of such contracts, losses become very significant variables. Studies by Bonneville Power Administration personnel, using the Whirlwind I digital computer at the Massachusetts Institute of Technology, showed steady improvement in the mathematical estimates of optimum loading for the Bonneville system, but were canceled when it became apparent that the degree of accuracy being attained exceeded the accuracy with which stream flows (a basic datum) could be predicted over long periods.[25] Automatic control has been approached at the East River Plant of Consolidated Edison Company of New York, where the operator is told, with the aid of an IBM tabulating machine, how to operate the plant's three turbine generators at the point of minimum operating costs.[26] In general, achievement of automatic control must await solution of the problem of optimal system loading, which will continue to be related to the complexity of the system's generating system. It may be assumed that the mixed steam-hydro system of Northern California is one of the more complex, and will only approach the goal of automatic operation in the following two decades.

ELECTRIC GENERATION FROM NEW ENERGY SOURCES

By 1975 the energy pattern of Northern California will be altered to some extent by new fuel sources for electric power generation. Prospective fuels include coal from the Rocky Mountains, liquid fuels synthesized from coal, oil shale or petroleum products, and nuclear products. Direct development of electricity from the wind, the tides, or the sun is not likely to become significant in this region during the planning period. New fuel sources applied to steam turbines will hold the center of the stage in the expansion of electric power generation in the relatively near future.

Coal and Oil Shale

Abundant supplies of low-grade coal in Utah, Colorado, and other Mountain States stand as a certain, long-term fuel reserve for Northern

[23] F. J. Maginniss, "Progress in the Application of Digital Computers to Power System Problems," *ibid.*, p. 466.
[24] *Ibid*, p. 473.
[25] Glenn W. Bills, "Applications of Digital Analysis to Power System Problems," *ibid*, p. 461.
[26] *Ibid.*, p. 463.

California. There are three principal ways in which this coal may be utilized to meet the demand for electric power in the region: (1) transport of pulverized coal to Northern California steam-generating stations; (2) mine-head generation of electricity, transmitted over high-tension lines to the California grid; and (3) extraction and conversion to liquid fuels for use in California plants. Studies of the economic alternatives presented by the first two methods have been conducted by the Bureau of Reclamation in Denver, Colorado. A report on this problem published in 1952 indicated that the two alternatives were of about equal feasibility, assuming 1960 conditions.[27] Mine-head generation would be developed either from conventional mining and burning of coal, or by underground gasification. Future improvements in coal utilization are expected to result from underground gasification, continuous mining, pipeline transport of liquid derivatives, and low-temperature carbonization. Of these, underground gasification is the only one that has been put into practice. Its main benefit is to allow virtually complete recovery from inaccessible seams. Another prospect for improving the economy of mine-head generation is the development of coal-fired gas turbines that would meet the problem of the limited water supply of the coal mining areas of the Rocky Mountain States.[28] California's declining crude-oil reserves make it the most logical market for synthetic liquid fuels produced in the Mountain States. It has been estimated that with a pipeline capacity of 100,000 barrels per day, the cost of shipping liquid fuels from Colorado to Los Angeles, a distance of some 850 miles, would be about 16 cents per barrel.[29] This prospect introduces the more general question of the competitive status of synthetic liquid fuels with the existing, conventional fuels.

Experimentation with low-cost techniques for the production of refined products from coal and oil shale have been conducted by the Bureau of Mines in Colorado for several years. In 1956 this activity of the Bureau of Mines was sharply curtailed. However, by 1951 sufficient progress had been made in oil shale synthesis for it to be competitive with current refinery products, given a rise of some 25 or 30 percent in the price of the latter. Thus, except for the limiting factor of availability of water in the major oil shale areas, such as northwestern Colorado, oil shale stands as an important secondary liquid fuel reserve.[30] The two main processes for producing liquid fuels from coal are known as hydrogenation and gas synthesis (Fischer-Tropsch). The prospective competitiveness of synthetic fuels derived from coal is not so clear-cut as is the case with oil shale.[31] Since the discussion of liquid synthetic fuels relates only to their competitiveness with gasoline and other high-grade distillates, this general development has only indirect relevance for the fuel problem in electric power generation. Extensive

[27] Assuming the availability of 500-kilovolt transmission lines, it was estimated that 29 5 billion kilowatt-hours of energy could be transported annually from eastern Utah to a 230-kilovolt bus-bar near Los Angeles (a distance of approximately 660 miles) at a transmission cost of 1.86 mills per kilowatt-hour. This compares with an estimated present cost of 2 19 mills per kilowatt-hour to transport coal by rail over the same distance. U S Department of the Interior, Bureau of Reclamation, *A Study of Future Power Transmission for the West* (1952), p. 17

[28] President's Materials Policy Commission, *Resources for Freedom* (1952), Vol III, p 25.

[29] U. S. Corps of Engineers, *Summary Report to the United States Bureau of Mines on Areas Suitable for Synthetic Liquid Fuel Plants in Western Kentucky, Northwestern Colorado and Southeastern Texas*, Washington, D. C., p 25, 1949.

[30] Resources for Freedom, Vol. III, *op. cit.*, p. 8.

[31] See *ibid*, p. 9, and Eugene Ayres, "Our Supplemental Petroleum Reserves," in *Our Oil Resources* (1950), Leonard M. Fanning, ed., pp. 211-225.

investment in equipment necessary for synthesis of low-grade products alone will not be warranted as long as abundant supplies of coal remain. In addition, there is the prospect of nuclear energy, which promises to drastically alter thermal-electric generation arrangements in the future.

Atomic Energy

Since the possibility of direct extraction of electric energy from the atom remains in the theoretical state at present, consideration here will be limited to indirect means of utilizing heat from atomic reactions to drive steam turbines.[32] "Energy can be secured from nuclear reactions either through: fission of heavy atoms to produce lighter elements, as in the A-bomb, or by: the [fusion] of light nuclei to create heavier atoms through a thermonuclear process as in the sun and H-bomb."[33] Since the latter process involves very high temperatures and other conditions difficult to control, currently practical nuclear fuels are those derived from fission: uranium, thorium, and plutonium derived from uranium.

> Energy from nuclear fuel is obtained by a controlled chain reaction converting some of the mass comprised in the fuel into energy * * * The conversion occurs through fission, whereby the nucleus of a heavy uranium atom is caused to split into smaller nuclei forming lighter atoms. In the process, the quantity of binding ingredient which holds nuclear constituents together changes slightly. It is only the mass represented by this binding energy that is susceptible to release as radiant energy and ultimately is transformed into sensible heat.[34]

Of the three basic kinds of reactors, thermal, converter, and advanced breeder, the last two are characterized as regenerative because they replace some of the fuel they burn. The breeder is the goal of reactor designers, because it replaces virtually all of the fuel that it consumes and would render fuel costs negligible, regardless of the future price of uranium.[35] The main disadvantage of the breeder, compared with other reactors, is the large initial amount of fuel required to achieve reactivity. This may limit its use to base-load steam plants and major industry users and encourage the use of the other types of reactors where the reduced investment of a smaller-scale plant is required.

December 29, 1956, may be chosen as the date inaugurating the era of electric generation from atomic energy in the United States. On that date the 5,000-kilowatt reactor at the Argonne National Laboratory, in Chicago, turned out the first electric energy under the Atomic Energy Commission's civilian power reactor program. This step occurred perhaps ten years earlier than would have been predicted in 1945. According to a statement made early in 1957 by Admiral Strauss, Chairman of the AEC, five or six such reactor plants will be producing electricity by the end of 1957. By 1962 a group of ten midwestern power companies expect to have a 60,000-kilowatt plant in operation on the Mississippi River a short distance north of the Iowa-Minnesota border.

Because of the higher cost of conventional fuels, and less readily available supply, Great Britain has been the world leader in this field.

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[32] W. F. Friend, "Nuclear Fuels for Power Generation," *Proceedings, American Power Conference* (1954), 16 216.
[33] *Ibid.*, p. 217.
[34] *Ibid.*, p. 217.
[35] For a comparison of the percent utilization factor, the fuel requirement (pounds per 10^6 kilowatt-hours) and uranium cost in mills per kilowatt-hour of the three basic reactor types, see *ibid.*, p. 226.

On October 17, 1956, the 90,000-kilowatt dual-purpose Calder Hall Station was opened. Since 25-30,000 kilowatts will be applied to plutonium production, a maximum of 65,000 kilowatts is likely to pass through the grid system [36] In March, 1957, the British Government announced plans for a total of 19 plants to be in operation by 1965. By that year it is estimated that Great Britain will be generating 15 percent of its power from nuclear plants, and that this source will provide 35-40 percent by 1975.

A second source of electric energy from the atom may develop from the use of heat generated in the production of plutonium. For example, there is indication that the possibility of developing between 200,000 and 1,000,000 kilowatts of electric power capacity in connection with the present operation of the Hanford, Washington project is under consideration. It is estimated that power could be produced at two mills at the larger capacity figure and sold to subsidize plutonium production. Since there is presently no indication that production of plutonium will become feasible in Northern California, the development of dual-purpose reactors in the Pacific Northwest would have only indirect significance for this region. Atomic energy plants as producers rather than consumers of electric energy would become a factor in the economics of the proposed high-capacity interconnection between the Pacific Northwest and Northern California.

In the past five years the issue of commercial application of nuclear energy has shifted from the scheduling of test plants to the actuality of electricity supplied to commercial power grids Such rapid change has led to general optimism concerning the prospects, within a decade in the United States, of economically competitive electric generation based on atomic energy. It is reassuring to know that the economic prospects for nuclear fuels are such that a large, general rise in the cost of electric energy is not likely to be a necessary part of the transition from conventional fuels. Such a transition within this century is almost inevitable, for "Regardless of comparative costs, we are compelled to develop some new source of energy commercially, if we continue the present phenomenal rate of increase in the use of energy." [37]

Through atomic-powered electric generating stations will probably be net consumers of electricity for some five years, they may be expected thereafter to constitute an increasing portion of new electric power capacity. It is estimated that by 1970 approximately 11,500 megawatts of nuclear-powered capacity will be in operation in the United States, with an annual rate of increase of 1,750 megawatts. By the year 2000 some 215,000 megawatts of capacity will be nuclear-powered, and the rate of annual increase will have grown to 14,000 megawatts.[38]

There is, at the present time, general agreement that after sufficient time has passed for technological advantages to be realized, "the cost of nuclear power will approximate 6 to 7 mills per kilowatt hour for all five types of reactors which appear to show promise for the near future." [39] The multiple-product character of nuclear power stations

[36] Sir Edwin Plowden, "Atomic Energy in Economic Development," *Labor and Industry in Britain*, Vol XIV, No. 4, December, 1956, p 166

[37] A C. Monteith, "Future Energy Sources," *Proceedings*, American Power Conference (1954), 16:44.

[38] For additional detail, see Table IV in Friend, *op cit*, p 223. This material was developed from information released by the Industrial Reactor Branch of the Atomic Energy Commission.

is a key element in their economic feasibility. For example, electric power reactors produce plutonium as a by-product which is currently used primarily in atomic weapons. As a spur to private atomic power development, the Federal Government in May, 1957, promised to pay $30-45 a gram for plutonium, depending on the weapons-grade plutonium content of the material. After July 1, 1962, a single price of $30 a gram, or $13,600 a pound, will be paid. Obviously, the economics of atomic-based electricity will depend, to considerable degree, on the nature and extent of the government armaments program and the market price of other by-products of nuclear fission.

The undeveloped hydro and by-product fuel oil resources of Northern California will affect the rate of utilization of nuclear power in the region within the next two decades, but there is no apparent reason why the region will not share proportionately in the indicated long-run development for the United States. Pacific Gas and Electric Company, the leading electric utility in Northern California, has been active in atomic energy research since 1951 and is co-sponsor, with General Electric Corporation, of the 5,000-kilowatt Vallecitos test plant near Livermore, California, several miles inland from San Francisco Bay. This boiling-water-type reactor is expected to be in operation in 1957 and will serve as a pilot plant for construction by the General Electric Corporation of a 180,000-kilowatt plant near Chicago.

One of the major unresolved problems in utilization of nuclear energy for electric power generation is the storage and disposal of radioactive wastes. To some extent this is a question of costs rather than constituting an insuperable technological barrier. However, one expert in this field, nuclear chemist Dr. Glenn P. Seaborg, in a statement made in March, 1957, before the World Affairs Council of Northern California, referred to "the terrible and underemphasized problem" of disposing of radioactive wastes. In this context he urged that an intensive effort be made to find a means of peacetime utilization of the principle underlying the hydrogen bomb-fusion, rather than fission of heavy elements. Not only are hydrogen, helium, and other light elements used in fusion processes exceedingly plentiful in world supply, but the energy-releasing process involved need not be radioactive. Even though atomic energy may become economically feasible in the coming decade, the cumulative nature of the problem of radioactive-waste disposal suggests that the alternative fusion process may hold great importance for the future.

Sun, Sea, and Wind

Other potential electric energy sources include the sun, sea, and wind. Technical means for converting electricity from solar energy have been demonstrated on an experimental basis.[40] However, commercial application competitive with other thermal energy sources will likely await a research program comparable to that which is solving the problems of practical application of nuclear fission. The development

[39] Samuel Glasstone, *Principles of Nuclear Reactor Engineering* (1955), p. 781. The section titled "Economic Aspects of Nuclear Power," pp. 779-785, includes a summary of the literature since 1952 concerned with the economics of nuclear-fueled electric power generation.

[40] Jacob Rosin and Max Eastman, *The Road to Abundance* (1953), p. 98. For a general discussion of the over-all possibilities of deriving energy from the sun, see F. G. Walton Smith and Henry Chapin, *The Sun, the Sea, and Tomorrow* (1952), pp. 137-156.

of electric energy from tidal movement depends on topography favorable to construction of the necessary control works and remoteness of potential market for such generating installations from electricity generated in conventional thermal or hydro stations. The 120,000-kilowatt-capacity Rance River Project, in France, is now under construction. Another prospect for commercial development of a tidal electric-generating station in the near future is Great Britain's Severn River Project. Favorable tidal energy sites do not exist on the coastline of Northern California.[41] Another source of electric energy from the sea is the difference in temperature between surface and undersea water, which creates pressure differences sufficient to operate a sea-water turbine. Such an installation, rated at a capacity of 7,000 kilowatts, is presently under construction at Abidjan, on the Ivory Coast of West Africa.[42] Since successful operation of sea-water turbines depends on temperature differences that are confined largely to the tropics, some 40 degrees Fahrenheit, such installations cannot be considered as a potential energy source for Northern California. Plankton, drifting plant and animal life of the sea, provides another possible source for sea-water energy, for it can be transformed into petroleum products by the Fischer-Tropsch process. The ultimate economic feasibility of this operation will depend on rising costs of fossil fuels combined with a multiple-purpose processing of sea water in which liquid fuels would be one of several end products. There is some prospect that electric energy could be generated as a by-product of a salt-water distillation system using a series of long-tube vertical evaporators. It has been estimated that a plant capable of producing seventeen million gallons of fresh water a day could produce 55,000 kilowatts of electricity.

