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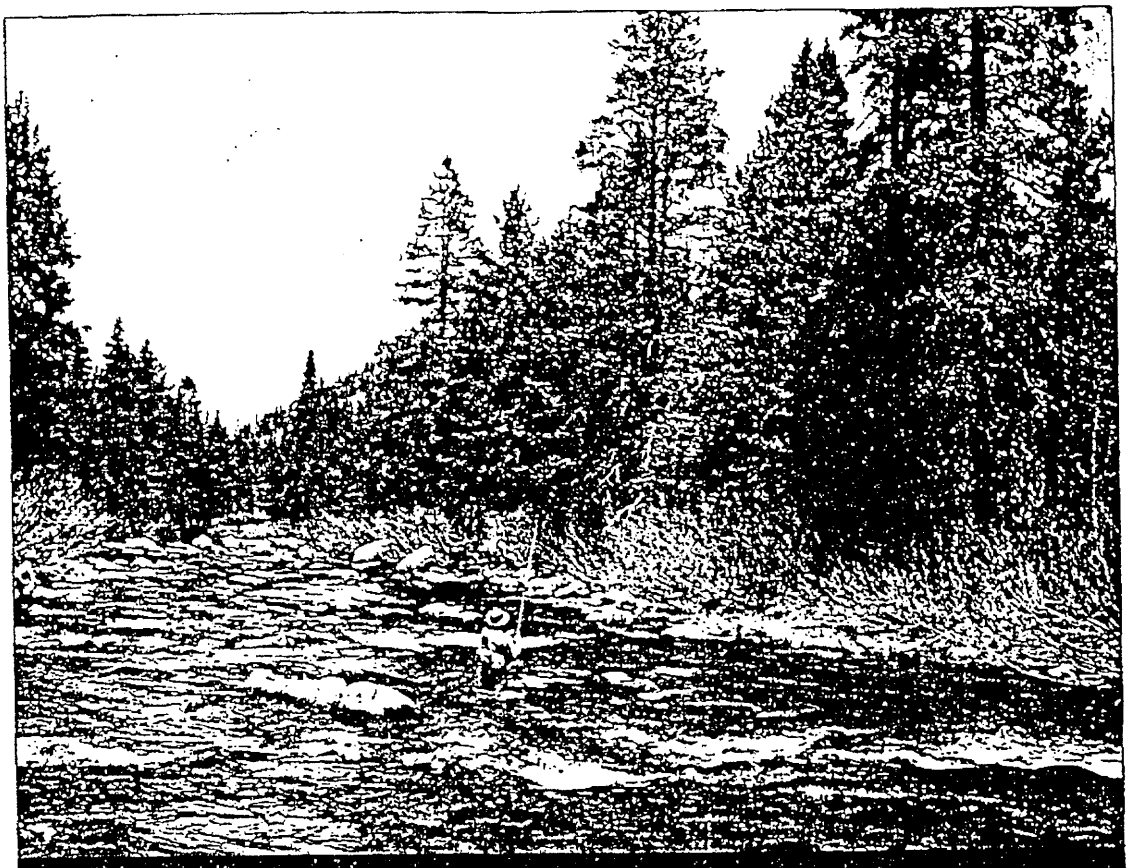
STATE OF CALIFORNIA

RONALD REAGAN, Governor

The RESOURCES AGENCY



RECOMMENDED CHANGES IN WATER QUALITY CONTROL

FINAL REPORT of the STUDY PANEL to the CALIFORNIA STATE WATER RESOURCES CONTROL BOARD

Study Project
Water Quality Control Program

Prepared for the *CALIFORNIA LEGISLATURE*

MARCH
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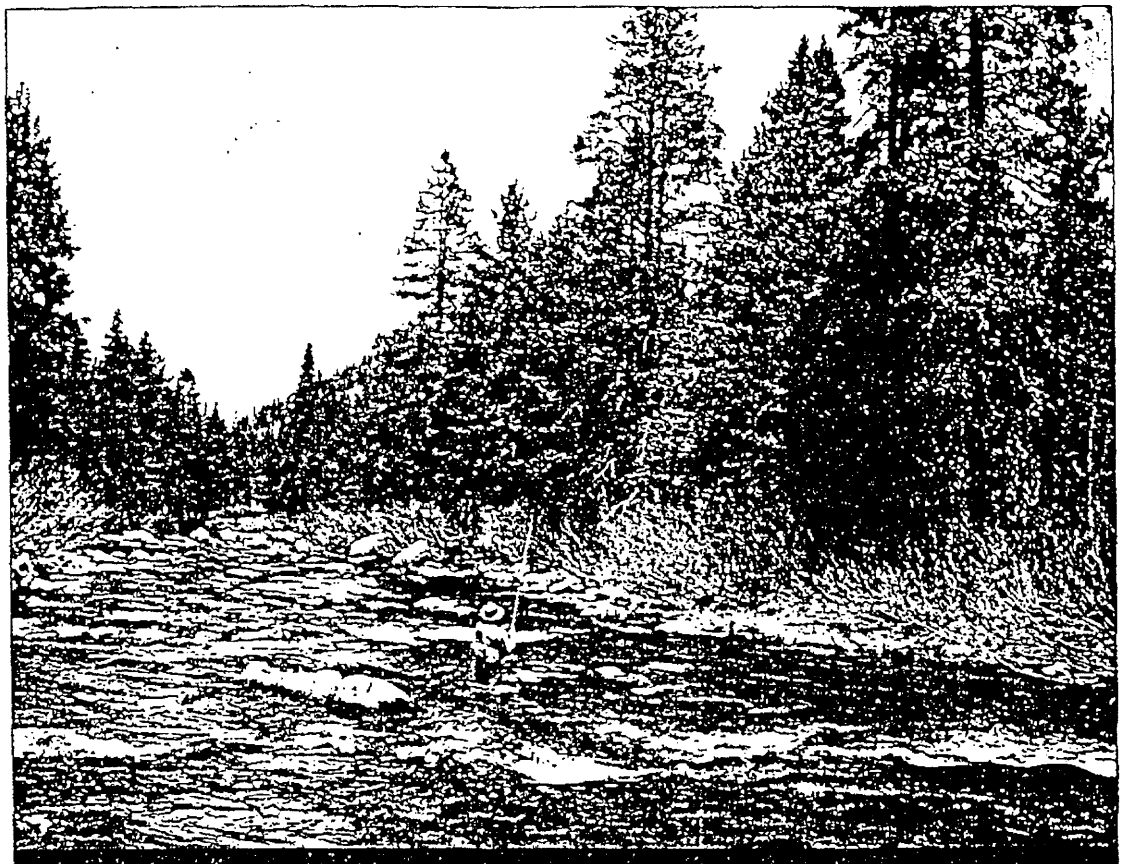
RONALD REAGAN, Governor

The RESOURCES AGENCY



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State of California
Ronald Reagan
Governor

The Resources Agency
Norman B. Livermore, Jr.
Secretary for Resources

RECOMMENDATIONS OF THE STUDY PANEL TO THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD FOR LEGISLATIVE CHANGES AND ADMINISTRATIVE PRACTICES RELATING TO WATER QUALITY

Study Project - Water Quality Control Program

The Study Panel:

Harvey O. Banks, Chairman
Jerome B. Gilbert, Vice Chairman
Burton J. Gindler
Norman B. Hume
Carlyle Reed
Bert L. Smith
Dr. Richard B. Tibby

The State Board:

Kerry W. Mulligan, Chairman
W. A. Alexander, Vice Chairman
George B. Maul
(Resigned in April, 1969)
Edward J. Dibble
Norman B. Hume
Ronald B. Robie
Ralph J. McGill
(Term expired in January, 1969)
Jerome B. Gilbert, Executive Officer

Study Project Staff:

Luther H. Gulick, Director
Bill B. Dendy, Assistant Director
Sandy Tackitt, Administrative Assistant
Ruth Derby, Secretary

The recommended legislative changes in Appendix A were adopted by the State Board on March 20, 1969, for transmittal to the California Legislature.

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FOREWORD

The origin of and authorization for the State Water Resources Control Board's Study Project - Water Quality Control Program, is explained by two basic documents printed in the Assembly Daily Journal for May 13, 1968, on pages 3003 to 3005, as follows:

"Assembly Committee on Water

February 7, 1968

"Mr. George Maul, Chairman
State Water Resources Control Board
1416 Ninth Street
Sacramento, California

"Dear George: As you know, at the end of next year we will complete 20 years of operation under the State's Water Quality Control Act which was enacted by the Legislature in 1949. I am certain that you will agree that our experience to date has shown that the Act has proved to be an effective tool for upgrading the quality of California's waters and maintaining them in adequate water quality.

"As you are probably also aware, the Assembly Water Committee and its predecessor committees of the Legislature have made several studies of the Water Quality Control Act with major changes being enacted at the 1959, 1963, and 1965 sessions. The 1963 and 1965 changes added a new dimension - water quality - to the basic water pollution control features of the Act.

"Most importantly, in 1967 for the first time we modified our basic organization for water pollution and quality control through the creation of the State Water Resources Control Board and the integration of consideration of water quantity and water quality on a state level. Also in 1967 the Act was broadened to include waste water reclamation and water well standards.

"Major action on the federal level in the water quality field has actually followed California's leadership, but in recent years the demands for clean water have stepped up and increasing emphasis is being placed on higher water quality than ever before.

"In working with the Water Quality Control Act over the years, this committee and its predecessor committees have made many changes but have never made a comprehensive review of its basic procedures and provisions.

"It seems to me appropriate that as the new State Water Resources Control Board organizes and begins its operations and as we complete two decades of operations under the Water Quality Control Act, that a comprehensive review of the Act should be undertaken.

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"We are indeed in different times and facing different situations than existed in 1949 with regard to protecting our environment.

"I would respectfully suggest that the board establish a task force to develop a comprehensive review of the Water Quality Control Act, including legal and engineering aspects. The task force objective would be to recommend to the Legislature any changes necessary to update the Act's basic provisions to make it more effective and more workable and particularly to make it more adequate to meet the expanding responsibilities in water quality and the increased demands being placed upon state government by the federal government in formulating effective water quality control programs. For example, interrelationship between water quality and water pollution responsibilities has created uncertainties and is an area in need of immediate study, particularly with regard to enforcement.

"I would hope that such a study would be a comprehensive one which undoubtedly will take considerable time, perhaps even a year. The board should assemble the best available talent from within and without state service to conduct such a study. It should also work closely with its own Water Quality Advisory Committee and with a broadly representative group of technical experts from business, industry, recreation, conservation and agricultural fields so that all aspects of the Act can be carefully reviewed and the views of all interested parties obtained.

"I do not prejudge the results of such a study. But, I am certain that such a study can be most productive at this time.