Experience in the United States with electricity generated from the wind has been limited to the Smith-Putnam 1,250-kilowatt-capacity wind turbine, located on Grandpa's Knob in Vermont. This unit was in operation from 1941 to 1945. For a part of that period it was connected with an operating electric utility system and produced energy for commercial loads.[43] The degree of success of this experimental station stimulated a study sponsored by the FPC, in which the conclusion was drawn that with the development of sufficient wind duration and velocity data at promising sites, wind turbines could be successfully integrated into existing combined steam-hydro systems.[44] No high-altitude tests (200-500 feet) have been made in the United States except at Grandpa's Knob. There has been some emphasis on wind turbines in the USSR [45] and their use seems likely in the United States as reserves of liquid fuels become depleted. Since Putnam's survey of world prospects for wind turbines prepared by Putnam did not include

[41] That such a development in the region is technically possible is indicated in Ranji Takahashi, *The Utilization of Tidal Force for the Generation of Electricity*, MS Thesis, University of California (1927), pp. 56-58. In this study an inlet on Tiburon Peninsula, north of Angel Island in San Francisco Bay was chosen to demonstrate the technical possibility of applying the principle of the hydraulic ram in locations where a low tidal range obtains. For a summary of the world potential of tidal power see Eugene Ayres and Charles A. Scarlott, *Energy Sources —the Wealth of the World* (1952), pp. 266-267.

[42] Smith and Chapin, *op. cit.*, p. 167.

[43] See Palmer Cosslett Putnam, *Power From the Wind* (1948) for a complete discussion of this project.

[44] Federal Power Commission, *Electric Power From the Wind* (1945), a survey by Percy H. Thomas, pp. 37-38.

[45] John P. Hardt, *Economics of the Soviet Electric Power Industry*, Montgomery, Alabama: Air University (1955), Chapter II, p. 60.

the coast of California among the areas presenting particular promise, the use of wind turbines in Northern California by 1975 seems unlikely.

The wind and sun and tides can be, at best, intermittent sources of power to generate electricity; thus, they would have to be used in conjunction with power systems that provided facilities for storage of electric power potential. Since water retained behind hydroelectric power stations is the only known basis for such storage, this factor makes the mixed steam-hydro system of Northern California eligible to participate in any ultimate development of these three presently unconventional energy sources.

CHAPTER 10

PRINCIPLES IN EVALUATION OF THE HYDROELECTRIC RESOURCE

Evaluation of hydroelectric power development in the United States includes two major elements: thermal, or steam-electric, cost comparison; and appraisal of the benefit and cost relationships of a given project or basin program. In the evaluation of single-purpose hydroelectric projects, both approaches yield relatively precise, objective results. In the multiple-purpose case, however, evaluation of project effects may become extremely subjective.

PROCEDURES OF THE FEDERAL POWER COMMISSION IN APPLICATION OF STEAM-ELECTRIC COSTS TO HYDROELECTRIC DEVELOPMENT

Under the Federal Water Power Act of 1920 the Federal Power Commission (FPC) was given the responsibility of passing on applications for the development of water power resources. In the ensuing years, determination of the economic justification of a given hydroelectric project has come to be based, for the most part, on its superiority to the most likely alternative power source, usually a steam-electric generation plant. This procedure was affirmed in 1950, within a broader policy context, when the Subcommittee on Benefits and Costs of the Federal Interagency River Basin Committee (FI-ARBC) stated that the primary benefits of power produced from a hydroelectric project could be measured by "* * * the cost of equivalent power from the alternative source of power that would most likely be utilized in the absence of the project."[1]

Steam-hydro Cost Comparison

Currently, steam-hydro cost comparison is based on a FPC staff memorandum that spells out specific methods and provides basic cost and performance data for use by regional office staffs.[2] These data are based upon the actual costs and performance characteristics of 275 steam-electric generation plants constructed by public and private utility companies in the United States in the postwar period,[3] and are to be applied in the following manner:

> In the selection of the hypothetical steam-electric plant against which any given hydroelectric plant is evaluated, the basic principle * * * is that the plant so selected should have the characteristics of a plant or plants which would most likely serve the same market areas as would be served by the proposed hydroelectric plant.[4]

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[1] U. S. Federal Interagency River Basin Committee, Subcommittee on Benefits and Costs, *Proposed Practices for Economic Analysis of River Basin Projects* (1950), p. 49. (Hereafter referred to as FI-ARBC, *Proposed Practices*.)

[2] U. S. Federal Power Commission, *Information for Staff Use in Estimating Electric Power Costs and Values*, Bureau of Power, Technical Memorandum No. 1 (November, 1955), (hereafter referred to as FPC, *Technical Memorandum No. 1*), which revises and supplements *Information for Interim Use in Estimating Power Values and Hydroelectric Power Costs* (1953). Memorandum for staff use. (Hereafter referred to as FPC, *Interim Use Memorandum.*)

[3] FPC, *Technical Memorandum No. 1*, p. 53, Table I, revised January 1, 1957, "Actual and Estimated Construction Costs by Power Supply Areas." This table summarizes much of the basic information.

[4] FPC, *Interim Use Memorandum*, pp. 1-2.

Fixed costs, in dollars per kilowatt of installed capacity, and variable costs, in mills per kilowatt-hour, are calculated separately in presenting the overall cost characteristics of a given steam-electric station. Although a representative modern base-load plant is chosen for each power supply area, the regional office selects the type and scale of plant that it considers most appropriate for evaluation of a given application. For example, if the demand for power adjacent to the proposed hydro project would absorb the greater part of the added output, the relevant comparison would probably be with the costs of a local steam installation.

Steam-electric cost comparison is the major but not the sole evaluation criterion of the FPC. In the Pacific Northwest, where steam generation costs are considerably above the anticipated cost of output of the major undeveloped hydroelectric sites, the marketability of additional output has been given weight in the determination of hydro feasibility. Feasibility is set in part by the price that can be paid by the large volume users, such as the aluminum industry.[5] Since 1956, electric power capacity evaluation in the Pacific Northwest has been based on the cost of alternative hydro and steam. Under current procedures hydro plants are considered the cheapest alternative until 1980. Thereafter the evaluation base will be public-financed steam-electric capacity with an assumed life of 50 years. In a final decision on feasibility, each project in any area must be judged as generally more desirable than any other that would provide similar benefits.

In estimating annual costs, the FPC assumes a plant life of 35 years for steam-electric and 50 years for hydroelectric plants. This, together with interest, taxes, etc., results in current annual fixed charges of about 13.1 percent and 12.2 percent for privately financed steam and hydro, respectively, compared with about 4.9 percent and 3.8 percent for federal financing.[6] Estimates of operating and maintenance costs assume an average annual operation of 4,500 hours for a steam-electric plant over the 35-year period, which means an "* * * average plant factor of 51 percent based on plant 'Net Continuous Capability Rating' "[7]—the latter being assumed as 10 percent greater than the manufacturers' nameplate rating. Thus, high plant factors approaching 100 percent in the first years of operation of a new steam-electric plant, and the very low plant factor that results from the use of the same plant as standby equipment in its last years, are averaged out for the plant's total life span. It is felt by the staff of the FPC that the discretion allowed the regional offices in applying the basic rules to local conditions will not result in variations from the base figures of more than 15 percent. Establishment of prices by the regional office includes consideration of local conditions and the use of current prices for the most part.

An important change in the procedures outlined in the memorandum concerns the treatment of taxes. Based on an agreement between the Department of the Interior, the U. S. Army (Corps of Engineers), and the FPC dated March 12, 1954, taxes included in the cost estimate of

[5] Federal Power Commission, Interoffice Memorandum, March 12, 1954. See also Bureau of the Budget, *Reports and Budget Estimates Relating to Federal Programs and Water Projects for Conservation, Development, or Use of Water and Related Land Resources*, Circular No. A-47 (1952), p. 8, for a general policy statement of these two alternative valuation bases.

[6] FPC, *Technical Memorandum No. 1*, pp. 22, 28, 32, and 35.

[7] FPC, *Interim Use Memorandum*, p. 7.

the plant that is used as a measure of value, must be added to the cost of the prospective federal hydro plant. This includes federal, state, and local taxes.

Cost Comparison: Base-load Versus Basin Steam-electric Plants

The assumption underlying FPC policy, that each new hydro plant must justify itself as more economic than an alternative energy source, is generally accepted. Application of this policy in Northern California has meant, virtually without exception, that the cost of energy generated at the prospective hydro station and transmitted to the load center (the San Francisco Bay area) must be cheaper than the cost of energy from a modern large-scale, base-load steam plant located near San Francisco. This procedure has been logical in Northern California's integrated system, but will not necessarily hold in the future.

As the Northern California economy matures and population and economic activity fill in the hinterlands, increasing amounts of electric energy will be consumed in the river basins from which the hydroelectric energy originates. As this locally generated energy is increasingly consumed within the basin, it will become appropriate to judge the feasibility of additional basin hydro capacity in comparison with costs of small-scale steam plants located within the basin. In this respect, undeveloped hydroelectric sites will become more economic as the adjacent area is developed.

In addition, hydro capacity that can be used to meet peaking requirements of the Northern California grid will become increasingly valuable. Before World War II hydroelectric energy was used primarily for base-load requirements, and steam-electric capacity was used for peaking. In recent years these roles have, to some extent, been reversed. Thus, the economics of a hydroelectric station with a water regime appropriate for peaking might well improve with the passing of time and the increase of steam-electric costs.

Steam-electric Costs and Multiple-purpose Water Projects

Alternative steam-generation costs are fully applicable to evaluation of single-purpose hydro stations. However, where hydroelectric power occurs as one aspect of a multiple-purpose water project, steam costs can, of course, be applied only to the hydro element. The smaller the latter in relation to the total cost of the project, the less relevant is the steam cost comparison in judging feasibility of the project. Its relevance is further diminished by the difficulties encountered in designating the portion of the project that will be allocable to the hydroelectric function compared with irrigation, flood control, navigation, and the several other services the project might perform. Thus, evaluation of the hydroelectric resource that occurs in a mutliple-purpose project is much less precise than evaluation of a single-purpose hydro station. Indeed, it is subject to a multitude of social and political considerations, in addition to some very difficult problems of economic evaluation.

ISSUES IN MULTIPLE-PURPOSE WATER-RESOURCE EVALUATION

This evaluation problem involves determining whether or not the total costs of construction and operation of a given project will be covered by returns from the project over its useful life. Benefit-cost

analysis is the means now commonly used in the United States to make this determination. In general, if the benefits are greater than the costs, if the benefit-cost ratio is greater than unity, the project is considered economically feasible.[8]

Types of Costs and Benefits

A number of difficult, unresolved problems attend the use of benefit-cost analysis. These problems stem primarily from the identification and varying treatment afforded the several kinds of project benefits and costs. Three groups of project effects are commonly identified: primary, secondary, and intangible. Primary effects are those stemming directly from the project which can be measured in money terms, such as electric energy and irrigation water. Secondary project effects are those that appear indirectly, as a result of the project. For example, the net value added by processing agricultural products grown from project-irrigated land could be a secondary benefit of the project. Intangibles may be either direct or indirect, but have not, to this writing, been satisfactorily measured in physical or monetary terms. Such effects include certain aspects of flood control, recreation, fish and wildlife preservation.

The fundamental issue in benefit-cost accounting is the problem of compromise between inclusiveness and precision of the analysis The "Green Book" prepared by the Subcommittee on Benefits and Costs of the Federal Inter-Agency River Basin Committee is recognized as the theoretical-analytical foundation for present policy in the United States. In the subcommittee's statement of the problem, the importance of the viewpoint from which the effects of a project are evaluated is explicitly recognized:

> It is apparent that in federal practice a comprehensive public viewpoint should be taken; that is, a viewpoint which would include consideration of all effects, beneficial or adverse, short-range or long-range, that can be expected to be felt by all persons and groups in the entire zone of influence of the project.[9]

Hence, the need is clear for a public rather than a private or individualistic approach and for long-term, comprehensive treatment. Meaningful analysis, on the other hand, requires as precise valuation and quantification as is possible.

The subcommittee concludes that the best obtainable approximation to the desired "public viewpoint" valuation will be based on market prices of project benefits and costs. Thus, comprehensiveness must give way to precision, and only those project effects which can be quantified in terms of market price are to be specifically covered by the analysis.

The case for giving increasingly careful attention to evaluation of intangibles is strengthened by the prospect of their growing relative importance. The value of recreation benefits, for example, will almost certainly be augmented in the coming decades. On the one hand, high levels of personal income and shorter hours of work (longer vacations, more holidays, as well as the long-run trend of the shorter work day)

[8] A review of the major issues in benefit-cost analysis is presented by Mark M Regan and John F. Timmons in *Water Resources and Economic Development of the West*, Report No 3, pp. 1-15, "Current Concepts and Practices in Benefit-cost Analysis of Natural Resource Developments," by the Committee on the Economics of Water Resources Development of the Western Agricultural Economics Research Council. This paper was presented at the December 27, 1954, meeting of the American Association for the Advancement of Science, Berkeley, California.

[9] FI-ARBC, *Proposed Practices*, p. 6.

are providing both more leisure and more money with which it can be enjoyed. One indication of this combined development is the rapid rise in small pleasure-boat ownership in the United States. On the other hand, natural recreation areas are shrinking and existing facilities are rapidly becoming overcrowded as population rises in the West.

It is not unreasonable to assume that the value of water recreation facilities, such as those provided by multiple-purpose water storage reservoirs, will increase several times over in the coming decades. To some extent increased recreation values of such units will be measurable in terms of prices people will pay for various aspects of their use. But, measurable or not, the value of new leisure-time facilities will increase at least in direct proportion to the combination of rising incomes, shorter working hours, and depreciation of existing recreation facilities.

Evaluation of Intangibles

Market price can be applied directly to most primary project effects, and indirectly to secondary benefits and costs. Since intangible effects are defined as those which cannot be easily measured in conventional monetary or physical terms, the Subcommittee recommends that they be given full descriptive treatment. In practice, such treatment commonly means that even if the evaluating agency includes discussion of the intangibles, the Legislature ignores them as being too subjective to provide a valid basis for judging the project's worth.