"I stand ready to support this request with whatever legislative action is necessary, and respectfully request that this suggestion be given the board's early consideration.

"Sincerely yours,

CARLEY V. PORTER, Chairman"

The State Board, after an in-depth review of all facets of such an investigation and consideration of benefits to be derived therefrom, concurred in Mr. Porter's recommendations and adopted the following resolution:

"STATE WATER RESOURCES CONTROL BOARD
RESOLUTION NO. 68-7

"Authorizing establishment of study project for comprehensive review of water quality control laws, including legal, engineering, and manpower needs, to clarify and update laws, and improve enforceability;

"WHEREAS the State Water Resources Control Board is authorized to formulate and adopt statewide policies for control of water

pollution and water quality, and to coordinate the actions of various state agencies and political subdivisions; and

"WHEREAS the Assembly Committee on Water and its predecessor committees of the Legislature have made several studies of the Water Quality Control Act, but no comprehensive review has been made of all aspects of the law since original enactment of the Dickey Act in 1949, and said Committee concurs with this Board in the need for such a review;

"NOW, THEREFORE, BE IT RESOLVED that there is hereby authorized to be established a study project for comprehensive review of water quality control laws, including legal, engineering and manpower needs, to clarify and update laws, and improve enforceability, to be referred to, for convenience, as study project - water quality control laws. The purpose of the study project is to identify and analyze legal, engineering, manpower and administrative problems and needs, and to recommend legislative and administrative changes in a report to be made available to the Assembly Committee on Water in March, 1969; and

"BE IT FURTHER RESOLVED that outstanding leaders be designated to serve on the study project, with five members from the fields of law, engineering, life environmental science, economics, and public administration or community service, with one member from the State Water Resources Control Board and one member from a regional water quality control board. Consultants may be used, as needed, within budgetary limitations. The study project shall work closely with the Water Quality Advisory Committee in this matter. The study project shall organize itself into subcommittees as appropriate, and invite subcommittee membership and participation by representatives of interested governmental and private organizations, and of business, science, industry, and conservation organizations. Subcommittee recommendations and suggested legislative changes will be the basis for the final report of the study project. A staff shall be assigned to assist the study project.

"CERTIFICATION

"The undersigned, Executive Officer of the State Water Resources Control Board, does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the State Water Resources Control Board held on May 2, 1968.

"Dated: May 2, 1968

KERRY W. MULLIGAN
Executive Officer"

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The State Board promptly implemented its resolution by designating to its Study Panel the following leaders in their respective fields (as indicated), each of whom was officially appointed by the Secretary for the Resources Agency.

Harvey O. Banks, Chairman
Chairman of the Board
Leeds, Hill and Jewett, Inc.
of San Francisco
(Engineering)

Jerome B. Gilbert, Vice Chairman
Former Chairman of the San Francisco
Regional Board
(Resigned in February, 1969)
(Regional Board)

Burton J. Gindler
Former Deputy Attorney General
State of California; Now in
Private practice in Los Angeles
(Law)

Norman B. Hume
Member, State Water Resources
Control Board
(State Board)

Carlyle Reed
Publisher of the Sacramento Union
(Community Affairs)

Bert L. Smith
Former Vice President, Farm Credit
Banks of Berkeley
(Economics)

Richard B. Tibby
Director, Catalina Marine Science
Center, University of Southern
California
(Life Environmental Sciences)

The State Board also immediately selected a small staff to give support to the Study Panel. The staff was directed by Luther H. Gulick, an attorney from the State Board's Legal Division.

The Study Panel in June, 1968, organized itself into four working subcommittees, with subcommittee chairmen as follows:

Organization and Administration: Bert L. Smith
Definitions and Policy: Jerome B. Gilbert
Enforcement and Implementation: Burton J. Gindler
Intergovernmental Relations: Norman B. Hume

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Each Study Panel member was designated to serve on two subcommittees, - as chairman, vice chairman, or member. Harvey O. Banks, as Study Panel Chairman, was ex-officio a member of all subcommittees.

In June of 1968 each subcommittee expanded its membership to include representatives of 23 statewide organizations and 13 state agencies with responsibility or interest in water quality or water quality control. Representatives of these organizations and agencies who participated in some or all of the twenty workshop-type subcommittee meetings held from June, 1968, to the middle of December, are identified in Appendix E, as are individuals and other organizations that participated in this Study Project.

Without the unselfish and constructive participation of all these organizations, agencies, and individuals, this report would not have been possible in its present form.

The Preliminary Report of the Study Panel, published in January, 1969, contained all legislative recommendations of the Study Panel and an outline of the administrative problems, practices and recommendations relating to water quality and water quality control which are elaborated upon in this Final Report. The Study Panel and State Board held meetings in January with members and staffs of the nine regional boards to consider the Preliminary Report, and hearings were held in Los Angeles, San Francisco and Sacramento on February 3, 5 and 7, 1969, to which the public was invited.

The legislative recommendations of the Study Panel, constituting Appendix A of this report, were adopted by the State Board on March 20, 1969, for transmittal to the California Legislature as State Board recommendations.

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CHAPTER I

INTRODUCTION

The increasing demands on California's limited water resources make urgent the broad-scale planning and sound decision-making needed to protect or enhance the quality of all the waters of the state. This urgency is superimposed upon important economic and scientific considerations. Water resources that have once become degraded may be practically impossible to restore to a usable or acceptable quality. This is particularly true of groundwater resources, where there is very little water circulation available to remove impurities.

> It costs much less in the long run - and the result is much more certain - to spend the money needed for an effective water quality control program than to try to salvage water resources that have been allowed to become unreasonably degraded.

A. THE PROBLEMS

1. The Impact of Growth on California Water Quality Problems

Man's survival has always depended upon the nature of the environment in which he lives. All natural resources, which provide the basis of man's existence, are interrelated and are supported by the water resources system. Demands on this system are increasing in all parts of the world, particularly in California where rapid population, agricultural and industrial growth and peculiar geographic conditions cause unique problems.

Water is used in many ways: for domestic, agricultural, industrial, and other purposes. Man's senses respond to it. The state's economic and recreational potential depends on it. Water provides separation and absolute space. The direct and indirect effects of water use are interrelated in complex ways.

In 1900, the pace of life was leisurely, fresh water supplies of high quality were relatively plentiful in areas where many people lived, and the disposal of liquid wastes bothered few. In those days, a town - a city - in water surplus areas could take all the water it wanted from the nearest river, use it, then return it to the same river downstream. Nature, through chemical and physical processes, was able to restore the water to its original, or at least an acceptable, condition. Primitive kinds of waste often were broken down into simpler compounds by these natural processes. This chemical and physical action, given time to do a thorough job, significantly improved the quality of the water and in many cases made it usable by the next community.

If the laws of nature worked so well in 1900, why don't they work today? The answer is, "They do." Nature has not changed, but society has.

To begin with, there are a great many more towns and cities in California than there were in 1900. The state's population then was 1,490,000. Today it is 20,000,000. By the year 2020, an estimated 54,000,000 people will reside in California. So, answer number one is people.

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In addition, each person today is using a great deal more water than each person did in 1900. The reason is that man has greatly increased his standard of living. Instead of the 1900 average of five gallons of water used in the home per person per day, it is estimated that man now uses for his household needs an average of 150 gallons of water per person per day, and from 1,500 to 2,000 gallons per person per day is required to supply man with the products of agriculture and industry. Answer number two, then, is prosperity.

Few people are aware of the amount of water required for all the products of this highly complex society. It takes 300 gallons of water to grow the grain for a single loaf of bread; 4,000 gallons of water to produce one pound of beef; and 100,000 gallons of water to manufacture just one automobile. Our advances in technology have resulted in many new and complex types of waste, many of which are imperfectly understood and difficult to treat. The third answer then, is products.

During the last 20 years there has been created a great deal more waste to be discharged - domestic and industrial waste, drainage from farmlands - all the side effects of more people, more prosperity, and more products. As a result, more than 80 percent of the water used nationwide by man has been previously used. In addition, the in-stream uses, such as fish and wildlife and recreation have become vastly more important, therefore, water must be given a higher degree of treatment before discharge into waters of the state in order to maintain these in-stream uses and to enable reuse for other purposes. In the future, there must be a much greater emphasis on the multiple use and reuse of water.

It must be recognized that regardless of the degree of treatment provided for waste there always remains some residual for which satisfactory disposal must be provided.

2. Specific California Water Quality Problems

Control of water pollution and of water quality in the surface, saline and groundwaters of California primarily has been by administrative control of discharges of waste in the manner provided for in the Dickey Water Pollution Act of 1949. This pioneering Act followed a two-year legislative study and publication of a valuable document, the Dickey Report. There have been various amendments and additions to the Act over the following years, but no comprehensive review has been made of the laws or of administrative practices relating to water pollution or water quality control.

Since enactment of the Dickey Act, extensive interpretation of the law has been developed by opinions rendered by the Office of the Attorney General. Little of this interpretation has found its way into the statutes, and, therefore, often remains obscure, both to the regulatory agencies and to those being regulated.

The state's water regulatory activities include a second major component: water rights, and the issuance of permits and licenses to appropriate surface waters for those who propose to put water to some beneficial use.

In 1967, the Legislature consolidated all water rights and water quality control activities, assigning those activities to the State Water Resources

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Control Board by combining the State Water Quality Control Board (successor to the State Water Pollution Control Board) and the State Water Rights Board. A five-man, full-time board was established. This legislation was based upon the principle that the state's water quality and water quantity regulatory activities should be jointly administered because they are interrelated and cannot be effectively administered independently.

The intent of the Legislature in establishing the state board was to achieve a better integration of the quantity and quality aspects of overall water resource management. However, the concepts, policies, and procedures for achieving this objective required study and definition.

As indicated in the Foreword, other major areas of the state's water pollution and water quality control programs were in need of review. Changing conditions made mandatory a basic review of all aspects.

B. THE APPROACH

The fundamental concern of the Study Project - Water Quality Control Program has been to develop a way in which all affected parties, acting together, can plan for and have available water of the quality as well as the quantity needed for use and reuse. Research and technological advances have indicated a significant improvement in man's ability to deal with the immediately damaging effects to his environment. However, planning must not be just for today, but based on a long-range 40 or 50-year concept. Planning must include research on the control of those subtle, long-term effects on the environment resulting from the use of new chemical substances, altering of surface water flow patterns, and man-made changes in the earth's landscape.