One of many possible examples will be cited of the situation where engineering-economic studies have omitted the intangibles. "In determining the economic feasibility of the proposed interconnection (between Northern California and the Pacific Northwest) consideration was given to the savings in (1) fuel costs * * *, (2) costs of firming secondary energy * * *. It is recognized that substantial other benefits would result, however these have not been evaluated."[10] Some writers in this field hold that attempts at inclusion of secondary and intangible effects have impugned the validity of the benefit-cost approach in the eyes of many legislators. From this position they conclude that the best prospect for improvement of benefit-cost analysis lies in further refinement of market price analysis of primary effects.[11] It is the position of the present writer that the fruits of further effort in that area are likely to be small. That, on the contrary, the end of maximizing net social benefits from water resource development is more likely to be approached by full and careful analysis of the direct, intangible effects of each project.[12]

A recent study broke ground in this problem-area with a very interesting and provocative analysis of the satisfaction to be gained by recreationists from development of the Upper Feather River Basin. The conclusion of this study was that a value of $2 per visitor-day could be appropriately taken as the amount of satisfaction gained by

[10] Federal Power Commission, San Francisco Regional Office, *Report on Feasibility of California-Oregon 230—KV Interconnection* (1953), p. 61.

[11] See, for example, S. V. Ciriacy-Wantrup, "The Role of Benefit-cost Analysis in Public Resource Development," Water Resources and Economic Development of the West, Report No. 3, *op. cit.*, p. 27.

[12] A full statement of the writers' position is presented on pp. 111-125 of the original version of this work, which is available in the library of the University of California, Berkeley, under the title "The Development of Electric Power in Northern California."

the visitor from use of this area—and that this value should be added to the prospective benefits from the development.[13]

PRINCIPLES FOR ANALYSIS OF NORTHERN CALIFORNIA RIVER BASINS

The following four principles are essential in the development of water resource analysis that would encompass the end of maximum public welfare. First, the entire river basin is the proper unit for analysis of the actual water resource; second, the multiple-purpose concept must underlie all evaluation and design of structures; third, comprehensive benefit-cost analysis provides an adequate conceptual framework for evaluation and ranking of alternative projects; finally, the technical-economic issues in development can be fruitfully separated from the political-institutional ones for the purpose of analysis. These four principles have been applied, as far as possible, in judging the relative feasibility of the undeveloped hydroelectric potential of Northern California.

River Basin Unit

The logic of treatment of the river basin as a planning unit steams fundamentally from the nature of the hydrologic cycle. The water resource is essentially inexhaustible and self-regenerative. Evaporated moisture precipitates onto the land mass where it is absorbed into the earth, runs off into a storage basin, or evaporates into the atmosphere to directly begin the cycle once more. This cyclic pattern and the resulting physical unity of the river basin are well recognized in principle but often ignored in the formulation and execution of water resource development programs.

The case of erosion and siltage presents one of the most obvious illustrations of such unity. The rate of siltage accumulation in a storage reservoir is a primary variable in its effective life. At the same time the rate of siltage is a function of the condition of the surface of the entire watershed. Thus, calculation of the economic feasibility [14] of a given water storage project, which must include consideration of its life span, requires specific assumptions concerning the maintenance of the watershed. Such interrelationships hold, in general, for all multiple-purpose project costs and returns and are the basis for taking the entire river basin as the basic physical unit in the analysis of Northern California water resources.

Designation of the river basin as the unit for analysis may be contrasted with the possibility of selecting one of several projects on a given stream, without regard to the implications for this project that would be found in development of the others. This possibility has particular significance for electric power when a basin has both single- and multiple-purpose hydroelectric sites, and a private agency may be

[13] California State Department of Water Resources, *Investigation of Upper Feather River Basin Development*, Interim Report on Engineering, Economic, and Financial Feasibility of Initial Units (February, 1957), Appendix A, "Evaluation of Recreation Benefit From Five Proposed Reservoirs in Upper Feather River Basin," prepared by Harold F Wise & Associates, p 13 The background study for the data cited here was prepared by Andrew Trice and will be published by Harold F Wise & Associates

[14] In this study the term *economic feasibility* means over-all economic justification This contrasts with the term *financial feasibility* which refers to the narrower consideration of whether or not a project will pay for itself in a certain period of time according to a particular (usually legislative) prescription

interested in proceeding with the former but not with the latter. The physical unity of the river basin suggests a corollary political or administrative unity. The relevance of this issue for Northern California is discussed in the following chapter.

For electric power development in the region as a whole, the unit is set by the technical characteristics of electric power transmission. Here the theoretical limit for coordinated development is the continental land mass, while the relevant unit with which Northern California will be integrated in the coming decades is the area west of the Rocky Mountains.

Multiple-purpose Approach

Comprehensive analysis of project effects means multiple-purpose design of projects and fullest possible treatment of project costs and benefits. By extending the multiple-purpose concept to include the basin as well as the individual project, upstream single-purpose (e.g., hydroelectric) plants whose water release affects downstream storage may themselves be treated as multiple-purpose projects.

Multiple-purpose river valley development in the United States was proposed as early as 1908 in a report to the President by the Inland Waterways Commission. This approach was further recognized in 1925 by an act directing the Corps of Engineers and the Federal Power Commission to prepare joint reports, the "308" report series, on surveys of water resources.[15] The Boulder Canyon Project Act of 1928 authorized the first large-scale federal multiple-purpose project. With the establishment of the Tennessee Valley Authority in 1933, a single administrative agency was set up to carry out a program of comprehensive river basin development. The multiple-purpose approach may be considered to have become established on a base of widespread public support following the 1934 report on the Mississippi River.[16] Much of what was suggested there was adopted in planning procedures of the TVA. Though the multiple-purpose principle has been almost universally accepted in this country, debate on the extent and details of its application has never completely disappeared. For example, the principle of an ever-empty reservoir to meet the requirement of flood control was indelibly stamped in many minds as being an inextricable contradiction to the desirability of maintaining the fullest possible reservoir for maximum hydroelectric power head. Years of missionary work were required to establish the possibility of compromising the several purposes of a given project to gain a maximum total benefit. Recent indications are that the multiple-purpose aproach has not been fully accepted.[17] For the present, however, the multiple-purpose principle is reflected in official water resource planning and development in the United States.

Comprehensive Benefit-cost Analysis

The issue of inclusive benefit-cost analysis merely highlights the underlying value problem. Since market prices are not perfect reflections of real values, the limitation of benefit-cost analysis to primary,

[15] 43 Stat. (1925) 467, Sec. 3.

[16] Public Works Administration, *Report of the Mississippi Valley Committee* (1934), Morris L. Cooke, Chairman.

[17] See, for example, William B. Leopold and Thomas Maddock, Jr., *The Flood Control Controversy Big Dams, Little Dams, and Land Management* (1954), p. 245.

marketable project effects yields, at best, an approximation of real values. Extension of the analysis to include secondary and intangible effects increases the degree of subjectivity but presents the compensating advantage of approaching the comprehensive evaluation required in measurement of public benefits and costs.

It is recognized that the logical extension of an argument for inclusive benefit-cost analysis would be the application of such a test to all investment expenditures, public and private. The implication of this consideration for the public sphere is that prior to proceeding with a given water development project, the benefit-cost ratio of the given project would have to be compared with a benefit-cost ratio for all other prospective government expenditures. Such comparison would be complicated further by the level and structure of employment of productive resources, for, under conditions of less than full employment, separate standards would be required for projects that would utilize idle resources compared with those that would divert resources already employed.

Benefit-cost analysis has developed in water resource evaluation because of the marketability of portions of the output of multiple-purpose water projects. In projects with nonmarketable products, such as flood control, the decision concerning feasibility rests at times upon political and social considerations rather than the formal, professional study of a group such as the Corps of Engineers. At the other extreme, the product of a single-purpose hydroelectric plant is sufficiently quantifiable in market terms to allow acceptably objective evaluation with market price analysis. It is, thus, in projects with mixed products—market and nonmarket—where existing political and economic standards of valuation are held to be generally unsatisfactory, that benefit-cost analysis has appeared. Understanding its nature should minimize the undoubted dangers that accompany its naive, uncritical use.

Separate Treatment of Technical-economic Issues

The separation of the technical-economic from the political-institutional issues in water resource development does not imply a judgment concerning their relative importance. Indeed, the existence of the political decision as the final, critical barrier to development, provides the note on which this study both begins and ends.

The judgment involved is of a procedural nature, for it is held that fruitful consideration of the political-institutional issues must follow an initial definition of the technical-economic parameters. For example, two issues that are of utmost importance in the actual implementation of water resource development are those presented in the treatment of interest (financing) rates and taxes. They are, however, extraneous to the initial technical-economic evaluation of the feasibility of a given project, for at that level the question of who will carry out the development is largely irrelevant. The existence of institutional arrangements, whereby one type of developmental organization is free from tax payments and can operate with relatively low finance charges while another must receive a rate of return that will cover both tax payments and higher costs of finance, presents a set of considerations that can be set apart from the question of determining the optimum combination of resources and technology. Once the technical-economic appraisal has

been made, the final decision concerning the relative feasibility of a given project will be vitally affected by which agency is responsible for its construction. Insofar as interest charges and taxes are included in the feasibility judgments of the various organizations concerned with water resource development in Northern California, they have been retained as a part of the feasibility classification that has been presented in Chapters 5-7.

Inadequacy of Data for Analysis of Northern California River Basins

Cost data for undeveloped hydroelectric sites vary widely both in content and in availability. Some undeveloped hydroelectric sites have never received a full engineering and economic study. In others, early studies are now obsolete in terms of the higher price level and new technology in constructing water storage and diversion, and electric generation and transmission facilities.

The amount of detailed information available to the public, as well as the bases for its selection, depends upon the stage of consideration of the project and the agency involved. Details of preliminary studies are kept secret, insofar as possible, to prevent increases in the price of land and structures in a development area. The requirement of public hearings and debate makes such secrecy difficult for public projects. The desire for detailed preliminary studies is always countered by the need to keep preliminary costs low, until clearance to proceed with development is assured. This unevenness of data has precluded any general comparison of the feasibility of various sites.

Rational water resource development requires the ranking of alternative sites according to their technical, economic, and financial feasibility. Such ranking, in turn, depends on studies that will allow all sites to be reduced to a common denominator. No doubt, studies of individual sites will continue to be initiated by diverse organizations, public and private. However, optimal development and use of Northern California's hydroelectric potential will depend on the state government, the Federal Power Commission, or some other organization playing a coordinating role. Only in this way will information accumulate in a form that will allow the periodic comparative reappraisal of sites that is basic to effective long-run hydroelectric planning.

CHAPTER 11

POLITICAL-INSTITUTIONAL ASPECTS OF ELECTRIC POWER DEVELOPMENT

There are, in general, two types of political-institutional hurdles in the path of water resource and electric power development in Northern California The first of these involves ascertainment of the appropriate development agency. The major elements of this problem are the coordination of diverse agencies with overlapping jurisdiction, and the issue of public versus private development. The second set of hurdles relates to water law. Here, one set of questions derives from local water rights and state water law, while others concern federal questions that are germane to the determination of the proper development agency.[1]

WHO SHALL DEVELOP THE WATER AND HYDROELECTRIC RESOURCE?

In several situations the answer to this question is direct and clear cut. For example, in development of the single-purpose hydroelectric station, private utility companies have well established priority. Similarly, municipal water supply is almost invariably provided by municipal governments. In the case of multiple-purpose projects, public development is the rule, but the choice of specific agency-federal, state, or local, depends on the unique characteristics of each project. For example, irrigation water supply is provided by the gamut of development agencies: public and private, and federal, state or local.

After decades of water development in California, responsibility remains divided among many, essentially independent, major agencies or groups· (1) the State of California; (2) the U. S. Bureau of Reclamation; (3) the U. S. Corps of Engineers; (4) private power companies; (5) local public districts; (6) municipalities; and (7) individual farmers In hydroelectric development, the voices of the California Public Utility Commission and Federal Power Commission must be added.

The Problem of Overlapping Jurisdiction

This problem occurs both between several federal agencies and between the federal, state, and local levels of government. The long-lived jurisdictional conflict between the Bureau of Reclamation and the Corps of Engineers stems from the multiple-purpose nature of the water resource. The former agency's prerogative for development of irrigation and reclamation projects leads to direct conflict with the corps whenever substantial flood control and navigation benefits would be included—and vice versa. As often as not, legislative designation of one agency or the other stems from political considerations rather than

[1] For a more broadly oriented discussion of these issues by the present author see, "Economics and Politics—Inseparables in Water Resource Development," *Proceedings*, Western Economic Association (1956), pp 26-31.

the proportion of the project that falls within the given agency's jurisdiction. In the past decade the U. S. Department of Agriculture has entered the federal jurisdictional arena. Its watershed management program includes construction of relatively small reservoirs in upper basins. In some instances this program has been proposed as a suitable substitute, or precedent, to the construction of large-scale flood-control and storage dams on lower reaches of main streams.

Particularly relevant for Northern California is the question of developmental jurisdiction between the several levels of government—for state versus federal development of the Central Valley river system has been a basic, recurring developmental issue since publication of the State Water Plan in 1930.[2] Powerful groups in the state have never been satisfied with federal development which, under Federal Law, must include such provisos as the 160-acre limitation and the public preference clause in sale of federally generated electric energy. Only through purchase by the State of California of the existing Central Valley Project installations can the State be completely rid of these provisions. If the State does not purchase the CVP, yet proceeds with construction of its Feather River storage and diversion project many political administrative problems will remain to be resolved over the years. Recent testimony by leading administrators in the Bureau of Reclamation and the State indicates that such problems are not considered insoluble.[3]

Resolution of these issues has been further complicated by introduction of the Federal Government's "partnership" policy in the field of hydroelectric power, and by the 1957 decision by the California State Supreme Court declaring the 160-acre limitation unconstitutional in the State of California. However, falling ground-water tables and imperiled agricultural lands in the San Joaquin Valley are imperatives that cannot easily await resolution of these political and legal complexities. Thus, California's national legislators proposed in April, 1957, that the Bureau of Reclamation proceed with construction of the San Luis unit of the Central Valley Project on the west side of the San Joaquin Valley. Their proposal, recognizing the uncertain, dual nature of water-resources jurisdiction in the State, is presented as a two-phase program. In the initial phase the bureau would build a reservoir of 1,000,000-acre-feet capacity, which would be at least doubled at a later date, in connection with the long-term operation of the State's Feather River Project. While the problems of joint jurisdiction presumably have been met by authors of the bill, the unresolved 160-acre limitation issue remains a serious impediment to construction of the San Luis unit.

PUBLIC-VERSUS-PRIVATE ELECTRIC POWER GENERATION AND TRANSMISSION

As in other major river basins in the United States where hydroelectric power has occurred as a significant element in multiple-purpose water projects, the issue of public-versus-private power issue has

[2] For a full treatment of this issue see, Hugh Hansen, *Central Valley Project Federal or State?* Report prepared for Assembly Interim Committee on Conservation, Planning, and Public Works (Sacramento, 1955)

[3] See, for example, California Assembly Interim Committee on Conservation, Planning, and Public Works, *Hearing*, at Coalinga, California, September 10, 1956.

played an important role in the nature and rate of electric power development in Northern California. The following table summarizes the institutional ownership pattern of existing Northern California hydroelectric installations as well as those assumed for development by 1975.

OWNERSHIP OF NORTHERN CALIFORNIA HYDROELECTRIC CAPACITY, DEVELOPED AND ASSUMED FOR DEVELOPMENT BY 1975

(Thousands of kilowatts)

		Public		
Basin	*Private**	*Federal (USBR)*	*State of Calif.*	*Other (MUD's, ID's)*
Klamath	146,880	---	---	---
Trinity (diversion)	---	218,000	---	---
Pit, Upper Sacramento	813,750	453,000	---	---
Feather	754,300	---	465,000	54,000
Yuba	149,800	---	---	---
American	25,730	175,500	---	320,000
Cosumnes, Mokelumne, Calaveras	192,800	---	---	15,000
Stanislaus	65,800	---	---	63,000
Tuolumne	3,440	---	---	358,490
San Joaquin	640,470	---	---	---
Kings	274,000	---	---	120,000
Kaweah, Tule, Kern	78,330	---	---	---
Truckee	31,840	---	---	---
Owens	24,520	---	---	201,775
†Total	3,201,660	848,500	465,000	1,132,265

* Private development is by Pacific Gas and Electric Company, except for installations of California-Oregon Power Company on the Klamath, Southern California-Edison on the San Joaquin and Kaweah, California-Electric on the Owens, and the Sierra-Pacific Power Company on the Truckee River

† Totals do not equal those of summary tables in other chapters because of the indeterminacy of the development agency of several sites assumed for development by 1975.

SOURCE Basin summary tables in Chapters 5-7

Continued domination of private ownership in electric power capacity in Northern California in the next two decades is clearly indicated in the table. Likewise, public development stands out as being comprised, for the most part, of large-scale, multiple-purpose projects. Federal development in Northern California in the next two decades will most likely be encompassed in three major reclamation projects, Shasta, Folsom, and the Trinity Diversion. The latter would, of course, become a mixed federal-private enterprise under "partnership" operation. State hydroelectric developments could include a number of plants in the Feather, Yuba, and American River basins in conjunction with the California Water Plan. Local developments include projects operated or proposed by several irrigation districts, as well as those power plants constructed as units in the municipal water supply diversion systems of Oakland, San Francisco, and Los Angeles. The major new project in this developmental group is the Sacramento Municipal Utility District's proposal for development of the upper American River.

Federal Policy and Hydroelectric Development

The institutional pattern of future hydroelectric development has been effected in some degree by Federal Government policy since 1953, which has de-emphasized the construction of hydroelectric projects by the Federal Government, in favor of local (private) agencies. Thus, the only major federal project, assumed for development by 1975, that

includes a significant hydroelectric element is the bureau's Trinity Diversion Project. There is indication here of the beginning of a third major phase in hydroelectric development in Northern California Prior to the 1930's, activity was predominantly private in nature. Between 1935 and 1955, federal multiple-purpose hydroelectric projects paralleled private development. Now Federal activity has slackened and been replaced in some degree by local developments, public and private A large portion of the hydroelectric resource that will remain undeveloped after 1975 will be multiple-purpose in nature Thus, major developments three or four decades hence will be sponsored, for the most part, by public agencies. Private hydroelectric power capacity may be expected to become stabilized at something under five million kilowatts.

THE PUBLIC POWER CONTROVERSY AND THE RATE OF ELECTRIC POWER DEVELOPMENT

The issue of public-versus-private electric power development has been present in Northern California since proposals were advanced in the 1920's for comprehensive water development that included hydroelectric generation. The controversy was first drawn on the question of the propriety of public (particularly federal) agencies engaging in the production of electric energy for sale. When, by the late 1930's, this question had been resolved in the affirmative, the public-private controversy shifted to the problem of public construction and operation of power-transmission lines and steam-electric plants. In several federal programs, including the Central Valley Project, transmission lines have been constructed, and the Tennessee Valley Authority has put its own steam-electric stations into service However, the current swing away from such public expenditures indicates that this issue remains unresolved. In Northern California the 10-year "wheeling" agreement between P. G & E and the Bureau of Reclamation, whereby the major electric generating units of the region are coordinated, serves somewhat as a truce, pending ultimate resolution of the proper role of the federal government in electric power generation and sale.

The public-private development issue has taken several other forms in Northern California. With general public acceptance of the principle that public power development in the United States properly occurs only as a by-product of some other primary function, private interests have retained the sole prerogative for exploitation of single-purpose hydroelectric sites. Thus, primarily single-purpose sites, such as those on the lower Klamath River, that may be within the margin of feasibility under public development conditions are not attractive to private utility companies, whose shorter amortization period, higher finance costs, and tax obligation render such sites unprofitable. Continued lack of development of a sector of the region's hydroelectric potential is a price that the community must pay for its existing institutional structure.

A somewhat more intangible manifestation of the public-private controversy is found in the time lag that has occurred in linkage of the predominantly public system of the Pacific Northwest and the basically private system in Northern California with a high-capacity line that would allow bulk power transfers between the two regions.

The private systems in Northern and Southern California were linked as soon as the technical transmission problems had been solved and the economics of the connection ascertained. With a favorable benefit-cost ratio of over two to one established in the FPC study of the Pacific Northwest-Northern California inter-tie, and the recent increase in high capacity transmission voltages, institutional elements appear to provide the remaining major impediments to full high-capacity interconnection throughout the Pacific Coast region.

The public-private power issue is, at least indirectly, involved in the State's proposed diversion of water to Southern California. If the water is lifted over the Tehachipi Mountains by pumps, the California Water Plan will provide a net electric power deficit. Energy from project generating plants will fall far short of providing energy for project pumps. Most of this deficit would be purchased from private utilities.

Continued study concerning feasibility of an alternative water transfer plan seems advisable.[4] A major alternative to pumping would be a high line gravity flow conduit system based on a series of tunnels in the upper watersheds of southern Sierra streams. This transfer method would require much less power and the State would have a significant block of power to sell. In this case, the State would be faced with public power marketing questions not likely to arise if the State's plan depended on large purchases of energy from private utility companies.

The Federal Government's current "partnership" policy is presently being tested in California in connection with the Trinity River Diversion unit of the CVP. Federal construction of this unit by the Bureau of Reclamation was approved by Congress in 1953, and actual construction awaited only the appropriation of funds. With the injection of the partnership issue into the picture in that year, by P. G. & E.'s proposal to provide the electric power facilities, such funds were not forthcoming until the spring of 1956. Some three years of project operation have thus been foregone. The partnership issue in California serves as a somewhat minor illustration of the general point. Elsewhere, particularly in the Pacific Northwest, it is proving of vital significance for general regional development. It has virtually assured the incomplete utilization of the Hell's Canyon unit and promises to have a continuing effect of delaying development of other major projects of the Columbia River system—a system that possesses some 40 percent of the remaining hydroelectric resource of the Nation.[5]

Coordination of various water uses by public and private organizations has existed for many years on several Northern California streams. The concept of "partnership" presents nothing new in principle. However, a new means for combined public-private development, revenue bond financing, suggests problems of policy and flexibility in long run water use not presented in previous arrangements. Under the revenue bond method, as exemplified by the Tri-Dam Project on the Stanislaus River, projects developed by local irrigation districts,

[4] California Assembly Interim Committee on Conservation, Planning, and Public Works, *Progress Report*, Vol. 13, No. 8, March, 1956, pp. 34-36.

[5] Walton Seymour, "The Partnership Policy in Regional Power Planning," Papers and *Proceedings of the Sixty-eighth Annual Meeting of the American Economic Association*, New York, December 28-30, 1955, pp. 521-531.

having a hydroelectric component, are largely financed by project revenues from power over a long period (usually 50 years). Energy is distributed and sold at commercial rates through a private electric utility which pays no taxes to the local governmental units whose lands are taken off the tax rolls for the development. Water control could well be strongly influenced by the need to maximize electric power revenues to pay off the long-term financial commitment.

PROBLEMS IN INTERAGENCY CO-ORDINATION

There is no serious debate concerning the need for greater co-ordination of the many diverse agencies involved in water resource and electric power development. Nevertheless, despite a greater volume of development of water resources than in any similar period, the direction of administrative organization in the United States in the past two decades has been toward crystallization of the functional autonomy of the numerous agencies concerned, rather than toward a fundamental administrative reorganization that would facilitate unified, co-ordinated development.

This is not to say that no attempts have been made to meet the problem. Considerable ingenuity has been shown in trying to resolve this contradiction between legislative public interest goals and administrative practice without seriously disturbing the existing administrative framework. The several means attempted may be characterized as: the authority approach, which is exemplified by the Tennessee Valley Authority; interagency co-ordination, which is epitomized by the FIARBC; and establishment of *ad hoc* sub-units within existing agencies, such as the Bonneville Power Administration and the Central Valley Project. The success of these improvisations can be measured by the extent and quality of development that has occurred; their failure, by what has not been done.

The first Hoover Commission rejected the interagency approach as likely to prove ineffective for solution of important aspects of the water resource development problem. Instead, it strongly recommended consolidation of the Bureau of Reclamation and the civil functions of the Corps of Engineers into a new Water Development and Use Service in the Department of the Interior.[6] In two more recent statements of public policy regarding federal water resource development organization, such direct consolidation has been rejected. A presidential advisory group has proposed that three additional offices be established: (1) a Co-ordinator of Water Resources (chairman of a permanent Interagency Committee on Water Resources), (2) a Board of Review of Water Resources Projects, both to be established in the Executive Office of the President, and (3) a group of water resources committees, to be established at the regional or river basin level as the local situation requires.[7] The second Hoover Commission, in its June, 1955, report on Water Resources and Power recommended that the Congress create a Water Resources Board to be made up of the President's Committee on Water Resources and the Interagency Committee—substantially

[6] U. S. Commission on Organization of the Executive Branch of the Government, *Department of the Interior;* a report to the Congress. March, 1949, pp 19-35.
[7] H. Doc. 315; 84th Cong., 2d Sess., *Water Resources Policy,* Report by the Presidential Advisory Committee on Water Resources Policy, pp. 16-17.

the same solution proposed by the aforementioned Presidental Advisory Committee.

Despite this confusing melange of developmental organizations, one administrative tenet remains clear—the need for an authoritative, responsible co-ordinating agency at the river basin level. Optimum multiple-purpose development requires that one voice be ready to state the case for maximum economic use of the water resource whenever single or limited-purpose developmental proposals are made. For example, when upstream water control for hydroelectric power is proposed, the adequacy of such storage for future flood control and other purposes must be carefully examined. This end will be met only if some public agency assumes the necessary responsibility.

Between 1935 and 1953 the Bureau of Reclamation played such a role where basin developments impinged on the long-run plan for the Central Valley Project. With the increasingly limited activity of the bureau, there is presently no similar active, interested agency in the State of California. When a municipal utility district or private utility presents a hydroelectric development proposal to the Federal Power Commission, the proposal is examined on its merits alone—no question is automatically raised concerning the consistency of the proposed project with general basin development.

A similar question appears with regard to utilization of the recreation facilities provided by storage reservoirs. Preconstruction planning establishes the maximum elevation and general pattern of fluctuation of water level in these reservoirs. Thus, planning and construction of recreation facilities can, to considerable degree, proceed simultaneously with other project components. Experience to date has been, however, that far from advance construction of facilities, preliminary discussion of what organization—public or private, local, state, or national—would provide for recreation development has awaited the filling of the reservoir and its spontaneous use by Northern California's aquatic-minded public.

The newly formed State Department of Water Resources could assume such responsibility. There is some indication that it may do so. Optimal development of California's water resource will remain uncertain until this administrative void is filled.

A thorough treatment of the alternative methods of meeting the problem of unified river basin analysis and administration, with particular emphasis on the Pacific Northwest, has been prepared by McKinley.[8] In Northern California, the Kings River Basin will provide a continuing case study of the interagency co-ordination problem. At present, organizations interested in the development and disposition of the water there include the Bureau of Reclamation, the Corps of Engineers, the Fresno Irrigation District, and the Pacific Gas and Electric Company.

CALIFORNIA WATER LAW

Legal issues in water development have particular significance in Northern California, for the historical pattern of legislative and judicial decisions has left a heritage of conflicting principles from which a

[8] Charles McKinley, *Uncle Sam in the Pacific Northwest* (1952), pp. 543-617.

maze of conflicting claims to water has developed. To considerable extent the complication of California water law stems from the long-run evolution of major water uses and the almost coequal use of surface and ground water. Surface-water rights were first established for mining operations in the last half of the 19th Century under the legal principle of prior appropriation.[9] In the same period, the British common law principle of riparian rights was adopted as part of the State Constitution—a principle that allowed land owners adjacent to streams to divert water for their own use.

As ground-water pumping became an important source of supply for irrigation agriculture, the California Supreme Court in 1903 qualified the English doctrine of absolute ownership of water by overlying landowners in a decision that established the doctrine of correlative rights. Under this doctrine, individuals pumping from a common pool, may be limited to a "reasonable" share when the total supply becomes inadequate for all the users.

Since the solution of California's water problem involves, in large part, transfer of water from North to South, clearance of priority claims to water in the north is a necessary condition of development. Historically, every major water project involving alteration of the existing stream-flow regime has been delayed pending the resolution of questions concerning water rights. One of the most recent examples of this problem has been the delay in development of single-purpose hydroelectric sites on the Kings River and of the multiple-purpose Mammoth Pool Project on the San Joaquin. After withdrawal of the Bureau of Reclamation from the Kings River development controversy in 1953, P. G. & E. was cleared by the FPC to proceed with development as soon as agreements for the new water regime could be obtained from the downstream water rights holders. Several years were required to obtain this clearance. Recent resolution of water control issues between the Bureau of Reclamation and the Southern California Edison Company on the San Joaquin River, now clears the private utility to obtain similar agreements from local water rights holders. As in the case of the Kings River, the water rights problem will occasion a relatively minimal delay.