Attempts to control and regulate the factors that affect the water resource system have come from necessity. Often when a problem has become severe, man has jumped with alarmed haste to control pollution, to build massive new water supply projects, to establish marine recreational areas and protect groundwater basins. These efforts have generally been single-purpose. California has now reached a point in time when it must coordinate and integrate all such actions in accordance with a comprehensive water planning and control effort. This does not require that all such efforts be consolidated in a single authority; quite the contrary. But to preserve the effectiveness of existing water control activities - extending from domestic water purveyors to waste dischargers and from fish and wildlife enthusiasts to boaters - there must be a comprehensive approach and direction to the state's water resources programs.

> Problems must be anticipated, the necessary information and data obtained and plans formulated in advance. Corrective action must be initiated before a problem becomes acute and forces are set in motion which may well be irreversible except over very long periods of time.

Over the past two decades the state has controlled water pollution by regulating waste discharges, but there is now an increasingly urgent need for a greatly expanded, comprehensive control program covering the many

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other factors, apart from waste disposal, that affect water quality, such as impoundments, saline water intrusion, and land use. Water pollution control will, of course, continue to be a very significant means for protecting water quality, and the Study Panel has attempted to find the best methods and tools to strengthen and improve that program of control.

In the future, water use projects must be carried out under a coordinated planning program that includes the economic and social evaluation of California's long-term needs for its limited water resources.

The Study Panel believes that California has accomplished a great deal in water resources development and water pollution control. Many existing programs have been developed in an atmosphere of cooperation between waste dischargers and the regulating agencies, and have been, by and large, very successful. But California must now enable itself to meet the challenge to the quality of its waters and to its water quality control program which results from the state's tremendous and continuing growth and from the heavy water use demands of modern technology. For California to retain a place of preeminence in the field of water quality control, the state must build on its successful programs and look to the future. The state's programs must effectively deal with current and anticipated future problems and must be designed to protect the interests of its present and future citizens. The legislative recommendations in Appendix A and the specific recommendations in the body of this report for administrative activity or future study have been developed to meet these needs.

C. BASIC CONCEPTS FOR AN EFFECTIVE WATER QUALITY CONTROL PROGRAM

1. The State's Water Quality Control Program should consider all of the significant factors that affect water quality. To do this it will be necessary to substantially increase the magnitude and scope of water quality planning efforts which must be fully coordinated with planning for the protection and development of other natural resources. As water use becomes more intensive and the quantity of wastes becomes larger, knowledge concerning water quality must be expanded, and a comprehensive approach involving all levels of government, industry and agriculture is required.

2. Beneficial uses of waters of the state that are to be protected against unreasonable quality degradation include the esthetic enjoyment of clean water as well as the traditionally accepted beneficial uses.

3. A vested right cannot be acquired to discharge waste into the waters of the state or to continue a discharge at any particular level of quality, once initiated. Periodic revision and upgrading of waste discharge requirements will be necessary to adapt to changing conditions in the receiving waters, and to accommodate new discharges as the state's economy expands and the population increases.

4. Enforcement will be a greater and more difficult problem in the future due to the much greater volume of waste

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that will be generated, the greater scope and variety of corrective actions required, the magnitude of the costs involved, and the far more complicated interrelationships between the many kinds of waste discharges, and between water users and the dischargers.

5. The basic policies and procedures for establishing water quality objectives and setting waste discharge requirements, and the format for requirements, should be as uniform as possible throughout the state. Whenever possible, requirements should be expressed in explicit and statistically significant terms in order to facilitate enforceability.

6. The interrelationships between waste dischargers and the effects of their discharges on the receiving waters must be recognized in water quality control planning, in the setting of waste discharge requirements, and in other quality control actions, if equity is to be achieved.

7. The aquatic environment, including its quality aspects, is a dynamic system continually changing both in time and in space. A sound water quality program must be geared to this dynamism.

8. "Regional water pollution control . . . has proven, over the years, to be the best means of involving all levels of government in accomplishing cooperative and effective control of water pollution and water quality." (Stats. 1967, Ch. 284)

D. NEEDED LEGISLATIVE CHANGES

The effective water quality control program which California needs cannot be accomplished within the framework of existing water quality control laws.

The recommended legislative changes in Appendix A of this report are urgently needed and should be enacted as the framework for an effective water quality control program in California.

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CHAPTER II

LEGISLATIVE POLICY

A. WATER QUALITY

The recommended legislation modifies existing legislative policy in California in order to clarify apparent ambiguities that have resulted in conflicting arguments during the establishment of water quality policies and, particularly, of waste discharge requirements. The waste dischargers and those concerned primarily with economic development have long emphasized the cost-benefit aspects in the treatment of wastes, including the cost of providing high quality water.

On the other hand, those concerned mainly with conservation, sports, and recreation generally believe that state law should prohibit any degradation of water quality and that the environment should be given maximum protection at almost any cost. The recommended language (section 13000, paragraph 2) recognizes that efforts made toward accomplishing the ideal of clean water must accelerate but that economic progress and development is essential, not, however, at the sacrifice of the environment.

The key to the proper balancing of these interests lies only partly in established statewide policy. The regional and state boards which, in their decisions in which policy is applied to specific cases, weigh the benefits and costs to society, are the ones who actually determine this balance. In performing this function, there is no substitute for sound judgment. The regional boards have shown a commendable, increasing conservatism in establishing requirements and a growing concern for long-term environmental protection. It is evident that this is the direction the public wishes to take, as evidenced by recent federal legislation and public attention given to pollution matters. The Study Panel agrees with this approach and the recommended legislative policy moves accordingly in this direction.

B. REGIONAL CONCEPT

Among the principles enunciated in the Dickey Water Pollution Act of 1949 is the concept of regional water pollution control. The Legislature, in framing this concept, recognized that California's water pollution problems are primarily regional and that they depend on factors of climate, topography, population, and recreational, agricultural and industrial development which vary greatly from region to region. This concept was implemented by the creation of ten state boards, nine of them called regional boards, and the tenth the state board which was assigned the general duty of coordination and establishment of statewide policy. This concept was reviewed by the Legislature in 1959, 1963, 1965 and again in 1967 and, considering the alternatives, the Legislature chose to maintain this concept. The Study Panel conducted an in-depth study of the concept, believed unique among the 50 states, and concluded that the statewide program for water quality control can be most effectively administered regionally within a framework of statewide coordination and policy. (Section 13000, paragraph 3)

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C. WATER QUALITY AND WATER RIGHTS

As a result of the 1967 legislation, the Water Code now includes the following:

> Section 174. (Second paragraph) "It is also the intention of the Legislature to combine the water rights and water pollution and water quality functions of state government to provide for consideration of water pollution and water quality, and availability of unappropriated water whenever applications for appropriation of water are granted or waste discharge requirements or water quality objectives are established."
>
> Section 1258. "In acting upon applications to appropriate water, the board shall consider water quality objectives which have been established pursuant to law, and may subject such appropriations to such terms and conditions as it finds are necessary to carry out such objectives."

The Study Panel considered how best to implement these legislative mandates and concluded that several legislative tools and administrative procedures are needed for this purpose.

1. Actions by the state board with respect to the administration of water rights and those with regard to water quality control must be fully integrated and coordinated, and, in some cases, be concurrent.

2. The board should be expressly authorized to approve appropriation by storage of water that is to be released for the purpose of protecting or enhancing the quality of other waters that are put to beneficial uses. (Section 1242.5)

3. In determining the amount of water available for appropriation, the board should be specifically authorized to take into account the amounts of water needed to remain in the source for the protection of beneficial uses, including any uses specified to be protected in any relevant water quality control plan (Sections 1243, 1257 and 1259), and should subject appropriations to necessary permit and license terms and conditions for that purpose. (Section 1258)

4. Specific procedures are needed to initiate necessary court actions for the protection of the quality of groundwater. (Sections 2100-2103)

5. The state board should initiate and establish administrative procedures that will better merge the consideration of water rights with that of water quality.

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The purpose and necessity of these recommended legislative actions and administrative procedures are explained in Appendix A as annotations following the cited sections.

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CHAPTER III

WATER QUALITY CONTROL POLICY AND PLANS

A. STATE POLICY FOR WATER QUALITY CONTROL

As indicated in the policy provisions of the legislative recommendations, "the statewide program for water quality control can be most effectively administered regionally within a framework of statewide coordination and policy". (Section 13000)

Under present law, the former State Water Quality Control Board in March, 1967, adopted a Statewide Policy for the Control of Water Quality, in which guidelines were established for the formulation of water quality control policies. (The revised authority for this procedure is section 13164.) Recommendations now made by the Study Panel include the formulation of a more broadly conceived state policy for water quality control as the basic framework within which the state board, the nine regional boards, and other state and local agencies are to operate.

> State policy, in accordance with the proposed recommendations, includes principles and guidelines for long-range resource planning, including water management programs, the control and use of reclaimed water, and general principles and guidelines for water quality control. It also includes water quality objectives at certain key locations, and water quality control plans adopted by the state board for interstate or coastal waters or other waters of inter-regional or statewide interest. (Section 13142)

All state policy for water quality control should be reviewed periodically and may be revised. (Section 13143) The regional water quality control boards are to adopt water quality control plans for intra-state waters, which are to become effective when approved by the state board. (Section 13245)

> In order to integrate state policy into the total framework of state water law, state and regional water quality control plans are to become part of the California Water Plan. (Section 13141)
>
> Compliance with state policy for water quality control by all state departments, boards and commissions is required (unless there is statutory exception). (Section 13146)

These provisions replace the vague requirements of existing law under which state offices, departments and boards need only "take cognizance" of "such policy".

B. REGIONAL WATER QUALITY CONTROL PLANS

Under existing law, the regional boards develop water quality control policies for specific waters within their region. When the Legislature

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added provisions relating to water quality to the state law in 1963, it provided for the adoption of water quality control policies which were defined as "water quality objectives for affected waters of the state where water quality control measures are necessary or may be needed in the future to assure suitable water quality for beneficial use." (Section 13005 of the present law)

"Water quality objectives" established at levels which "are necessary or may be needed in the future to assure suitable water quality for beneficial use" may call for water of a higher quality than that needed to prevent pollution, i.e., an adverse and unreasonable effect on existing beneficial uses, because of inevitable changes in types and intensification of use in the future. Following this legislative mandate, some of the regional boards soon established objectives or goals for water quality control policies at levels designed to ensure water of very high quality. This was and is part of a frustrating administrative procedure because waste discharge requirements consistent with high water quality objectives are not enforceable to the extent they call for water of a quality higher than that needed to prevent pollution as defined in existing law.

The Study Panel approached this problem by revising certain definitions (such as "pollution", Section 13050(e)) and by defining procedures for the establishment and enforcement of relatively high objectives in water quality control plans and in waste discharge requirements. It is expected that objectives will be tailored on the high quality side of needs of the present and future beneficial uses. But at the level where established, it is intended that these objectives shall be reasonable, enforceable and enforced.

> These policies are redesignated by the proposed legislation as "regional water quality control plans" and consist of a designation for the waters within a specified area of:
>
> 1. Beneficial uses to be protected
>
> 2. Water quality objectives necessary to insure the reasonable protection of beneficial uses and the prevention of nuisance
>
> 3. A program of implementation and enforcement (See Sections 13050 (i) and 13240-13247)

The criteria in regional water quality control plans (i.e., "to insure reasonable protection of beneficial uses, etc.") are thus identical to the criteria applied to waste discharge requirements.

> Water quality control plans, as a result of these changes, for the first time will be enforceable by the establishment of waste discharge requirements which are selected to implement the water quality control plans.

It is recognized that in establishing water quality plans and waste discharge requirements, the quality of water may be changed to some degree without unreasonably affecting beneficial uses. Clearly, the very continuance of society depends upon some utilization of the waste assimilative capacity of the waters of the state.

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Water is a chemical compound of unique properties and is too useful as a solvent and as a mechanical carrier to remain completely unused. The basic problem in water quality management and control is that of determining the degree to which the available amounts of water can (or should) be used as a receptacle and transport mechanism for the discarded by-products of civilization.

The regional boards must balance environmental characteristics, past, present and future beneficial uses, and economic considerations (both the cost of providing treatment facilities and the economic value of development) in establishing plans to achieve the highest water quality which is reasonable. All water quality control policies previously adopted must be reviewed because many will need to be amended to comply with the proposed legislative recommendations.

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CHAPTER IV

WASTE DISCHARGE REQUIREMENTS

Waste discharge requirements should be established to implement regional water quality control plans.

If plans have not yet been adopted, the waste discharge requirements would be established on the same basis as water quality control plans; that is, on the designation of beneficial uses to be protected, and on the establishment of water quality objectives reasonably required for the protection of those beneficial uses and the prevention of nuisance. (Section 13263)

There must be increased attention to the full consequences of water quality changes with particular attention to ecological and environmental effects.

The conventional parameters of biological oxygen demand, dissolved oxygen, and others which have been historically used as the yardsticks for measuring the effectiveness of pollution control are inadequate. Other parameters which are scientifically valid and of greater usefulness, and which measure all effects of beneficial uses, must also be employed.

Conservatism in the direction of high quality should guide the establishment of objectives both in water quality control plans and in waste discharge requirements. A margin of safety must be maintained to assure the protection of all beneficial uses. (See Section 13263, and note.)

A great deal remains unknown concerning water quality and the effects of waste on the beneficial uses of water. Also, there are many uncontrollable pollutants which enter the waters of the state, such as runoff from urban and agricultural lands, for which provision must be made. To assure the maintenance of high quality, ample allowance must be made for the unknown and uncontrollable.

Under existing law discharges may be made prior to the filing of a report with the regional board of the proposed discharge and prior to the establishment of waste discharge requirements. In order to provide maximum protection to the public, a new procedure is recommended.

No person may initiate a new discharge of waste or make a material change in an existing discharge prior to the filing of a discharge report nor prior to the issuance of requirements.

This prohibition on discharges is limited to one hundred twenty (120) days after the report has been filed. The prohibition on the discharge may be waived by the regional board when it finds a waiver to be justified and not against the public interest. (Sections 13264 and 13269)

The present policy of specifying waste discharge requirements in the effluent or receiving waters, or both, is continued.

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The filing fees recommended by the Study Panel are not intended to cover the costs of the state water quality enforcement program but rather all fees collected should be deposited in the Water Quality Cleanup and Abatement Account. (Sections 13260(d) and 13440-13442) The state board will prescribe specific fee schedules, taking into consideration the volume of the waste discharge and other relevant factors.

Reports under the State Water Quality Control Act will be made under penalty of perjury with criminal penalties provided for falsification of or failure to file such reports. Injunctive action is also made available to the regional boards or state board to prevent discharge prior to the filing of the necessary report.

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CHAPTER V

SURVEILLANCE, MONITORING AND BASIC DATA COLLECTION

A water quality control program (including water quality planning, research and enforcement) cannot be effective unless the state and regional boards, in cooperation with other state agencies, carry out a carefully coordinated and thorough program of surveillance, monitoring and basic data collection.

Adequate basic data concerning hydrology, quality and other matters are a necessary prerequisite to the establishment of reasonable water quality objectives and waste discharge requirements. Basic data collection programs must be comprehensive and be initiated far enough in advance of need to provide information covering a wide variety of conditions. Basic data collection must be a continuing program because of the dynamic nature of the system. The current basic data programs of the federal, state and local agencies are not adequate.

Surveillance and monitoring are the foundation of a successful enforcement program. At present, there are about 9,200 dischargers in the state that are under requirements. It is estimated that there are 650 other dischargers who will be placed under requirements each year in the near future. Establishing requirements and then ignoring the waste discharge until obvious pollution exists is not an effective program for water quality management or pollution control. All dischargers' wastes must be checked periodically. Standard and simplified techniques for evaluating compliance must be developed. Compliance may become more difficult to achieve, and court action can result when violation - even unintentional violation - is not detected at an early date.

The surveillance must be broad enough in scope to determine not merely compliance with requirements, but whether the objectives do in fact reasonably protect the beneficial uses for which they were established. This approach is essential to a sound program of reviewing water quality control plans and waste discharge requirements.

For many years the Department of Water Resources has conducted an extensive monitoring program on many of the principal waters of the state, monitoring a wide range of characteristics, - but not all those needed in a water quality control program. Water quality regulation requires additional emphasis on biological characteristics, and it requires additional knowledge of water quality characteristics throughout various time periods (a day, a week, etc.) that is not satisfied by occasional sampling. Also required is a knowledge of the precise location of the monitoring with respect to the location of major waste discharges and tributary inflows of watercourses, - information which now is sometimes imprecise.

Regional boards are increasing their surveillance and monitoring activities to determine dischargers' compliance with requirements, to check on dischargers' self-monitoring programs, and to develop long-term policies. State and federal agencies have engaged in increasingly extensive water quality monitoring in the Delta.

The recent approval by the federal government of California's standards for water quality control includes an implementation program and commits the state to monitoring and surveillance.

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An expanded and improved monitoring and surveillance program is essential to an adequate water quality control program, and should be established.

A greatly expanded basic data program is also essential to an effective water quality planning effort, and should be established.

The Study Panel believes that the waste dischargers themselves have the basic responsibility to provide a continuing flow of information concerning the quality of their waste discharges and the effects upon the receiving waters.

The Study Panel did consider a program for the monitoring of waste discharges by regional boards on a contractual basis, i.e., the waste dischargers would pay the boards to employ specialists to conduct the monitoring services. This approach was rejected because it would require very substantial increases in regional board staffs, and because waste dischargers must do a certain amount of monitoring in any event to assure the effective operation of their own facilities.

However, self-monitoring by waste dischargers will not do the job alone. Regional boards must "spot-check" discharges on a scientific basis to determine if established requirements are being met. Spot-checking is presently inadequate due to lack of staff, and in some cases, equipment. Without adequate staffing, this situation will worsen in the future as the number of dischargers under requirements increase and workloads become heavier in other respects as well.

The state board should have adequate staff to develop and recommend, at the earliest possible date, a comprehensive program with respect to surveillance, monitoring, and basic data collection.

Regional boards also will need substantially increased personnel for the surveillance, monitoring, and basic data collection that needs to be done.

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CHAPTER VI

ENFORCEMENT AND IMPLEMENTATION

A. DEFICIENCIES OF PRESENT LAW

The enforcement provisions in the current Water Quality Control Act are totally inadequate.

For example, the act now provides that any person proposing to discharge wastes into waters of the state shall first file a report of such proposed discharge with the regional board. The regional board thereafter establishes requirements as to the nature of his discharge or the condition to be maintained in the receiving waters. If a report is not filed, the regional board may go to court to secure an injunction prohibiting the discharge of waste until the report has been filed. However, once the report has been filed, the board has no jurisdiction to prohibit a discharge that occurs after the filing of the report and before the waste discharge requirements have been established by the board.

Thus, if the board has reason to believe that a proposed waste discharge might be harmful to the waters of the state, it may prohibit that discharge until a report thereon is filed. But, once the report of discharge is filed, even though the report indicates that the proposed discharge would indeed be harmful to waters of the state, the board is not authorized to take any corrective action until requirements have been established, which usually takes several months.

Another example relates to the restricted applicability of the "cease and desist" procedure, which is the initial step in the enforcement procedures.

Section 13060 now authorizes issuance of a cease and desist order only where two conditions exist: (1) a waste discharger is violating requirements and (2) "such discharge is threatening to cause or is causing a pollution or a nuisance." No allowance is made under the second condition for the effects of discharges by others, although water quality reflects many discharges of waste. It is the discharge of the person against whom the cease and desist order is directed which - apparently alone - must be causing or threatening to cause the pollution or nuisance! The statutory restriction has made enforcement practically impossible.

B. RATIONALE OF PROPOSED LAW

It is worse than useless to establish a public body to perform an indispensable public service, to carefully define areas of responsibilities and authorities, and then to withhold the means by which those responsibilities can be discharged. Accordingly, the Study Panel has sought to place in the hands of the regional boards and the state board a full range of tools on the administrative level and on the judicial level (civil and criminal) that will enable the boards to require compliance with the law and the decisions and orders of the boards, whenever such action becomes necessary, and to penalize and recover damages for violations. (See Chapter 5; see also Article 4 of Chapter 4.)

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This comprehensive approach will have two beneficial results: (1) Improved enforcement devices will encourage cooperative resolutions of problems that arise. (2) Should a lack of cooperation occur, however, the disadvantage would fall upon the person who violates the law, thus placing an even greater premium upon cooperative action.

The proposed law retains a basic approach of the former act that neither a regional board nor the state board has jurisdiction to specify the design, location, type of construction, or particular manner in which a discharge shall comply with requirements or other order of the board. The board simply specifies the end result to be achieved (as to the nature of the discharge or the condition to be maintained in the receiving waters, or both), and the person so ordered may comply in any lawful manner.

However, in judicial enforcement proceedings, the court may find that an injunction that simply prohibits a discharge in violation of a board order is not a practical means of securing compliance with the law. For example, it is usually impractical for a court to order a city to stop discharging waste from its sewer system. Under such circumstances, the court now may specify the means that shall be undertaken in order to comply with the decision and order of the court. (Section 13360)

C. SUMMARY OF ENFORCEMENT AND IMPLEMENTATION PROCEDURES UNDER DIVISION 7 OF THE WATER CODE

Enforcement and implementation in California involve, of course, not only the provisions of the new proposed State Water Control Act in Division 7, but also its interaction with other provisions relating to water quality in the Water Code and in other codes, such as the Health and Safety Code, Fish and Game Code, Penal Code, Public Resources Code, Public Utility Code, and Harbors and Navigation Code. The common law powers of state and local government agencies, as well as common law and statutory rights of private persons within the State of California, also are involved. Finally, the relationship between state laws and federal and international laws must be considered.