Resolution of the water rights conflict that has developed between interests in Northern and Southern California in connection with the Feather River Project promises a more extended delay. Considering the feelings that have been aroused in water holders in the North and legislators in the South, it is possible that the over-all state water plan could founder on the issue of water rights. Two major alternatives seem possible, in this event: (1) ultimate development of the Feather River would be limited to water diversion south to but not beyond the Tehachapi Mountains; or (2) primary responsibility for water development would be returned by the State to the Federal Government.

[9] For details concerning issues in California water law, see S. T. Harding, "Background of California Water and Power Problems," *California Law Review*, Vol 38, No. 4, October, 1950, pp. 551-553. See also, The Report of the President's Water Resource Policy Commission, Vol. 3, *Water Resources Law*, Appendix E, "Summaries of the Water Law Doctrines of the Seventeen Western States" (California pp. 715-721), prepared by Wells A. Hutchins

RESOURCE DEVELOPMENT PLANNING

The Problem of Adequate Resource Data

A prerequisite to balanced regional growth is complete, detailed information concerning the resource base. From this study, it is apparent that in the case of both the hydroelectric potential and the mineral resource, available information is not sufficient to allow for a confident statement of the physical and economic limits of the total resource.[10]

The absence of a comprehensive analysis of the region's hydroelectric resource stems from the lack of a single, responsible research or development agency. The Pacific Gas and Electric Company has a dominant interest in the undeveloped single-purpose sites, and submits its proposals to two main regulatory agencies: the California Public Utility Commission and the Federal Power Commission. In recent years, neither of these agencies have initiated comprehensive studies of undeveloped hydroelectric resources, either of a single- or multiple-purpose nature. Other agencies—such as the Bureau of Reclamation, the State of California, and the various irrigation and municipal utility districts—submit proposals to the Federal Power Commission for multiple-purpose projects falling within their area of jurisdiction or interest. Co-ordinated development of the remaining hydroelectric resource in the State awaits the appearance of some interested group to handle the evaluation problem in a comprehensive way.

Since the State Water Resources Department has general jurisdiction over multiple-purpose sites, it may eventually fulfill this function in connection with detailed studies related to the California Water Plan. The Federal Power Commission has jurisdiction over the entire hydroelectric resource. A third possibility is establishment of an interdisciplinary state water resource study by a major college or university.

The general state of knowledge concerning California's mineral resource is such that the State Division of Mines can provide information on the *types* of minerals to be found in various counties but cannot make a firm statement concerning *how much*. The latter information is, of course, necessary for a program of economic exploitation. Detailed, current information on quantities of minerals depends, for the most part, on surveys conducted by private individuals and corporations. For example, the major surveys presently in progress are those by the Western Pacific Railway in the Feather River Basin (Plumas and Lassen Counties) and the Southern Pacific on its lands, particularly in Siskiyou County.

Co-ordination of Water and Industrial Development Planning

Planning for industry and industrial resource development is in its infancy in Northern California. Agencies such as the California State Chamber of Commerce have been active in this general area for many years. However, only since World War II have individual communities interested themselves actively in the problem. Now, virtually every municipality in the region has a local committee formed

[10] An excellent example of the type of study required is the study by Harold F Wise and Associates, *Problem of Ultimate Population, Economic, and Recreational Development in California's Northeastern Counties,* shortly to be published as an appendix to the Department of Water Resources study, *Northeastern Counties Investigation.* This study was used in appraising ultimate population and timber resource developmens in the Sierra Nevada basins, *infra.,* chapters 6 and 7.

to attract industry. Most such committees are largely "property tax oriented," and are only gradually becoming aware of the broader concept of area planning for industry. There seems little doubt that such private, local groups will continue to predominate in the field of industrial planning in Northern California.

On the other hand, public agencies are almost certain to remain dominant in the field of water resource planning. The existing complexities of public agency co-ordination have been spelled out in some detail above. Nonetheless, to these difficulties a further dimension must be added—the co-ordination of private-industrial with public water resource planning The need for such co-ordination flows both from the direct industrial use of water and the indirect relationships between hydroelectric energy and industry.

Optimal resource development and utilization can be approached only through integration of the planning activities of all major economic sectors at all administrative levels.

ECONOMIC DEVELOPMENT AND INSTITUTIONAL FLEXIBILITY

The problem of formulating an effective organizational framework for development is indeed formidable. Administrative solutions such as the Tennessee Valley Authority, Bonneville Power Administration, and the Central Valley Project, which have proven satisfactory vehicles for development of major river basins, do not seem generally transferable. None of them appear to provide the basis for a general administrative-institutional solution to the problem. Unfortunately, no authoritatively supported suggestion seems to hold strong promise at present. For example, how can the constrasting recommendations of the first and second Hoover Commissions be reconciled? With what assurance can either program be followed, in light of the other?

At the heart of the problem is the need for compromise between the unquestionable desirability of local control and the facts of modern fiscal life in the United States. Since the 1930's, the Federal Government has proven to be the most effective agency for collecting large amounts of tax revenues. In this context, the problem of water resource development is directly analogous to the problem of highway construction and of public school expansion. If there is no alternative to reliance on the federal income tax as the primary revenue source in the United States, then means must be found whereby federal moneys can be made available to localities for water-resource and other development, with a minimum of necessary conditions attached. If the conditions of 160-acre limitation and public power preference are unacceptable to the United States public at large, as they are to influential groups in California, then these requirements should not be preserved, at the cost of timely development of the water resources of the United States. If such conditions are popularly supported, then states such as California must abide by that judgment or proceed without federal funds.

A related aspect of the problem is the lagged adjustment of the United States public to the fact of an apparently permanent expansion of the functional base of the Federal Government since the 1930's.

There is little prospect that the Federal Government is going to become significantly smaller or that the trend of its increasing responsibility for preservation and conservation of natural resources will be reversed. Thus, the problem is one of reconciling the role of the federal with that of the local government A certain amount of central resource legislation is inevitable. The problem is to see that it does not unduly abridge the independence and discretion of local organizations and private citizens.

It cannot be too strongly emphasized that the nature of the national and California water and energy problems are such that some solution will be found in the coming decades. Finding and implementing the best solution will depend entirely on the success with which new means are devised to meet these new problems. Human institutions do change to meet new situations. Political breadth, vision, and courage are required to insure that they do not change too late, or in a manner that compromises the general welfare.

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1955-1957
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REPORT OF THE

ASSEMBLY INTERIM COMMITTEE ON MANUFACTURING, OIL, AND MINING INDUSTRY

House Resolution No. 207, 1955

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JOSEPH C. SHELL, *Vice Chairman*
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LETTER OF TRANSMITTAL

ASSEMBLY CHAMBER, STATE CAPITOL
SACRAMENTO, CALIFORNIA, March 1, 1957

Hon. L. H. Lincoln
Speaker of the Assembly; and
Members of the Assembly
Assembly Chamber, Sacramento, California

GENTLEMEN: Your Committee on Manufacturing, Oil, and Mining Industry created pursuant to House Resolution No. 207, has concluded its work on the matters referred to it as the same are described in this report under "Scope of Report."

Your committee sets forth in this report its findings and recommendations relating to the matters studied and is confident that the same will be valuable to the Legislature in its consideration of these matters.

The chairman desires to express his sincere appreciation for the cooperation he has received from the members of the committee. The chairman and the committee members are grateful for the assistance and cooperation they received from witnesses appearing before the committee and to other persons who made valuable contributions to the committee report.

Respectfully submitted,

H. W. KELLY, Chairman
JOSEPH C. SHELL, Vice Chairman
BERNARD R. BRADY
MONTIVEL A. BURKE
CHARLES EDWARD CHAPEL
DOROTHY M. DONAHOE
WM. S. GRANT
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CARLEY V. PORTER

SCOPE OF REPORT

The Assembly Interim Committee on Manufacturing, Oil and Mining Industry, created through House Resolution No. 207, studied the following matters:

a. The subject matter of Assembly Bill No. 2885 of the 1955 Session of the Legislature was referred to this committee for interim study. This study deals with the tonnage tax on commercial fertilizers, and includes the enforcement, policing and operation of the act as it relates to these industries.

b. Relations of the petroleum industry with the Division of Oil and Gas, State Department of Natural Resources. This study dealt with the paperwork requirements of the division and the cooperation of the industry in relation to these requirements.

c. The subsidence of certain lands, particularly in the Long Beach area, and effects thereof. Hearings on this subject were held at the request of Assemblymen Grant and Klocksiem of Long Beach.

d. Western Governors Mineral Policies Conference, including recommendations of that conference; the participation of this committee, and the recommendations resulting from this conference.

e. Sales tax on reconditioning of certain leased oil field equipment, dealing specifically with rock-bits.

f. Taxes levied on contracts for disposal of oil field waste. Hearings on this subject considered the nature of the services involved, and the question of whether or not such services were properly subject to the provisions of the Sales Tax Statutes.

g. Proposed changes and additions to the Oil and Gas laws. Hearings on this subject considered presentations of proposed changes from the State Lands Commission, the Division of Oil and Gas, and from the industry.

RECOMMENDATIONS

A. Agricultural Minerals Tonnage Tax

The committee has carefully analyzed the data submitted to it by witnesses and other interested parties, and on the basis thereof, recommends that the tonnage tax levied on agricultural minerals sold in California be continued at three cents per ton until the ninety-first day after final adjournment of the 1959 Regular Session of the Legislature. (Assembly Bill No. 393)

It is further recommended that the Bureau of Chemistry of the State Department of Agriculture, the Legislative Auditor's office, and the Department of Finance make cost studies to determine basic information needed to establish permanent relationship between Commercial Fertilizer and Agricultural Minerals tonnage taxes.

B. Relations of the Petroleum Industry and the State Division of Gas and Oil

Section 3200, Article 4, Chapter 1 of the Public Resources Code should be amended. (Assembly Bill No. 1927.) Present requirements for the reporting of basic information by producing companies to the Division of Oil and Gas are at a minimum, and it is recommended that they not be further reduced.

C. The Subsidence of Certain Lands, Particularly in the Long Beach Area, and Effects Thereof

The injection of water and gas in oil fields for the purpose of preventing, retarding or stopping subsidence is still in its experimental stages

This committee recommends further study be given this matter.

D. Western Governors Mineral Policies Conference, Including Recommendations of That Conference

This committee recommends further studies be made on the following subjects·

(1) The effects of federal regulation of public lands on the economy of California's mining industry and the State.
(2) The advisability of compulsory recording of the annual assessment work performed on claims.
(3) Prevention of "claim jumping" in California.

E. Sales Tax on Reconditioned Leased Oil Field Equipment

Based on information presented by witnesses, the committee recommends that the gross receipts from rentals of oil well drilling equipment be exempted from the computation of sales tax. (Assembly Bill No. 72)

F. Waste Levied on Contracts for Disposal of Oil Field Waste

This committee recommends that the gross receipts from the sale in California of oil field production wastes, when such sale is for the disposal of such wastes, be exempted from the computation of the sales tax. (Assembly Bill No. 71)

G. Proposed Changes and Additions to the Oil and Gas Laws

The committee has no recommendations on proposed changes as submitted by State Lands Commission, Division of Oil and Gas, and the industry.

FINDINGS

A. *Agricultural Minerals*

1. Assembly Bill No. 2885 enacted during the 1955 Session of the Legislature revised the rate of the tonnage tax levied on agricultural minerals produced and sold in California.
2. This bill amended Section 1038 of the Agricultural Code to effect a reduction of the tonnage tax on agricultural minerals from 10 cents to three cents per ton until the ninety-first day after the final adjournment of the 1957 Regular Session of the Legislature.
3. The balance in reserve for operations pertaining to the inspection, policing and operations related to commercial and agricultural minerals will be $422,000 based on a Bureau of Chemistry projection through the 1957-58 Fiscal Year.
4. The reserve fund is not used for capital outlay.
5. The Legislature can pass a law to change the use of these earmarked funds.
6. It is the department's policy that the amount of the reserve should equal the cost of one year's operation, currently $296,930.
7. The department estimates 20 percent of its expenditures were devoted to operations pertaining to agricultural minerals and 80 percent to commercial fertilizers.
8. The department does not presently consider the economic value of commercial fertilizer as contrasted with agricultural minerals in determining the equity of the related tonnage taxes.
9. The original tonnage tax on commercial fertilizers (Statutes of 1903) did consider economic values of the products by exempting from any such tax all fertilizers selling for less than $8 per ton.
10. The laboratory testing of agricultural minerals is generally less costly than the testing of commercial fertilizers.
11. Increases in sales of commercial fertilizers have compensated for reduction of the tonnage tax from 25 cents per ton to 15 cents per ton, as far as department revenue is concerned.
12. Increased use of agricultural minerals is anticipated.
13. There is no cost analysis data on the expenditures devoted to operations pertaining to agricultural minerals or commercial fertilizers.

B. *Relations of the Petroleum Industry With the State Division of Oil and Gas*

1. The administration of the code relating to oil and gas production in the State is the responsibility of the Division of Oil and Gas of the Department of Natural Resources.
2. The operations of the division require that all basic information regarding production be supplied by the producing companies.
3. The Oil and Gas Division has reduced its requirements to a bare minimum. Any further simplification will deprive the division of information necessary for its operation.
4. Section 3200, Article 4, Chapter 1 of the Public Resources Code relating to the designation of agents, by producers, in each county wherein oil and gas wells are located has proven impractical in actual operation.

C. *The Subsidence of Certain Lands in the Long Beach Area*

1. The Port of Long Beach has submitted a very comprehensive analysis of the subsidence problem and its cause, effect, and its possible correction. The Long Beach area, both dry land and tidelands, has encountered a very serious subsidence problem. The harbor subsidence area is an egg-shaped basin from 2 to 22 feet deep covering over 14 square miles. At its deepest point the land had sunk approximately 26 feet.
2. The matter of subsidence has been studied extensively in the Long Beach area because of its severity. The experts feel that in this particular case a major cause of the subsidence is the withdrawing of gas and oil from the subterranean oil fields underlying the area.
3. Nothing can be done to lift the lands back to their former state.
4. Unitizing and repressuring the oil zone might prove helpful in retarding the rate of sinking, but there are no examples in which it has.
5. There are many areas that have suffered a certain amount of subsidence; e.g., San Joaquin Valley and Signal Hill. Not all areas having some subsidence are or have been oil producing areas. Likewise, all areas from which oil is being produced have not suffered subsidence.
6. If and when a water or gas injection program is indicated to prevent, retard or stop subsidence on the basis of present experimentation, unitization would probably be necessary. To accomplish unitization it may be necessary at that time to enact certain enabling legislation to permit the voluntary cooperation in such a program between a municipality and a private company. The voluntary cooperation between private companies would not require enabling legislation.