The following outline is intended to summarize only some salient features of the enforcement provisions and some closely related implementation provisions included in the new proposed State Water Quality Control Act, which will be Division 7 of the Water Code.

1. Preventive and Abatement Procedures

a. Special procedures:

(1) Suit by Attorney General to enjoin pollution or nuisance (Sections 13002(c), 13223(a) (5))

(2) Summary judicial abatement of pollution or nuisance constituting an emergency (Sections 13223(a) (5), 13340)

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(3) Delegation of authority to act by regional board to executive officer (Section 13223)

(4) Enforcement of lien on property to repay costs of correction in cases of "non-operating facilities" (Section 13267)

(5) Control of discharges from "houseboats" on state waters (Sections 13900-08)

b. Regular procedures:

(1) Administrative level:

(a) Report of discharge and issuance of waste discharge requirements (Sections 13260-65, 13269)

(b) Issuance of time schedule (Section 13300)

(c) Issuance of cease and desist order (Sections 13301-03)

(d) Investigations by regional board, including requirements for technical reports from dischargers (Sections 13267-69)

(e) State board review of regional board actions under sections 13260-13304 (Section 13320)

(f) Stay orders by state board (Section 13321)

(2) Judicial level:

(a) Injunction to require submission of report of waste discharge (Section 13262)

(b) Enjoining discharges prior to report and prior to (i) issuance of waste discharge requirements, (ii) expiration of 120 days after waste discharge report has been filed, or (iii) waiver of report or requirements, whichever of (i), (ii) or (iii) occurs first (Section 13264(b))

(c) Appellate proceedings by any aggrieved party (e.g., discharger, downstream user, conservationist organization) from state board decision to the court (Section 13330)

(d) Injunctive proceedings to enforce cease and desist order (Sections 13223(a) (5), 13331)

(e) General provisions that the Attorney General shall bring civil actions in the name of the People of the State of California; relating to joinder, consolidation, and venue; and that allegation or proof or irreparable injury or inadequate remedy at law not required to secure injunctive relief (Section 13361)

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(f) Stay of administrative orders pending judicial review or enforcement proceedings (Sections 13330(c), 13331(d))

2. Remedial proceedings

a. Cleanup and abatement of wastes, and some funding thereof by the State Water Pollution Cleanup and Abatement Account (Sections 13304, 13440-42)

b. Civil monetary remedies of not to exceed $6,000 per day for intentional or negligent violation of cease and desist order (Section 13350) (See also, Harbors and Navigation Code section 151.) For a comparison with fines and penalties in various other states, see Appendix B.

3. Criminal misdemeanors

a. Failure to file report of discharge when requested or falsifying report of discharge (Section 13261)

b. After notice of such violation, discharging waste in violation of section 13264 (see item 1-b(2)(b) above) (Section 13265)

c. Failure or refusal to file, or falsification of, technical report (Section 13268)

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CHAPTER VII

SPECIAL PROGRAMS AND ORGANIZATION OF THE REGULATORY AGENCIES

A. STATE WATER RESOURCES CONTROL BOARD

1. State Programs

a. Research

> The increased expenditures needed for water quality control, as well as for water resource development, require that research efforts be accelerated to ensure that adequate information is available in order to arrive at proper decisions.

The Federal Water Pollution Control Administration, many of the 50 state water pollution or water quality control agencies, endowed foundations and private associations, and public and private universities, conduct extensive research in water pollution, water quality control and related subjects. Extensive and important research also has been conducted in other parts of the world. The state board has not had the staff to evaluate reports issued on these research projects to determine the applicability of their findings, conclusions and recommendations to conditions existing in California. An extremely valuable store of information, provided essentially free to the state, is not being utilized. The state board should be provided with the necessary staff in the interest of both economy and efficiency in carrying out the legislative mandate for clean water.

While California has earned worldwide recognition for its sponsorship of the research study that resulted in the publication of Water Quality Criteria, State Board Publication No. 3-A, research activities in the field of water quality and environmental protection have been limited in California compared to research efforts in other technical areas. Approximately $2.2 million (exclusive of investigations conducted for the regional boards or specific local problems) have been invested in research and soecial studies by the State Water Resources Control Board and its predecessor agencies between January 1, 1950 and June 1, 1967. The information and data obtained have been - and are - of great value to the regional boards in establishing waste discharge requirements, and to waste dischargers in designing, constructing and operating waste treatment and disposal facilities. Approximately $1.1 billion was spent during the same period by local agencies and industry for the construction of waste treatment facilities (exclusive of collection systems).

In a report submitted to the Legislature in March, 1968, by the state board, it was estimated that financial needs of California communities for the construction of waste treatment and disposal facilities would be $530 million for the period 1968-1972, inclusive.

As the state moves further into the field of water quality control, the costs of adequate water management will increase. In other words, cleaner water costs more money. The cost of well-planned research efforts and evaluation will be returned many times to the people of the state in improved, more economical methods for obtaining cleaner water.

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It is essential also to develop and to coordinate research programs as needed to support water quality planning and implementation.

1. A separate unit in the state board's organization should be established to advise the board on research and planning.

2. The state board should be given central responsibility to coordinate and recommend necessary research programs and major field investigations to be administered by the state board, the regional boards or other appropriate state agencies.

3. A scientific research program should make use of the research capabilities now existing in the Departments of Water Resources, Fish and Game, Public Health, and other state agencies.

4. The state board should develop a system for determining priorities and funding scientific and other research activities to be conducted by state agencies, academic institutions, industry and other non-state agencies.

5. The state board should have a technical advisory group consisting of experts from appropriate areas in the scientific and professional communities to provide the board with information and to make recommendations on research matters and the broader phases of water quality control.

b. Planning and Coordination

The state's activities in water quality control must be guided by policies that are based on a comprehensive planning effort. This planning effort must be coordinated, and must extend well beyond that which has been undertaken by individual state agencies in the past.

The state board will adopt water quality control plans for interstate and coastal waters and the waters of interregional or statewide interest. It will also review and evaluate regional board plans, and will have the ultimate responsibility for development and coordination of an effective statewide program of water quality control. (Sections 13140-45)

Each regional board will adopt water quality control plans for various areas within its region, and will encourage regional planning by local agencies through every available method and incentive. (Sections 13240-47 and 13225(i))

The Study Panel believes that the state board and regional boards, in formulating these water quality control plans, should depend primarily upon the planning activities of other agencies - federal, state and local. However, these boards must have adequate staffing to evaluate these plans of other agencies and to consolidate them into coordinated and useful water quality control plans.

Many state agencies conduct programs that have an effect on, or are concerned with, water quality.

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The Department of Water Resources is the engineering arm of state government in water resource development and provides guidelines for all state and federal water projects through the California Water Plan, long-range projections, and regional, statewide and interstate planning programs. The department is constructing and operating the State Water Project, and in this capacity has responsibility for the principal state program in the field of water use. The department further conducts extensive investigations, including water quality analyses of surface and groundwaters and saline waters, and waste water reclamation studies. While these activities relate directly or indirectly to water quality, the activities of the Department of Water Resources are separate and distinct from the water resource regulatory activities - the water rights procedures and the regulation of water quality - of the State Water Resources Control Board.

The Department of Public Health, Division of Environmental Sanitation, has water quality responsibilities principally in the fields of sewage, industrial waste and garbage disposal insofar as these affect domestic water supply, shellfish culture, recreation and radiological health. In discharging these responsibilities, the department (in cooperation with local health agencies) investigates certain water quality conditions in all of the waters of the state.

The Department of Fish and Game, charged with the responsibility for the protection, maintenance, and enhancement of the state's living resources, is vitally concerned with water quality and conducts water quality investigations.

In addition, the Department of Agriculture, the Department of Parks and Recreation, the Department of Conservation, the California Water Commission, the Colorado River Board, and many federal and local agencies are directly concerned in one way or another with water quality.

The activities of other state and local agencies, like those of the Department of Water Resources, relate directly or indirectly to water quality, but are separate and distinct from those of the state board. The state board, together with the regional boards, are designated in the new legislation as "the principal state agencies with primary responsibility for the coordination and control of water quality." (Section 13001)

The state board, as an effective regulatory body, must, in the decision-making process, be able to obtain and evaluate all necessary information to arrive at the best possible decision. Obviously, the water quality efforts of all state agencies should be objectively coordinated in order to be effective and to avoid duplication.

1. The state board will coordinate water quality related investigations of state agencies, and will consult with the regional boards in the implementation of related water quality investigations. (Section 13163(a))

2. The state board will evaluate the need for water quality related investigations and transmit its recommendations to the appropriate federal, state or local agency for implementation. (Section 13163(b))

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3. State agencies will submit to the state board plans for, and results of, all investigations that relate to or have an effect upon water quality for review and comment. (Sections 13163(c), 12617.1, and 12923.1)

Factors to be considered in a comprehensive planning effort include economics, long-range environmental effects, and the social consequences of man's activities on our water resources. In this effort, water quality planning must involve many agencies in addition to the state board. Regional boards, to effectively establish water quality plans, particularly those which may require studies related to peculiarly local problems, must also contribute to this effort. Local and regional agencies must play an essential role in basin-wide water quality planning, with particular emphasis on implementation activities.

The following are but two of the many areas where planning efforts are urgently needed:

(1) Costs:

All waste dischargers and others contributing to quality problems in a given water resource should share equitably in the costs of achieving and maintaining the requisite levels of quality. Ideally, also, waste dischargers should pay the social and economic costs of any residual effects of their discharges on the receiving waters, rather than having those costs passed on to users downstream; similarly, they should pay for any benefits received from water resources management. Maintaining equity among waste dischargers and among water users and waste dischargers will be one of the more difficult problems of the future.

(2) Scientific Parameters:

In connection with waste discharge requirements, the Study Panel has indicated that all scientific parameters which affect water quality must be analyzed. The state board must see that necessary studies are conducted to determine, for all parameters, what objectives or range of objectives are needed for the protection of different beneficial uses.

The state board should fully exercise its new authority as the principal coordinating agency for all state water quality planning efforts and should implement this program by the addition of a small but highly qualified, multi-disciplinary staff as recommended in the preceding discussion on research.

Legislative recommendations also include an extension of the 1967 directive to the state board to make regular surveys of future needs for water quality control facilities. (Section 13601) This survey is essential in planning state financing policies and programs and should be broadened to include methods of financing local projects.

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c. State Board - Regional Board Relationships

The state board should establish policies and guidelines for the regional boards covering those matters of common concern to all regional boards, such as procedures for establishing water quality control plans, the establishment of waste discharge requirements and the format of requirements. This will achieve three important purposes: (1) to assure uniform administration of law throughout the state; (2) to assist the regional boards in the performance of their duties; and (3) to improve enforceability of waste discharge requirements.

d. State Intergovernmental Relationships

(1) Interagency Programming Committee:

While the principal area of common interest between all agencies with major responsibilities in the field of water quality is in future planning, there are many other enforcement and regulatory activities that should be coordinated. The principal purpose of an Interagency Programming Committee is to assure that the total state program for the control and management of water quality is adequate to meet all state and local needs. This committee would be responsible for identifying the specific activities required to carry out statutory responsibilities and statewide policy for water quality control, for recommending priorities for the activities identified and for recommending the assignment of specific activities to the proper state agency.

As one example, there is an obvious need for central coordination of cleanup activities. If the Study Panel's recommendations on waste discharge cleanup, whether resulting from oil discharge, accidental industrial spill or municipal plant failure, are adopted, there should be a clearly defined agent with responsibility to direct cleanup activities.

An interagency committee for water quality control and management activities should be created, consisting of water quality representatives from each of the following: The Resources Agency, the State Water Resources Control Board, the Departments of Agriculture, Conservation, Finance, Fish and Game, Harbors and Watercraft, Public Health, Water Resources, and the Colorado River Board. The Committee should be chaired by a representative of the State Water Resources Control Board.

Appendix C describes the functions and activities of the proposed committee.

(2) Data Collection and Retrieval:

The need for additional and coordinated investigative programs is discussed above, under the subheading Planning

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and Coordination. To expedite processing the data obtained and to insure its availability and effective use, there is a need for an information storage and retrieval center.

All water-related data (water quantity and quality, land and water use, etc.) should be processed by a single information storage and retrieval center in the Resources Agency. The center should include an information screening and processing section composed of representatives of departments or boards which will use the center.

Appendix C describes the need and the operation of the Information Storage and Retrieval Center in more detail.

e. Program for Public Information

Within recent years there has been an increasing public awareness of the need to protect and to enhance man's natural environment. The demand to protect our natural resources and prevent spoilage will not diminish. High on the list of what people want, according to public polls, is clean water and air, unlittered beaches, parks and highways, and the beautification of cities and rural areas. The volume of mail requesting information on water quality control received by the state board attests to this fact.

Much has been accomplished in California since 1949 to prevent and control water pollution and to enhance water quality. Yet, after 19 years, it is apparent from surveying newspaper and magazine stories that very little is known of what has been done and what must be done in the future. News media emphasis in on the dirty, not on the clean. An appalling ignorance exists among nearly all sectors of the people concerning California's water quality control problems, its law, and its continuing efforts to prevent water pollution and to control water quality.

A planned program of public information should be developed and implemented to the end that the general public will know what the water quality problems are, how they are being met, and the anticipated needs for facilities and programs to meet water quality objectives. (Section 13167) The public should understand water quality problems of local and statewide importance. An informed public will recognize the need for, and cooperate in, an effective water quality control program.

Examples of successful and economic water quality control programs, methods and operations of government and industry should be identified and included in the information made available to the public.

f. Training of Treatment Plant Operators

California has invested billions of dollars in waste treatment facilities. Many more billions will be invested in the future. These facilities, which must provide an increasingly high degree of treatment through more sophisticated methods, equipment and controls, require highly trained personnel to achieve the results for which the expenditure on equipment was originally made.

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A significant portion of the additional expenditure on treatment plants has been wasted and even more will be wasted in the future because technically qualified treatment plant operators are not hired.

There is a tremendous shortage of technically trained and qualified operators. With the assistance of several agencies and educational institutions throughout the state, the California Water Pollution Control Association is operating a training and certification program. Considering its voluntary nature, it has produced good results. However, training programs must be expanded and their value recognized in all parts of the state. The format of instruction should be standardized and uniform qualifications established for the several levels of competence designated. Such a cooperative program, with all concerned agencies participating, is urgently needed.

> The state board should develop a statewide training program through the classifications of plants, establishment of operator qualifications and the development of training curricula. The board should have the authority to assure that the operation of plants constructed with state or federal financial assistance will be operated at the highest level of technical competence commensurate with the nature of the facilities. (Sections 13608 and 13625-13630)

2. Organization

a. Research and Planning

There should be established within the state board a unit responsible for the effective conduct of the research, planning and coordination activities described earlier in this chapter. (Section A, 1, d)

A highly qualified, multi-disciplinary staff is necessary and should include, in addition to water quality engineers, persons competent in the *fields of economics, biology, geology and fish and wildlife resources* management.

b. Public information

The state board's staff should include a person or persons, the number to be determined by the scope of the program, to carry out the public information program as recommended in this chapter, above. (Section A, 1, d)

3. Advisory Committee

The Water Quality Advisory Committee to the state board has been functioning for a little more than a year and has made some significant policy recommendations to the state board. However, the present composition of the committee tends to represent some fields of endeavor several times over, and other fields not at all, because the regional board chairmen, or their designees, who are members of the committee in many instances represent the same fields as the nine appointed committee members. (See present section 13015.) To enable the Advisory Committee to carry out more effectively the specific advisory functions assigned to it by statute and to advise the state board

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effectively on other matters that may be referred to it, the committee will be composed of three categories of people: representatives of regional boards, people from agriculture, industry and municipalities, and members from new and important fields of expert knowledge who possess broad and practical experience.

The Water Quality Advisory Committee can also provide great service to the state board by undertaking further studies, discussion and evaluation of those issues that could not be resolved in the limited time allocated to the Study Project.

1. The revised Water Quality Advisory Committee will include the chairmen of each of the nine regional boards and nine members appointed by the Governor selected from persons with specialized knowledge in one of each of the following fields: Agricultural Science; Aquatic Biology; Economics; Environmental Sciences; Industrial Waste Problems; Municipal Waste Problems; Oceanography; Recreational Water Use; and Urban Planning.

2. Members of the Advisory Committee should receive $25 dollars for each day while on official board business in addition to actual necessary expenses.

4. State-Federal Relationships

Federal laws and administrative action cross the paths of state laws and administrative actions in the field of pollution control and in financing of waste collection and treatment facilities.

The Refuse Act of 1899 (33 U.S.C. 407 et seq.) is now used by the Federal Water Pollution Control Administration (FWPCA), in cooperation with the Corps of Engineers, as a water pollution control measure, especially with respect to oil pollution.

The Oil Pollution Act of 1924, also enforced by the FWPCA, is seldom used because, under a recent amendment, its enforcement is limited to "grossly negligent or willful" spilling of "discharge". This act is regarded as practically unenforceable.

The Federal Water Pollution Control Act (33 U.S.C. 466 et seq.), which began as a weak and temporary federal pollution control measure in 1948, has been extensively amended and is now considered the breakthrough in federal anti-pollution legislation. One essential feature of the Federal Water Pollution Control Act, as amended in 1956 by P.L. 84-660, is that it helped communities to build waste treatment facilities by providing them with federal grants of up to 33 percent of project costs. Another provision authorizes grants to state pollution control agencies to help them improve their programs.

For the period of 1956 to 1971, congressional authorization of grant funds increased from $50 million per year to $1250 million per year nationally. Until fiscal 1968 the amount of moneys authorized were the same as the amount appropriated. In fiscal 1968, however, $450 million was authorized and only $203 million was appropriated. In fiscal 1969, $700 million was authorized but only $225 million appropriated.

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The federal grant program has been administered at the state level in California by the state board. California's share of the national appropriation has increased from about $2 million in 1957 to about $16 million in 1969.

Several other amendments to the FWPC Act should be mentioned. In 1961 33 U.S.C. 466a was amended to require consideration, in planning for federal reservoirs, of the inclusion of storage for regulation of streamflow for the purpose of water quality control. This provision was implemented the same year in P.L. 87-874, with respect to the New Melones Project.

The Water Quality Act of 1965 amended the FWPC Act by giving the states an opportunity to hold public hearings and propose federal water quality standards for interstate and coastal waters within their borders. About 33 areas of interstate and coastal waters were identified in California, and hearings were held in all these areas. According to the federal law, once the standards are approved by the Secretary of the Interior, they become both state and federal standards, enforceable by both governments.

The Clean Water Restoration Act of 1966 further amended the act with additional provisions relating to planning, research, grants for research and for pollution control programs, grants for construction, and enforcement measures.

There are several additional federal financing programs. The Farmers Home Administration of the U. S. Department of Agriculture has five lending programs, oriented to the needs of the farming or rural communities. The Department of Housing and Urban Development has grant and other lending programs to help communities construct adequate basic water and sewer facilities, or to help finance such facilities.

Long-range planning and research funds are also available through the Office of Water Resources Research and the Office of Saline Water, both of the U. S. Department of the Interior.

> It is important that the State of California so manage its water quality programs as to take maximum advantage of the federal programs.

The federal agency with by far the greatest impact on California's water quality control program is the FWPCA. In the deliberations of Study Project subcommittees, and at special panels held by the Study Panel, the cooperative attitude and actions of regional and district representatives of the FWPCA became quite evident.

The Study Panel decided early that the best contribution it could make towards improved state-federal relationships dealing with water quality control, was to concentrate on improving California's water quality control laws and administrative procedures.

5. Manpower Needs

> The state board's staff must be expanded.

The need for additional qualified personnel is explained in specific sections of this report, such as those on research and planning. The state

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board's personnel needs in other areas are substantial. They include: treatment plant operator training, financial assistance programs, quality control activities, coordinating functions, emergency cleanup programs, administration of applied research contracts, public information, preparation of long-range plans and policies, and staff support to the Water Quality Advisory Committee. In fact, even without these added responsibilities, the present staff does not permit the state board to do essential policy evaluation and give thorough review to applications for financial assistance as provided for in both federal and state laws.

Appendix D shows unit effort requirements for state board program activities.

The following table indicates the type and number of personnel that should be added to the state board staff to meet these unit effort requirements.

Table I

Disciplines	1969-70
Sanitary or Water Quality Engineer	9
Biologist	2
Engineering Economist	1
Statistician	1
Other*	3
Clerical	5
Total Number of Positions	22

8. REGIONAL WATER QUALITY CONTROL BOARDS

The principal action arm of California's water quality control program is the nine regional water quality control boards. Equipped with staffs ranging in size from four to eighteen full-time employees, the boards have been administering the increasingly complex and extensive water pollution/water quality control programs for twenty years. The complexity and scope of the regional board programs will increase in the future.