D. *Western Governors Mineral Policies Conference*

1. Most of the discussion at the conference pointed to the need of legislation and executive assistance at the federal level.
2. Further research and public hearings by this committee seem advisable on the following problems:
   a. The advisability of compulsory recording of the annual assessment work performed on claims.
   b. The effects of federal regulation of public lands on the economy of the California mining industry, and the State.
   c. Prevention of "claim jumping" in California.

E. *Sales Tax on Reconditioned Leased Oilfield Equipment*

1. Most of the rock-bits involved were owned by the manufacturer and were leased, rather than sold, to the operators.
2. The code provides for such transactions wherein the usefulness of the product does not normally exceed the period of the lease. A sales tax is mandatory in such "in lieu of sale" operations.

F. *Taxes Levied on Contracts for Disposal of Oilfield Waste*

1. The State Board of Equalization has long levied a transportation tax on the removal of oilfield waste materials.

2. This industry operates on a 24-hour basis and conducts 25 percent of its business between the hours of 5 p.m. and 6 a.m. in order to comply with the regulations of various state departments governing oil field operations, and the county health and mosquito abatement projects.
3. Other transportation involved in the contribution to the public health and safety are granted certain exemptions; e.g., operators who dispose of waste from septic tanks, cesspools, garbage, trash, ashes, etc.
4. The oilfield waste disposal services involves the following operations:
   a. Waste mud, water and chemicals for drilling wells.
   b. Waste oil from tank batteries and sumps on producing oil leases.
   c. Waste salt water from wells and tanks.
   d. Waste oil and water from producing well cellars.
   e. Waste oil, water and sediment from cleaning tank bottoms
   f. Waste oil and water from oil refineries, pits and sumps.
   g. Waste oil from pipeline breaks.
   h. Flood water from streets and basements.

G. Proposed Changes in the Oil and Gas Laws

1. Under Section 6827 of Chapter 1724 with respect to royalty provisions, it is very difficult for the staff of the State Lands Commission, and its consultants, to classify lands proposed for lease as to whether they are wildcat or proven lands. Under the present act, proven lands pay 16⅔ percent minimum royalty with a sliding scale at the discretion of the commission, plus a bonus; wildcat lands pay a flat 12½ percent royalty plus the bonus.
2. Section 6830 of the Public Resources Code presently provides that the State Lands Commission regulate the spacing of wells and rate of drilling. Grantees of the State do not have full authority to go into the question of spacing of wells and rates of production under the present wording of this section, nor does the commission have the authority to determine the spacing of wells and the rate of drilling.
3. Section 6873.2 provides that the State Lands Commission shall, within 30 days after holding public hearings, determine to offer lands for lease. The commission has found it impossible to comply with this 30-day limit because of the time involved in experts evaluating the lands, and determining what restrictions will be put in the lease with respect to protection of on-shore developments.
4. There exists some terminology that needs to be expanded or more clearly defined in the existing oil and gas laws contained in Division 3 of the Public Resources Code.
5. Section 3608 is a section of the spacing laws which provides for the compulsory inclusion of small parcels of land aggregating less than one acre when they are surrounded completely by other leased land. This protects the rights of persons who own small lands since they cannot drill on it themselves.

There is no provision in this law whereby the person into whose lease this land is included has to file a quitclaim after he gives the lease up, therefore, in many cases a cloud is left on the title of these small parcels of land.

6. The law provides that every owner or operator of any well shall designate an agent, and this agent must reside within the county where the well is located. Residence within the State would be sufficient, and in keeping with actual practice.
7. The Division of Oil and Gas has experienced difficulty in the past in getting service of orders, notices and processes upon foreign operators.

   The operators designated agent, now required by law, could be served more readily as they are required to reside within the State.
8. Section 3202 requires every person who acquires the ownership of any well to give certain notice of transfer. Someone can take over the operation of a well, and the Division of Oil and Gas can not demand this notice from them under present law.
9. The law does not specifically provide for the filing of an electric log of a well that has been drilled. This is one of the most valuable records obtained in connection with the drilling of a well.

   About 95 percent of the electric logs that have been made in the State have been filed voluntarily.
10. The requirement to file notice before an operator may remove any rig, derrick, or other operating structure is considered an obsolete provision.
11. The authority of the Division of Oil and Gas to hold a hearing with respect to the location of a well to determine whether or not it is a proper location needs to be clarified.
12. The section of law that provides that the producing interval of a directional well that is drilled shall be not less than 75 feet from an outer boundary of the parcel of land into which the well is drilled needs to be clarified. If the land is less than 150 feet in width it is impossible to comply with this requirement, legally, and yet the land may be less than 150 feet in width provided it contains an acre
13. The opening of directional survey records of a slant-drilled well to any other operator in the same field is not in keeping with present law with respect to records
14. Section 3608 provides for the inclusion of small parcels of land aggregating less than one acre in area into a surrounding lease when they are surrounded, in order to protect the owners interest. This can only be done when the notice is filed to drill a well on a lease hold covering the other lands.

    There is no provision for an inclusion on request of the owner of the small parcel.

    If, for any reason, the small parcel is not included in the surrounding lease, under present law, there is no legal way he can get it in later.

15. The present law requires that the small parcel be included into the lease with which it has the longest common boundary. In many cases there are two or more boundaries of equal length, and there has been no way to legally determine into which lease the small parcel should be placed.
16. Section 6873 of the Public Resources Code subsection (b) prohibits pollution and contamination of the ocean by operators leasing tide or submerged lands.

    Salt water produced from oil wells can now be cleaned up and put into sewage systems eventually ending up in the ocean. Operators of state leases are transporting salt water by barge or submarine pipe to shore, cleaning it up, and then putting it into the normal sewage disposal systems.

FULL REPORT

A. AGRICULTURAL MINERALS

The 1955 Session of the Legislature enacted Assembly Bill No. 2885, introduced by Assemblyman Kelly, which revised the rate of the tonnage tax levied on agricultural minerals produced in California.

This bill amended Section 1038 of the Agricultural Code to effect a reduction of the tonnage tax on agricultural minerals from 10 cents to 3 cents per ton until the ninety-first day after the final adjournment of the 1957 Regular Session of the Legislature.

The Assembly Rules Committee assigned the subject matter of Assembly Bill No. 2885 to the Assembly Interim Committee on Manufacturing, Oil, and Mining Industry to study the tax levied on agricultural minerals as contrasted with the tax on commercial fertilizers, and that such study include the enforcement, policing and operation of the act as it relates to these industries, and that a report be made to the Assembly at the 1957 General Session of the Legislature.

Pursuant to this referral from the Assembly Rules Committee, the Assembly Interim Committee on Manufacturing, Oil, and Mining Industry acquired substantial data regarding the industry. On January 26 and 27, 1956, the committee conducted public hearings at the Bakersfield Inn, Bakersfield, California.

Considerable publicity was given in advance of the hearings and members of the two industries were notified by mail.

Chairman Kelly presided at the hearings. In addition to the committee members and staff, those present included:

Harvey Holloway, gypsum producer;
Al Holloway, gypsum producer;
Clint Fannin, gypsum producer;
Wm. R. Hulsey, attorney for Holloway Company;
Allen Lemmon, Chief of Division of Chemistry;
Charles V. Dick, Chief, Plant Industry;
Malcolm Hersko, Legislative Counsel;
Don Wright, Legislative Auditor's Office;
C. Sheldon Morley, Kern County Agricultural Commissioner.

Mr. Allen Lemmon, Chief of the Division of Chemistry, State Department of Agriculture, presented a prepared statement.

The witness of the agricultural minerals industry was Mr. Harvey S. Holloway, President of H. M. Holloway Company, Inc. Mr. Holloway's testimony was based on factual data relating to the operation of the industry.

The pertinent points developed in the presentations and the discussion that followed the testimony of the witnesses included:

1. The balance in reserve for operations pertaining to the inspection, policing and operation related to commercial fertilizers and agricultural minerals was $542,243 as of June 30, 1955.

2. A deficit of $40,000 is anticipated in next year's operation. Any deficit resulting from the operation of Assembly Bill No. 2885 will be taken out of this accumulated reserve.

3. It is the department's policy that the amount of the reserve should equal the cost of one year's operation, currently $245,215.

4. The reserve fund is not used for capital outlay.

5. The Legislature can pass a law to change the use of these earmarked funds.

6. The department estimated that 20 percent of its expenditures were devoted to operations pertaining to agricultural minerals and 80 percent to commercial fertilizers.

7. The department does not presently consider the economic value of commercial fertilizer as contrasted with agricultural minerals in determining the equity of the related tonnage taxes.

8. The original tonnage tax on commercial fertilizers (Statutes of 1903) did consider the economic values of the products by exempting from any tax all fertilizers selling for less than $8 per ton.

9. The laboratory testing of agricultural minerals is generally less costly than the testing of commercial fertilizers.

10. Increases in sales of commercial fertilizers have compensated for the reduction of the tonnage tax from 25 cents per ton to 15 cents per ton, as far as department revenue is concerned.

11. Increased use of agricultural minerals is anticipated.

A second public hearing on this subject was conducted by the committee in Sacramento December 14, 1956.

Chairman Kelly presided. In addition to the members of the committee, the following witnesses were in attendance:

Charles Dick, Assistant Director, Department of Agriculture;
Allen Lemmon, Chief, Division of Plant Industry;
Don Wright, Legislative Auditor's Office;
H. S. Holloway, H. M. Holloway, Inc.;
H. M. Stockman, Chairman, Legislative Committee, California Fertilizer Association.

Mr. Charles Dick, Assistant Director of the Department of Agriculture, presented the background of the problem.

Mr. Dick stated the Agricultural Code requires that manufacturers of fertilizers and agricultural minerals pay a registration fee of $50 a year, and in addition to that pay a tonnage license fee. He gave the code's definition of commercial fertilizer as substances containing 5 percent or more of nitrogen, available phosphorus pentoxide, or potassium oxide, soluble in distilled water, singly, collectively, or in combination, except manures, hay, straws, peat and leaf mold. Agricultural minerals are similar, except they contain less than 5 percent.

Prior to 1943, the tonnage tax was 25 cents a ton on commercial fertilizer and 10 cents a ton on agricultural minerals. In 1943, the commercial fertilizer tonnage tax was reduced from 25 cents to 20 cents a ton and then in 1952 was further reduced to 15 cents a ton.

During the 1955 Legislature the agricultural minerals people called attention to the fact that the tonnage tax on their product was not in proper relation to commercial fertilizer when viewed in the light of the value of the two types of product.

About 85 percent of the agricultural minerals produced in California is gypsum, he noted. Gypsum has a value at the mine of around $1 75 a ton whereas commercial fertilizers may have great range in price, probably closer to $50 a ton or more. The agricultural minerals people pointed out that this relationship of 15 cents for commercial fertilizer and 10 cents for agricultural minerals was not proper in view of the value of the product.

Mr. Dick stated the enforcement of the law against agricultural minerals as compared to commercial fertilizers is somewhat comparable and does not have any particular relationship to the value of the product.

Based on costs to the department, a relationship of 20 cents and 6 cents is the proper relationship, he stated. If the agricultural mineral side does not produce enough revenue to carry its share of the load, the commercial fertilizer people will bear the cost because these funds are co-mingled. He revealed that the amount of money coming in did not have to be exactly the amount of expenditures because of the reserve fund. The department could go on for some time with less revenue than cost before the fees would have to be adjusted. He called attention to the fact that the cost of enforcement involves the taking and analyzing of samples, checking on violations and handling prosecutions and all the things that go with the enforcement of any regulatory legislation.

Mr. Allen B. Lemmon, Chief of the Division of Plant Industry of the Department of Agriculture, was the next witness. He stated that the cost of analyzing agricultural minerals and commercial fertilizers differ according to the amount of time put in and the complexity. Gypsum was listed as an inexpensive one. Complex commercial fertilizers are rather expensive in comparison. He stated that, on the basis of running a great many samples at one time, gypsum would be $2 or $3 as compared to perhaps $15 or $20 for commercial fertilizer. He called attention to the other costs that are involved in the whole program indicating that this was the reason for the comparison on the over-all tonnage.

Mr. Lemmon reported that there are 366 firms holding commercial fertilizer registrations, and 153 agricultural minerals registrations. Registration fee is $50.

Mr. Lemmon called attention to Bureau of Chemistry reports that indicate that for the first three quarters in 1956 commercial fertilizers enjoyed an increase of about 5 percent over the similar quarters for 1955. This follows the trend of increase that has regularly occurred in sale of commercial fertilizers in California, he observed.

For the first three quarters of 1956 agricultural minerals show approximately 10 percent higher sales than in similar quarters in 1955. This is a reversal of the trend which occurred during the years 1952-1954 when there was a great reduction in sales of agricultural minerals, Mr. Lemmon observed.

Mr. Lemmon reported the Bureau of Chemistry experienced a deficit of $24,038 during Fiscal Year 1955-56 in expenditures for fertilizing materials enforcement. Had the agricultural minerals tax not been reduced, there would have been a surplus of $155,517, he stated. A tonnage license tax of 7¼ cents would have balanced the budget, he

noted. His preliminary budget estimates for 1956-57 indicate a possible deficit of $84,970.

Based on a projection through the 1957-58 Fiscal Year, Mr. Lemmon stated the reserve fund balance would be $422,000, leaving more than the estimated one year's operating cost at that time of $382,000. It's not a matter of money to carry on, but one of establishing an equitable relationship between the two groups, Mr. Lemmon stated.

Efficient administration and utilization of manpower precludes handling the two materials separately. Other than estimates, there are no accurate data on apportionment of costs between the two, he stated.

Assemblyman Hansen stated there must be a relationship in the enforcement, and a relationship in the dollar volume; otherwise it becomes a business of one group saying what they think it should cost and another group differing with them. We need more data on this, he stated.

Mr. Don Wright of the Legislative Auditor's Office was the next witness.

He stated a cost analysis would be difficult because the relationship between the two would change as their yearly volume changed. He suggested a short sampling might give an idea of the proportionate relationship; one that included lab costs as well as time required in traveling and taking samples.

Mr. Wright noted that what would be an equitable fee one year would not necessarily be so the following year. To some extent, whatever fee is set is going to be an arbitrary one.

Mr. Harvey Holloway of H. M. Holloway Gypsum and Agricultural Minerals, was the next witness.

He noted that a tonnage tax of 10 cents per ton was first fixed on the sale of agricultural minerals in 1933, and until the 1955 Session of the Legislature had not been changed, notwithstanding a great increase in the use of such minerals and the consequent taxation beyond the intent of the original legislation.

He stated that during the period 1933 through 1955 the use of minerals by agriculture has grown from 24,118 tons to 695,972 tons which is an increase of almost 2900 percent in 23 years.