The major programs of the regional boards are the establishment of water quality control plans and waste discharge requirements; surveillance and monitoring of the requirements; and enforcement and implementation. These programs have been discussed in Chapters III (Section B), IV, V and VI. In addition, the following matters relating to the regional boards have received specific considerations.

1. Board Membership

The present water quality control program has been criticized by persons claiming that there is potential conflict of interest on the part of certain categories of regional board members.

*"Other" includes management analyst, records and information officer and administrative assistant. The state board's Division of Water Rights has a geologist and hydrologists available.

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The Dickey Act of 1949 established the first five of the existing seven categories of regional board membership as persons associated with:

1. Water supply, conservation or production
2. Irrigated agriculture
3. Industry
4. Municipalities, and
5. Counties

In 1959 the regional board membership was expanded by Chapter 1299 which added the following two additional members:

6. One person, not employed by any governmental agency, from a responsible organization associated with both recreation and wildlife
7. One person not specifically associated with any of the foregoing interests representing the public at large

The 1959 amendment was the result of publicity and pressure primarily from wildlife organizations. All regional boards in retrospect now believe that this was a very good amendment. The argument in favor of that amendment was that the boards lacked representation for wildlife and recreation and that the large representation of waste dischargers on the boards resulted in lax regulations. The same argument again has been raised in recent months by letter, at public hearings conducted by the Study Project, and by newspaper and radio editorials.

Those members appointed in the categories related to industry, agriculture, municipalities, and (in certain instances) counties, have been referred to sometimes as the "waste dischargers". Most municipalities have community sewer systems subject to regulation, and many County Boards of Supervisors are ex-officio officers of special sewer districts. Industry and agriculture also add their special forms of waste. Yet it is most important, in the opinion of the Study Panel, that persons from all these categories be on regional boards not because they "represent polluters", but because their fields of expert knowledge are indispensable. They should, however, be persons with broad perspective in activities relating to water use and governmental affairs. Their background or technical knowledge is needed in all aspects of water quality regulation and management in the public interest.

In the last analysis, the effectiveness of each regional board depends much more on the ability, character and dedication of individuals appointed to the boards, rather than on the category from which they are appointed. The Governor should exercise care to appoint persons who will carry out the express provision of section 13201 that all members shall represent all the people.

As additional assurance that members from the categories of agriculture, industry, municipalities and certain counties, as well as those whose particular associations are not specified do, in fact, represent all the people, several restrictions or procedures are needed:

1. All appointments to regional boards of persons associated with any agency or business discharging waste should be made

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only if the entities with which those persons are associated have good waste discharge programs and a good record of compliance.

2. No member should vote or participate in the deliberations preceding a vote on any question involving a conflict of interest.

3. Continuous care is needed in the appointment of qualified and able members to regional boards, to insure a balanced board and an effective program in controlling pollution. Statewide organizations should be asked to help identify qualified individuals.

4. There will be two additional board members, each with special competence in areas related to water quality problems. (Section 13201(a)(7))

5. Regional board members should come from different fields and backgrounds in order to bring diversified knowledge and expertise to the board. All regional board members shall serve not as representatives of the activity category from which they are selected, but as representatives of all the people and are so designated. (Section 13201(a))

Possible fields of competence for the two new, additional members could be as identified with respect to the revised Water Quality Advisory Committee. (Section 13120)

This amendment will add to the competence of the boards and, together with the guiding principles outlined above, will help to eliminate cause for criticism directed at the present composition of the regional boards.

2. Delegation of Authority to Executive Officer

To streamline the administrative activities of the regional boards, section 13223 allows the delegation of authority on certain matters to the executive officer of each regional board. The extent of this delegation is limited by this section, but within those limits the extent of delegation will depend on the desires of each regional board.

3. Additional Regional Programs

An important program of the regional boards in addition to those already identified is that of conducting special investigations to obtain data directly applicable to specific problems. While many of these special investigations have been undertaken by other agencies and private consultants, the staffs of the regional boards themselves have undertaken many special investigations. Over 200 reports have been issued on these investigations, several having statewide significance. This program should be encouraged.

The importance of regional planning has been clearly demonstrated in the San Diego and San Francisco Bay areas and by the San Francisco Bay-Delta

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Water Quality Control Program. The latter program required special legislative authority as it exceeds the scope of planning needed for purely regulatory purposes.

> The regional board shall encourage regional planning and action for water quality control. (Section 13225(i))

Regional planning is further discussed in Chapter VIII (Section A), below, Community Sewer Systems.

4. Manpower Needs

The nine regional boards presently have a deficit of 77 management, professional and technical personnel, 3 administrative assistants, and 19 clerical personnel, for a total deficit of 99 persons. See Table 2. Most of these personnel are required to do an adequate job under existing law.

The Study Panel recommends that these personnel be provided. Because of recruitment, training and financing, this increase in personnel and the necessary provisions for operating expenses is projected over a five fiscal year period beginning in the 1969-70 fiscal year at January 1, 1970.

The statutory changes will help clarify the work to be done and procedures to accomplish the work.

All the regional boards must continue and must accelerate the preparation of water quality control plans. Plans (previously called policies) already adopted must be reviewed periodically.

There will also be a tremendous increase in the number and complexity of waste discharges taking place throughout the State. This means increased surveillance and monitoring programs, and more thorough investigations for the establishment of requirements. If the urgently needed manpower is provided as hereby recommended, it will suffice for these programs and purposes.

Appendix D discusses in more detail the manpower requirements for the regional boards.

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TABLE 2
REGIONAL BOARD MANPOWER DEFICIT SUMMARY

Regional Boards by number	1			2			3			4			5			6			7			8			9			Totals		
CLASS	N	H	D	N	H	D	N	H	D	N	H	D	N	H	D	N	H	D	N	H	D	N	H	D	N	H	D	N	H	D
Executive Officer I	1	1	0				1	1	0							1	1	0	1	1	0	1	1	0	1	1	0	6	6	0
Executive Officer II				1	1	0				1	1	0	1	1	0													3	3	0
Supervising Engineer				1	0	1				1	0	1	2	0	2													4	0	4
Senior Engineer	2	2	0	5	3	2	1	1	0	3	3	0	7	4	3	1	1	0	3	1	2	3	0	3	2	2	0	27	17	10
Associate Engineer	1	1	0	6	2	4	2	1	1	2	1	1	11	4	7	2	1	1	3	1	2	1	1	0	2	0	2	30	12	18
Engineering Assoc.				2	2	0				2	1	1	3	3	0							0	1	-1				7	7	0
Assistant Engineer	1	1	0	4	1	3	3	1	2	6	2	4	11	2	9	1	1	0	1	0	1	1	0	1	2	1	1	30	9	21
Junior Engineer				6	1	5				1	0	1																7	1	6
Technician II				3	0	3				3	0	3				1	0	1	1	0	1							8	1	7
Aid II				2	1	1																						2	1	1
Associate Economist													1	0	1													1	0	1
Associate Geologist													1	0	1													1	0	1
Fish and Wildlife Resources Manager	1	0	1																									1	0	1
Associate Biologist				2	0	2	1	0	1	1	0	1	1	0	1										1	0	1	6	0	6
Assistant Biologist													1	0	1													1	0	1
Sub-Totals	6	5	1	32	11	21	8	4	4	20	8	12	39	14	25	6	4	2	9	4	5	6	3	3	8	4	4	134	57	77
Administrative Assistants	0	0	0	1	0	1	0	0	0	1	0	1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3
Clerical	2	2	0	11	6	5	2	2	0	8	3	5	9	4	5	3	2	1	3	2	1	3	2	1	3	2	1	44	25	19
Totals	8	7	1	44	17	27	10	6	4	29	11	18	49	18	31	9	6	3	12	6	6	9	5	4	11	6	5	181	82	99

N - Need H - Has D - Deficit

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CHAPTER VIII

WASTE DISCHARGE PROBLEMS

A. COMMUNITY SEWER SYSTEMS

Municipalities or public agencies constitute about 14 percent of all waste dischargers that are under waste discharge requirements. However, these discharges contain a very large proportion of the total amount of pollutants added to the waters of the state.

It is quite unlikely that a court would enjoin a municipal waste discharge (even if in serious violation of requirements) because of the practical difficulties of reducing or eliminating entirely the discharge from community sewer systems. Therefore, a number of specific procedures are recommended to promote compliance by municipal dischargers.

1. Additions to Systems

A procedure must be available to minimize adverse effects resulting from violations of waste discharge requirements in the operation of a community sewer system.

> In the event of an existing or threatened violation of waste discharge requirements by a municipality, county or other public agency, cease and desist orders may restrict or prohibit the volume, type, or concentration of waste that might be added to the system. (Section 13301)

The ability to restrict additions to waste discharges will not only prevent additional violation of existing waste discharge requirements, but would indirectly bring public pressure on the city to induce it to comply with the requirements.

2. Financing Problems

a. Federal Grant Program

The federal grant program, which at the state level is administered by the state board in California, (see State-Federal Relationships, page 30) has been of great assistance to communities in the building of waste treatment facilities.

There has been some discussion of a state contribution to sewerage facility construction financing on a statewide basis in the amount of a minimum of 25 percent of construction costs, to complement the federal program. Some states do this. But, while this state contribution on a statewide basis would reduce the local share of plant costs from 67 percent to a minimum of 20 percent of actual cost, (state 25 percent, federal 55 percent, local 20 percent) it would not increase the total amount of federal funds that California would receive. The backlog totaling $530 million of needed waste treatment and disposal facilities should be completed as soon as possible. The present distribution of federal funds among many local communities is more compatible with this goal than would be the distribution of a higher proportion of federal and state funds to relatively few communities.

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b. Local Government Financing

The Study Panel considered legislation that would remove local government debt limitation for the purposes of constructing municipal waste treatment facilities. After considering the implications of such a removal on the general problem of municipal financing, the Panel decided to forgo recommending at this time elimination of this statutory impediment to the ability of municipalities to finance sewage facilities. It is recognized, however, that the key to water quality improvement lies in providing the financial ability to install and provide adequate waste treatment and disposal facilities.

It is recognized that better allocation of resources is obtained when each contributor to the pollution load pays for facilities necessary to treat his wastes. Any relief from this burden tends to cause unwise economic decisions by the dischargers. This may result in greater costs to the state as a whole, but may be a necessary burden if the objective of high quality water is to be achieved.

c. Sewer Service Charges

> The state board should be authorized to require the establishment of sewer service charges by public agencies applying for federal grant funds when such agencies cannot otherwise adequately finance the local agency share of the proposed waste treatment facility. (Section 13606)

The use of sewer service charges is increasingly prevalent. The San Francisco Bay-Delta Study for the twelve-county study area revealed that 55.4 percent of the Bay Area revenue for water waste disposal between 1962/63 and 1966/67 has been derived from sewer service charges. Their use should be encouraged because they have the following advantages:

1. Costs are distributed amongst the producers of waste who cause the problem.

2. Local property taxes are not thereby increased.

3. There is increased flexibility in financing, with the result that rates can be established to reflect local situations.

d. State Financing

The State Water Quality Control Fund is available for loans approved by the state board and the Director of Finance to local agencies for facilities for sewage collection, treatment or export, or for the reclamation or conveyance of reclaimed water. (Section 13100 et seq. of present law. Section 13400 of proposed new law.) In recent years the funds available have been earmarked for the Lake Tahoe area.