The use of gypsum as a soil conditioner has become an important factor in the conduct of farming practices in California, he noted. Gypsum usage constitutes over 80 percent of the total usage of agricultural minerals, he stated.

Using his company as an example, Mr. Holloway noted that during the last 12 years his tonnage tax payments to the State of California have averaged almost 6 percent of gross receipts, F.O.B. the mine. During the same period his mine labor costs averaged almost 8 percent of gross receipts, he stated. In relation to total operating expenses tonnage tax was 8¼ percent whereas labor was 14 percent. The tonnage tax costs us three-quarters as much as our labor costs do, he said.

The tonnage tax problem is one of serious proportions to the producer of an agricultural mineral such as gypsum, he said. He noted that the tax on agricultural minerals is 20 times greater than it is on commercial fertilizer based on the economic value of the product. Gypsum sells for $1.75 per ton and commercial fertilizer for $50 to $60 per ton, Mr. Holloway stated.

The $1.75 per ton price has been in existence since 1946, he related. Operation methods have been modernized to keep the price stable, so that the tonnage tax has been an ever-increasingly important factor, he noted. The tonnage tax should be fixed at a rate that is reasonable and equitable.

A large portion of agricultural minerals is transported and sold in bulk, Mr. Holloway stated, and the statutes and its regulations should be modernized to more properly protect the purchaser of such minerals in respect to the certification of weights on each lot of material and the identification as to quality and quantity.

Mr. Holloway stated he believed it feasible and possible to arrive at some comprehensive and exact costs of carrying out the Bureau of Chemistry's functions in this field.

He also recommended that consideration be given to increasing the registration fee as far as agricultural minerals are concerned.

Referring to the fertilizing materials books of 1955 and 1954, Mr. Holloway noted that there are 3,064 samples of commercial fertilizer to 509 analyses of agricultural minerals in 1955. In 1954 and for the last seven years the ratio has been about six to one, he noted.

Noting that his company also engages in farming operations, Mr. Holloway cited costs on 180 acres of cotton. His fertilizer cost was $51 58 per ton on 180 acres for a total cost of $2,799. He used 710 tons of gypsum on the 180 acres at an average cost of $3.28 per ton, or a total cost of $2,329. His tonnage tax cost per acre was 4½ cents per acre for the fertilizer, and 39½ cents per acre for the gypsum. "From the standpoint of the consumer who pays this tax," Mr. Holloway said, "the tonnage tax is high on gypsum."

Mr. Holloway submitted the following table that shows the relative growth of the agricultural minerals and the commercial fertilizer industries from 1933 to 1955 with the percentage gypsum indicated.

TABLE I

ANNUAL AGRICULTURAL USE OF AGRICULTURAL MINERAL vs. USE OF GYPSUM WITH COMPARATIVE USE OF COMMERCIAL FERTILIZERS

Calendar year	*Total agricultural minerals—tons*	*Total gypsum tons*	*Gypsum percent of total*	*Commercial fertilizers tons*
1933	24 118	3,618	15 0	131,178
1934	55,471	7,914	14 3	156,271
1935	51,507	16,787	32 6	185,801
1936	53,320	17,328	32 5	210,939
1937	52,803	24,218	45 9	238,015
1938	48,412	17,580	36 3	210,795
1939	66,611	42,878	64 4	220,431
1940	109,066	77,195	70.8	218,589
1941	159,130	122,304	76 9	267,372
1942	234,794	185,856	79 2	302,721
1943	380,826	300,980	79 0	301,497
1944	516,647	395,174	76 5	420,450
1945	479,010	367,108	76 6	486,594
1946	540,622	414,286	76 6	574,117
1947	605,387	490,268	81 0	602,015
1948	500,330	394,979	79 0	550,336
1949	427,588	338,340	79 1	517,009
1950	411,104	327,970	79 8	640,050
1951	700,356	611,024	87 2	736 203
1952	817,255	708,593	86 7	748,321

TABLE I—Continued

Calendar year	Total agricultural minerals—tons	Total gypsum tons	Gypsum percent of total	Commercial fertilizers tons
1953	714,077	597,520	83.7	808,550
1954	618,339	531,678	86 0	833,833
1955	695,972	572,511	82.3	976,160

NOTE Source of above information from annual publications of the Bureau of Chemistry of California, Department of Agriculture, issued in accordance with Section 1033 of the Agricultural Code of California

Mr. M. M. Stockman, Chairman of the Legislative Committee for the California Fertilizer Association, was the next witness.

He stated that his committee felt that each industry whose products are the concern of the Bureau of Chemistry and who pay the taxes on the sale of its materials towards the bureau's support should rightly stand on its own feet. He expressed concern that the commercial fertilizer industry might be called upon to carry a disproportionate share of the burden of regulating the agricultural minerals industry.

He recommended that if any permanent reduction be placed in effect, that it be made not less than six cents on each ton of agricultural minerals sold in California. This would probably suffice in future years, he said, if expansion of use should continue as it has during recent years.

He stated that the crux of this matter is not what the material costs or what it is sold for, but what it costs the State Department of Agriculture to administer the code for the benefit of the farmers for whom it was originally enacted.

He indicated he did not believe there would be any value in a cost analysis on a short term basis. A proportion of 15 to 6 would be fair in his opinion.

Assemblyman Klocksiem stated that any rate of taxation arrived at now by the committee would be on an arbitrary basis He indicated he wanted to see the committee get some real information as to what the tax should be.

Chairman Kelly agreed that additional information was needed, and noted that the committee must be fair to those operating the business and still have sufficient funds available to the department.

B. RELATIONS OF THE PETROLEUM INDUSTRY WITH THE STATE DIVISION OF OIL AND GAS

The administration of the code relating to oil and gas production in the State is the responsibility of the Division of Oil and Gas of the Department of Natural Resources.

The operations of the division require that all basic information regarding production be supplied by the producing companies. This requires considerable paper work by the producers.

The Assembly Manufacturing, Oil and Mining Industry Committee was requested to conduct a study of the amount of paper work required of the producers by the division to determine whether further simplification was possible without depriving the division of any of the information necessary for its operations.

This study revealed that the Oil and Gas Division, under the competent direction of Supervisor E. H. Musser, had reduced its requirements to the barest minimum. A survey of the oil and gas producers conducted by the Oil Producers Agency failed to produce a single

complaint or suggestion for improvement. Personal interviews with producers by the committee counsel revealed complete satisfaction with the division's paperwork requirements.

The committee's interest in the requirements of the oil and gas laws did reveal the impracticability of Section 3200, Article 4, Chapter 1, of the Public Resources Code relating to the designation of agents, by producers, in each county wherein oil and gas wells are located.

Supervisor Musser proposed the following amendment to Section 3200:

> "Every owner or operator of any well shall designate an agent, giving his post office address, who resides in this state upon whom may be served all orders, notices, and processes of the supervisor, a board, or any court of law. Every person so appointing an agent shall, within five days after the termination of any such agency, notify the supervisor in writing, of such termination, and unless operations are discontinued, shall appoint a new agent."

C. THE SUBSIDENCE OF CERTAIN LANDS AND THE EXPLORATION OF OFFSHORE OIL FIELDS

At the request of Assemblyman Klocksiem and Grant and the City of Long Beach, the committee conducted a public hearing at Long Beach on November 18, 1955. This meeting was held jointly with the Assembly Judiciary Subcommittee on Tidelands.

Chairman Kelly presided. In addition to members of the two committees, the following witnesses were in attendance:

Gerald Desmond, Acting Mayor of Long Beach;
Robert Shoemaker, Long Beach Port Engineer;
Jess D. Gilkerson, City Engineer of Long Beach;
Frank J. Hardesty, Chief Petroleum Engineer of Long Beach;
Pierce Works, Special Counsel for City of Long Beach;
John R. McKinney, Chairman, Long Beach Subsidence Remedial Council;
Wm. J. Travers, Vice President, Richfield Oil Corporation;
Frank G. Miller, Professor of Petroleum Engineering, University of California;
W. H. Somerton, Associate Professor of Petroleum Engineering, University of California;
Congressman Cecil King.

Mr. Gerald Desmond, Acting Mayor of Long Beach, welcomed the committees to Long Beach and stated that subsidence in that area presents a more serious danger than is faced by any other community in the nation.

The witnesses for the City of Long Beach presented all facets of the problem. Mr. Robert Shoemaker, Port Engineer, gave the history of subsidence in the various parts of the area, and related the land sinking to the discovery and withdrawal of oil and gas in 1936. While recognizing that unitizing and repressuring the oil zones might prove helpful in retarding the rate of sinking, Mr. Shoemaker stated, "We know of no example in which it has." Testimony revealed that the harbor subsidence area in Long Beach is an egg-shaped basin from 2 to 22 feet deep covering over 14 square miles.

Mr. Shoemaker submitted the following documents to the committee:

1. Prepared Statement.
2. Why the Long Beach Harbor Department is doing Subsidence Remedial Work.
3. Subsidence Problems in Long Beach Harbor District.
4. Protection of Subsiding Waterfront Properties.
5. Outline of Subsidence Problems and of Access and Flood Control Problems as They Affect Specified Areas.
6. Possible Harbor Damage From Seismic Sea Waves.

Also submitted were numerous maps delineating the subsidence areas.

A second public hearing was conducted by the committee in Long Beach on August 17, 1956.

Chairman Kelly presided. In addition to the members of the committee, the following witnesses were in attendance:

Robert Shoemaker, Long Beach Port Engineer;
William J. Travers, Vice President, Richfield Oil Corporation;
Richard C. Bergen, O'Melveny & Myers, Counsel for Richfield Oil Corporation;
Frank Hardesty, Chief Petroleum Engineer, Long Beach Harbor Department.

Mr. Robert Shoemaker, Long Beach Port Engineer, noted that many experts believe that unless subsidence is combated subsurface, and some effort at pressure maintenance is commenced, subsidence could go on in the Long Beach area even after the field is shut down—well beyond the year 2000. The degree to which a delayed program would be of benefit is a debatable thing however, he stated. His estimates of total subsidence are from 30 to 34 feet as of about 1970 or 1972. The approximate maximum rate at the center of the subsidence bowl is between 1.5 and 1 6 feet per annum, he reported. The curve has been downward, the rate having been 2.6 feet per annum at one time.

His testimony indicated he believed that some type of legislation to permit a repressuring of the field is necessary to attack the subsidence problem. One of the prime factors in the subsidence problem is the time element, Mr. Shoemaker stated.

Further testimony by Mr. Shoemaker revealed that the City of Long Beach, on a very limited scale, has done some work on repressuring on the tidelands where they felt reasonably sure they were not disturbing any other areas.

He indicated that he did not believe all the operators involved would voluntarily agree and repressurize this whole pool without legislation and some type of unitization agreement.

Subsidence is a very broad problem occurring in other parts of the State as a result of reduction of fluid pressures, it was indicated.

One estimate indicates 75 percent of virgin pressures would essentially control subsidence, and it would become a negligible factor from year to year.

Mr. Richard C. Bergen, a partner in the firm of O'Melveny & Myers, counsel for Richfield Oil Corporation, gave testimony on the possible effects of Proposition No. 4 on subsidence in the Long Beach Area.

Mr Frank Hardesty, Chief Petroleum Engineer of the Long Beach Harbor Department, testified on Proposition No. 4 and its effects on subsidence in the Long Beach Area.

Mr. Hardesty indicated he didn't think they had the full answer as to whether peripheral flooding or pattern flooding would be the most efficient method in the Long Beach Area.

He stated that anything that would permit them to engage in secondary recovery projects will undoubtedly help on the subsidence problem.

D. WESTERN GOVERNORS MINERAL POLICIES CONFERENCE

Meetings of the committee were held in Sacramento on November 7 and 8, 1955, coincident with the meeting of the Western Governors Mineral Policies Conference.

Members of the committee attended all sessions of the conference and participated in its discussions of the critical problems that confront the mining industry of California and the other western states.

Governor Knight acted as host of the conference, attended by Governors Robert Smylie (Idaho); Charles H. Russell (Nevada); Lt. Governor Stephen McNichols (Colorado); J. Bracken Lee (Utah); and Milward L. Simpson (Wyoming).

California's Director of Natural Resources, DeWitt Nelson, was co-chairman.

The conference covered a broad range of mining problems, including taxes, lands and water, mineral economics and public information. While most of the discussion pointed to the need of legislation and executive assistance at the federal level, the committee did review the recommendations of the conference in an effort to determine to what extent legislation by the State can aid in solving some of the more serious problems of the mining industry. Much further research is required before any firm recommendations can be made to the Assembly.

Among the problems that need further study are: (1) the advisability of compulsory recording of the annual assessment work performed on claims; (2) the effects of federal regulation of public lands on the economy of California's mining industry, and the State; and (3) prevention of "claim jumping" in California.

E. SALES TAX ON RECONDITIONED LEASED OIL FIELD EQUIPMENT

At a public hearing of the committee in Bakersfield, July 27, 1956, the subject of sales taxes imposed on leased oil field equipment was explored at the request of several Kern County firms engaged in the reconditioning of such equipment, specifically rock-bits used in drilling operations.

Witnesses for the industry included Charles Steelsmith, Stan Janowski, and O. O. Cullum.

The testimony and committee discussion revealed that most of the rock-bits involved were owned by the manufacturer and were leased, rather than sold, to the operators. Counsel advised that the code provides for such transactions wherein the usefulness of the product does not normally exceed the period of the lease and that a sales tax is mandatory in such "in lieu of sales" operations.

F. TAXES LEVIED ON CONTRACTS FOR DISPOSAL OF OIL FIELD WASTE

This subject was discussed at a public hearing of the committee January 27, 1956, in Bakersfield at the request of the oil field service companies of Kern County.

Representing the industry were L. W. Potter, Aubrey Webb, and Charles Steelsmith.

Testimony and discussion revealed that the State Board of Equalization has long levied a transportation tax on the removal of oil field waste materials. The industry feels that their operations are entitled to the same exemptions that govern other transportation involved in the contribution to public health and safety; as are the operators who dispose of waste from septic tanks, cesspools, garbage, trash, ashes, etc.

This industry operates on a 24-hour basis and conducts 25 percent of its business between the hours of 5 p.m. and 6 a.m. in order to comply with the regulations of various state departments governing oil field operations, and the county health and mosquito abatement projects.

The waste disposal service involves the following operations:

1. Waste mud, water and chemicals for drilling wells.
2. Waste oil from tank batteries and sumps on producing oil leases.
3. Waste salt water from wells and tanks.
4. Waste oil and water from producing well cellars.
5. Waste oil, water and sediment from cleaning tank bottoms.
6. Waste oil and water from oil refineries, pits and sumps.
7. Waste oil from pipeline breaks.
8. Flood water from streets and basements.

G. PROPOSED CHANGES IN THE OIL AND GAS LAWS

Meeting of the Assembly Committee on Manufacturing, Oil, and Mining Industry held in Sacramento, December 13, 1956.

The Honorable H. W. "Pat" Kelly, Chairman of the committee, stated the purpose of the meeting was to give the committee an opportunity to hear presentations from the State Lands Commission, Division of Oil and Gas, and the industry on proposed changes in the Oil and Gas Laws.

Rufus W. Putnam, Executive Officer of the State Lands Commission, presented several proposed amendments to the Cunningham-Shell Act, giving the commission's thinking on each amendment.

> Colonel Putnam: It is proposed by the State Lands Commission to amend Section 6827 of Chapter 1724 with respect to royalty provisions. Under present procedures it is necessary for our office and for the Lands Commission to reach conclusions before a lease is advertised for with respect to whether or not the lands proposed to be leased are wildcat or proven lands. Under the present act if they are proven lands, there is a $16\frac{2}{3}$ percent minimum royalty with a sliding scale at the discretion of the commission so that as production goes up, the royalty will go up, plus the bonus, and the award of the lease is made to the highest bidder. As to wildcat lands, the present act provides for $12\frac{1}{2}$ percent flat royalty, plus the bonus.

The purpose of this change is to eliminate the classification, the requirement for classification, and strike some happy medium between the two.

These proposed changes will result in having no classification necessary, and a 12½ percent minimum royalty with a sliding scale so as production goes up, the State will share along with the lessee, and the leases to be awarded on the basis of the highest bonus.

In reply to a question by Assemblyman Shell, Colonel Putnam stated that as far as he knew the Federal Government had not experienced the same difficulty classifying land as to proven or unproven. He noted that the United States has the benefit of the services of the U. S. Geological Survey, which is a large and experienced organization.

Colonel Putnam's testimony revealed that the commission presently grants permits for geophysical exploration and core drilling in excess of 500 feet in the off-shore areas. This type data has only been available for a comparatively few months, and what has been accumulated so far is not helpful in classification. The colonel acknowledged that this amendment would make the bid program for proven lands and wildcat lands the same, except that the sliding scale would be set appropriately for lands the commission feels are more prospectively profitable.

Colonel Putnam proposed changing Section 6830 of the Public Resources Code so that instead of regulate, the State Lands Commission will be allowed to determine the spacing of wells and the rate of drilling. He noted that the added language makes it possible for grantees of the State, including the City of Long Beach, to go into the question of regulation and determination of spacing of wells and rates of production. They do not have full authority in this matter at present.

In reply to a question by Assemblywoman Donahoe regarding "working interest";

Colonel Putnam: Our present Section 6832, which looks toward a cooperative unit plan of development, is first amended so we bring in the grantees of the State. Then rather than have it left to the State Lands Commission to determine whether or not the unit operation might be advisable in the public interest, we have placed it on the basis of this: "Such determination by the State may be made only in the event that at least an undivided 75 percent of the total working interests in the area proposed to be affected have agreed to the proposed cooperative or unit plan of development or operation." We propose the addition of a definition by 6832.2. "Working interest" is defined to mean an interest held in lands by virtue of fee title, a lease, operating agreement, or otherwise, under which the owner of such interest has the right to drill for, develop and produce oil and gas. A working interest shall be deemed vested in the owner thereof even though his right to drill or produce may be delegated to an operator under a unit agreement, or other type of operating agreement.

Colonel Putnam agreed with Assemblywoman Donahoe that the law under which the industry is now operating has not been harmful to the best interest of conservation in California.

Colonel Putnam: Section 6873.2 provides that the public hearings shall be held in accordance with certain procedures, and presently it provides that within 30 days after such hearings, the commission shall determine to offer the lands for lease. We have found it impossible to comply with that 30-day limit because we have to get experts in under the present law to evaluate the lands, determine what restrictions will be put in the lease with respect to protection of on-shore developments and the 30 days is not adequate. Furthermore, there is a very distinct difference of opinion between the Attorney General's office and attorneys for the industry as to when the discretion of the State Lands Commission as to making a determination on the offering of lands for lease expires.

Colonel Putnam acknowledged this issue would be controversial, and that the commission would be satisfied with 90 days as an ultimate time limit.

E. H. Musser, Chief of the Division of Oil and Gas, Department of Natural Resources, presented a series of proposed changes to the existing oil and gas laws contained in Division 3 of the Public Resources Code.

Mr. Musser made the following proposed changes:

1. The addition of Section 3014 which defines "board" as any board of oil and gas commissioners.
2. The addition of Section 3015 which defines "district" as oil and gas district as provided for in Section 3150.
3. The addition of Section 3602.2—"In determining the area of parcels of land for the purposes of this chapter, the area of the oil and gas mineral estate shall be used exclusively" This, Mr. Musser pointed out, is to make certain that the mineral estate is considered and not the surface of the land. There have been arguments on this in the past.
4. The addition of Section 3608.1—"The owner or operator of any leasehold, into which land has been included under provisions of Section 3608, shall cause to be recorded an appropriate quit claim to such land in the proper recorder's office when said leasehold has been terminated." Section 3608, Mr. Musser stated, is a section of the spacing laws which provides for the compulsory inclusion of small parcels of land aggregating less than one acre when they are surrounded completely by other leased land. Section 3608 makes it mandatory upon the supervisor to include those parcels within the lease adjoining with which they have the longest common boundary. There is no provision in this law whereby the person into whose lease this land was included had to file a quitclaim after he gave up the lease; therefore, there was in many cases a cloud left on title of these small parcels of land. This addition makes it mandatory that the operator quitclaim the land so that the title will be clear.
5. The amendment of Section 3002 to define "division" as the Division of Oil and Gas in the Department of Natural Resources.

6. The amendment of Section 3007 to define "gas" as any natural hydrocarbon gas coming from the earth. This would clarify that the code—which was designed to cover oil and gas—means gas that is associated with oil or derived from hydrocarbon sources, Mr. Musser stated.
7. The amendment of Section 3106 to insert the words "or reservoir energy." The term "reservoir energy" is used in the unreasonable waste of gas section of the law, Mr. Musser noted, and in order to be consistent, it should be here too. This is upon advice of the Attorney General, he said.
8. The amendment of Section 3150 taking Contra Costa, San Maeto, Alameda, and San Francisco Counties from Distrtict No. 3 and putting them in District No. 6. This change was proposed for administration purposes.
9. The amendment of Section 3200 providing for a change in the manner of designating an agent. "Every owner or operator of any well shall designate an agent, giving his post-office address, who resides in this State upon whom may be served all orders, notices, and processes of the supervisor, a board, or any court of law. Every person so appointing an agent shall, within five days after the termination of any such agency, notify the supervisor in writing, of such termination, and unless operations are discontinued, shall appoint a new agent." The present requirements that the agent must reside within the county where the well is located have not proven practical, Mr. Musser stated. Operators from out-of-state ofttimes have no one here that you can serve legally. This would obligate them to appoint someone within the State upon whom orders can be served.
10. The amendment of Section 3202 to add the words "operation" in addition to ownership. It states "every person who acquires the ownership or operation of any well must give certain notice of this transfer to the supervisor." Many times, Mr. Musser stated, someone will take over the operation of a well they won't actually own. This gives the Division of Oil and Gas the right to demand notice from them.
11. The amendment of Section 3203 to read "the owner's or operator's estimate of the depth between which production will be attempted."

Mr. Musser discussed another possible change to this section; "Require the owner or operator of the well, before commencing the work of drilling, to file his notice and receive his written approval from the supervisor."

The operator would then be aware of any conditions or requirements that the State would have in connection with the drilling of a well, not only as to location, but as to the requirements for the manner of drilling the well. Mr. Musser observed that the industry has objected to this proposal in the past expressing the fear that the State might take unlimited time to get out its answer, holding up drilling of a well, and causing the loss of a lease. To remove this objection, he recommended putting a time limit of 5 or 10 days. He noted that the normal length of time between receiving a proposal to drill and an answer is probably not in excess of five days.

12. The amendment of Section 3215 to add the words "electric log." The present law does not specifically provide for the filing of an electric log of a well. Mr. Musser stated that the State has been getting some 95 percent of all the electric logs that have been made in the State voluntarily. He recommended that the following also be added to this section: "Additional time within which to comply with the provisions of this section may be granted by the supervisor." This makes it possible for the supervisor to legally waive the filing of records temporarily if he feels that the operator has a good reason for so requesting. Mr. Musser stated the division would continue to reserve the right to obtain any information they might need for a determination of whether or not there is any unreasonable waste of gas.
13. The amendment of Section 3357 to substitute the word "division" for "chapter" to make this apply to the entire act instead of restricting it to one chapter. The insertion of the word "located" to make it possible for the supervisor to hold a hearing with respect to the location of a well to determine whether or not it is a proper location.

    Mr. Musser stated the purpose of holding this type of hearing is to determine ownerships of leases. He also proposed adding "and such person shall be required to produce, when directed, all records, surveys, documents, books, or accounts in his custody or under his control"; and "records, surveys, documents, books or accounts." He recommended deleting "either with or without books, papers, documents or accounts"; and "books, papers, and documents." He suggested changing "30" to "100" miles. These changes, he stated, are designed to make it certain that the division would have the right to obtain all the necessary records it wants in connection with a gas wastage investigation.
14. The amendment of Section 3606 to read "If the parcel of land qualified to be drilled under this section is less than 150 feet in width, the producing interval of such a well shall be as far from the lateral boundary lines of the property as is practicable."

    The present law provides that the producing interval of the well shall be not less than 75 feet from an outer boundary of the parcel of land into which the well is drilled. If the land is less than 150 feet in width, it is impossible to comply with this, legally, Mr. Musser stated. Yet, the land may be less than 150 feet in width provided it contains an acre. This amendment clarifies this situation.

    Mr. Musser further recommended that the phrase "and such plat shall be open to inspection by any other operator in the field in which the well is located" should be deleted from the section. The purpose of requiring the survey to be filed is to make certain the supervisor can determine that the well is not illegally drilled, Mr. Musser stated. Under the present law, a producer can inspect the plat for his own personal advantage to determine where the well was drilled.
15. Certain amendments to Section 3608. This section gives the supervisor the right to include small parcels of land aggregating less than one acre in area into a surrounding lease when they are surrounded, in order to protect the owner's interest. As the law is now written this inclusion can only be done when the notice is

filed to drill a well on a leasehold covering the lands into which the small parcel is going to be included. This amendment provides for an inclusion on request of the owner of that small parcel himself, Mr. Musser stated. Also proposed was an amendment to the section to provide that the person filing the request for inclusion, either the operator or the owner, would have the right to designate into which parcel it should go if there were more than one common boundary of equal length, and if he fails to do so, the supervisor may do so.

Mr. Martin Erk, Counsel for Monterey Oil Company appeared at the afternoon session with recommendations for amendments to Section 6873 of the Public Resources Code. This section provides that when leasing tide or submerged lands, the State Lands Commission shall prepare a form lease which shall contain specified provisions. Subsection (b) of that section relates to pollution.

Mr. Erk stated that salt water that is produced from oil wells can now be cleaned up and put into sewage systems. This same salt water eventualy ends up in the ocean. He noted that on Monterey Oil Company's State lease off Seal Beach, the company is required to either barge the salt water to land or pump it by submarine pipeline. It is put into the usual disposal systems eventually being pumped into the ocean. Mr. Erk stated his company felt it would be economical and proper to permit the operation of state leases in such a manner that polution and contamination of the ocean still would be prohibited, but that clean salt water could be put into the ocean.

Assemblyman Burke asked Mr. Erk if the water proposed to be dumped into the ocean is given any treatment, or if it just comes out of the well and would be dumped back into the ocean.

Mr. Erk stated the water would be treated so that all contaminants would be removed. He further stated that any regulations which would further this purpose would not be objectionable so far as Monterey Oil Company is concerned.

Assemblyman Shell noted that because of the consistency of the operation, supervision of water put into the ocean could be accomplished by periodic checks similar to those conducted for sewage disposal systems on-shore.

Mr. Erk noted that prior to the passage of the Shell-Cunningham bill, it was necessary that production and operations be carried on with respect to state leases only from filled lands. The Shell-Cunningham bill provided that leases could be operated from barges or platforms or other structures. Mr. Erk proposed that leases issued prior to the passage of this bill should also have the same advantage of operating from the same type of structures that are permitted under the new law. His proposed amendment would permit any existing lease to be amended so that it could contain or conform with the provisions of subdivisions (a), (b), (c), and (d), he stated. He noted there were a number of these leases in existence now. He stated that he did not propose there

should be any change in the supervision by the State Lands Commission as to the type of structure.

Mr. Larry Seaman, representing the San Joaquin Valley Oil Producers Association, submitted a resolution from his organization. The resolution recommended and urged a full and complete study of the activities of the oil and gas industry in the State of California in relation to the appropriate statutes, rules and regulations under which the industry now operates. The resolution further recommended that the findings and recommendations of such an industry-wide study should be given wide dissemination The proposed study would be undertaken by the industry itself.

Mr. Larry Stevens, registered representative of Richfield Oil Corporation, appeared to present a letter for the record from Richfield's president, Charles Jones. The letter stated Mr. Jones and Richfield Oil Corporation did not agree with the San Joaquin Valley Oil Producers Association's resolution. They believe that sufficient facts exist to show the need for an adequate oil conservation law in California, and to furnish the Legislature all the information it requires for the enactment of such a law.

Mr. Gordon A. Goodwin, counsel for Richfield Oil Corporation, appeared to state that the provisions offered on unitization were not clear, nor did they cover the subject. He recommended the State Lands Commission and the committee consult further with the industry before the Legislature gives any further consideration to this matter.

He further testified that the prevention of loss of reservoir energy under the proposed amendment to Section 3106, insofar as gas is concerned, would seem to be in conflict with Section 3307 which permits the loss of pool or reservoir energy. He called attention to the lack of a guide to the supervisor as to what the order should contain in order to protect the public interest or private property rights or correlative rights.

Everett S. Layman of San Francisco appeared to present a letter for the record. He stated that the most essential function the committee could and should perform is the ascertainment of the essential facts concerning: (a) the extent of waste, if any, existing in California now or at any time in the last several years; (b) the extent of other bad practices, if any, in the industry over the same period. He also recommended the committee ascertain to what extent, if any, the California Conservation Committee has in the last several years made Maximum Efficiency Rate (MER) recommendations and intra-pool distributions and the extent, if any, to which they have been complied with by the industry.