The state should consider making additional funds available for loans, and it should consider a grant program to cover situations where federal, local and state financing is unable to meet pressing financial needs.

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Such a grant program would be comparable to that of the states which now contribute 25 percent of sewerage facility construction costs on a statewide basis to complement the federal grant program.

3. Subdivision Laws

Subdivision laws should be amended in one respect, and supplemented in another, to help prevent violations of waste discharge requirements, and to protect against aggravation of violations.

1. The Subdivision Map Act administered by the State Department of Real Estate should be modified to include sewage facilities among those public utilities the plans for which must be included in the notice of intention. (Business and Professions Code Section 11010. Appendix A, page 109)

2. The Business and Professions Code should be amended to require that when acting on tentative subdivision maps the affected local government agency make a factual determination as to whether or not the discharge of waste from the proposed subdivision would result in a violation of existing requirements and that such a finding be grounds for disapproval of a tentative subdivision map. (Business and Professions Code, proposed new Section 11551.6. Appendix A, page 110)

4. Regional Systems

One of the most important ways to reduce the cost of sewerage facilities and increase the effectiveness of waste treatment is through coordinated regional plans and systems. Gradually, throughout the state, there is recognition of this need. The regional boards have been given the responsibility to coordinate implementation with local agencies, but they cannot force such cooperation. Many times there are issues within local government that will cause a city, county or district to avoid or frustrate a cooperative sewerage plan in order to achieve other governmental objectives.

The statewide interest in waste treatment and disposal is evidenced by the history of legislation and study of the problem in California. If there are local governmental problems (and financing is the major one), they should be solved directly by the Legislature; in this way the most economical and efficient solutions to pollution problems will not be frustrated. The state board, acting as the grant agency, should work with the Federal Water Pollution Control Administration to use the federal grant program to insure the regional cooperation. Careful study should be made of methods of implementing regional schemes. These have been discussed in detail in the San Francisco Bay-Delta Report, and that work has statewide implications. It must be emphasized that the above recommendations with regard to community sewer systems are only first steps and, if they are not adequate, more stringent devices may be necessary in the future.

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5. Consolidation of Special Districts

The two prerequisites for the construction of sewage treatment and disposal facilities are the ability to finance and an appropriate governmental structure. The financial aspects have been discussed in other sections of this report. Public agencies that dispose of waste range from cities to special districts which are sometimes administered by counties. By far the largest number of waste disposing agencies are special districts. There has been a commendable tendency in some of the metropolitan areas of California toward consolidation of waste disposing agencies, but in others, despite strenuous efforts of regional water quality control boards and others interested in more efficient and effective pollution control, the existence of separate special districts has promoted continued pollution.

The existence of many sources of waste increases the problem and difficulty, and in most cases the cost, of collection, treatment, and disposal. In some instances a small district will insist on continuing to operate and expand its own treatment plant although connection to an efficient regional system may be close at hand.

With the establishment of local agency formation commissions in each county of the state, the state decided to regulate the establishment and expansion of local government units. The program can provide an effective method, allowing the voters in a local district to determine whether or not their facilities should be consolidated with an existing district or city. At present, the district itself or an affected district or city can initiate proceedings for dissolution, consolidation, or reorganization.

Since regional boards are in a prime position to determine the effectiveness of waste treatment facilities that are constructed in meeting water quality objectives, and since waste dischargers frequently use their inability to finance (because of size) as a reason for a delay in time schedules, it is appropriate that the regional boards be given the authority to initiate dissolutions, consolidations or reorganizations to the local agency formation commission in the affected county or counties. This would in no way remove the authority of the local agency formation commissions, the board of supervisors, and ultimately the people of the district to decide the district's fate. It would, however, allow initiation of proposals to accomplish more effective pollution control. This cannot be done under present law.

> The District Reorganization Act should be amended as promptly as possible to allow regional boards, after appropriate hearings, to adopt a resolution initiating a consolidation, dissolution, or reorganization of a special district rendering sewerage service.

B. AGRICULTURAL WATER USE

Since by far the largest percentage (about 90 percent) of the water used in California is used for irrigation, any evaluation of effects on water

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quality must give consideration to irrigation practices and problems. These practices and problems fall into three general categories.

1. The Mineral or Salt Problem

The practice of irrigation increases the mineral content of downstream waters which receive the irrigation return flows. If agricultural land is not properly irrigated and drained, salts build up in the soil and ultimately make it sterile. The proposed construction of agricultural drainage facilities of the Central Valley to preserve agricultural land and protect this other priceless natural resource have brought this problem to everyone's attention. It is, however, a problem that involves agricultural practices, management of irrigation systems, and the planning of water development projects. This problem is not easily solved through the conventional process of regulation of waste discharge. Regional Board activity in this field has been extremely limited. Some requirements have been placed on runoff waters or waste discharges from heavy agricultural uses such as cattle feedlots. It is likely in the future that there will be the need for additional regulation of wastes from agriculture, but the quality problems created by use of water for irrigation are not readily amenable to solution in this fashion.

Long-range water quality control planning on an integrated basis, considering all factors that affect water use, will provide the means to determine the actions required to protect water quality from the effects of waste water from irrigated agriculture. The needs again focus on protection of land and water, as well as the uses of other segments of our economy and the needs for long-term resource and environmental protection must all be satisfied. Such water planning activities should recommend agricultural practices as well as any needed legislation to insure the long-term protection of our land and water resources.

2. Pesticides

Extensive studies of the use of pesticides, and particularly of the chlorinated hydrocarbons, have shown alarming residual concentrations in fish and fowl across wide areas of the earth, as well as here in California. Present accumulations of these toxic, nondegradable chemicals are causing heavy mortality in some birds and perhaps in fish. These concentrations do not seem to be dangerous to people in the amounts now found in California, but there is legitimate concern for the future. The country of Hungary is reported last summer to have banned the use of DDT, and the State of Wisconsin is now considering similar legislation.

There has been a tendency toward increased use of organic phosphates which are degradable. This is an important and encouraging trend. However, if the use of chlorinated hydrocarbons is continued, it will probably be necessary to regulate this problem at its source rather than at the point of application. The state board should continue the work that has been initiated in this area by the Bay-Delta Study.

The choice and use of pesticides and herbicides in agriculture have not been and cannot be directly regulated by the water quality control boards. Such regulation is outside the scope of present water quality law. However, discharges of waste water into the waters of the state can be

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regulated. If any upstream additives cause an unreasonable degradation of water quality at the discharge point, they can be regulated indirectly by establishment of requirements on the discharge itself or on the receiving waters.

The California Department of Agriculture has a procedure for testing and approving for use all different kinds and brands of pesticides and herbicides. However, this testing is entirely directed to the safety of food products for human consumption. It in no way relates to the agricultural return flows carrying residual wastes directly or indirectly into the waters of the state.

3. Fertilizers

Nutrients such as the compounds of nitrogen and phosphorous directly affect the food chain. Nutrients may be removed by collection and treatment of agricultural drainage water. This is expensive, and has not yet been done on any large scale. Significant additional research is needed in biostimulation and related fields as recommended in the San Francisco Bay-Delta Program.

C. WASTE WATER RECLAMATION

The Legislature enacted the Waste Water Reclamation and Reuse Law in 1967. Modifications in the law recommended by the Study Panel are primarily technical but specific provisions are being added to clarify the establishment of water reclamation requirements and enforcement provisions.

Where there is a potential direct public health danger, as in the case of projects to use reclaimed water, the projects must be designed and operated to ensure reliability.

> Design criteria should be established by the State Department of Public Health as part of statewide reclamation criteria in order to provide an adequate degree of reliability of performance in project operation.

D. OIL PROBLEMS

In California, oil well drilling is subject to statutory regulations administered by the Department of Conservation through its Division of Oil and Gas. These regulations emphasize safety and conservation of oil and gas, and also include some references to the prevention of pollution of water. For instance, Public Resources Code Section 3220 requires owners or operators of wells to "shut out detrimental substances from strata containing water suitable for irrigation or domestic purposes ..." The Department of Conservation has not to date adopted supplementary administrative regulations covering this subject in the California Administrative Code.

Oil wells drilled on dry land offer relatively controllable problems of potential pollution to surface and groundwaters of the state. But the 1969 discharge in an area under federal jurisdiction outside of

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California's ocean boundaries off Santa Barbara has focused attention on special problems relating to oil wells located in salt or fresh water areas, where the water can serve to disperse oil from unidentified or uncontrollable sources or seepages, and where the depth of the facility makes control extremely difficult and, perhaps, impossible. The result of such dispersal can be widespread water pollution.

The state lands within California's three-mile ocean boundaries, and in California's inland water and estuary areas, are administered by the State Lands Commission, which decides when and where to issue leases for oil well drilling and production. Such leases are of course subject to the regulations of the Department of Conservation. Under joint procedures worked out several years ago by the Division of Oil and Gas and the state and regional boards, the oil operator reports proposed discharges of waste to the Division of Oil and Gas and to the appropriate regional board. The latter issues waste discharge requirements, which, it is emphasized, are directed only to the planned discharge of waste; they do not contemplate a Santa Barbara type situation.

There is an urgent need that all California agencies involved in oil well drilling review all procedures to prevent the occurrence of pollution from oil wells. The state and regional boards must play a responsible role in the initial review and approval of such operations and in the remedial or clean-up work made necessary by oil spills.

There is a similar need to develop emergency plans to deal with effects of disasters to ships, particularly tankers.

E. VESSEL WASTES

Recently introduced federal legislation (S 7, 91st Congress, 1st session) provides for a federal control program for control of individual vessel sources of pollution to be implemented by 1971. An article in the December 1968 Water Pollution Control Journal included the following summary of the present national situation:

"1. Twenty-one states did not control pollution discharges from watercraft.

2. Twenty-nine states had laws partially controlling discharges.

3. Twelve states prohibited any discharge of wastewater.

4. Fifteen states required only minimal treatment.

5. Four states required approved treatment devices that were not specified.

6. Twenty-one states required such devices.

7. Twelve states approved on-board incinerators.

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"Many organizations have researched the question of just how much pollution watercraft adds to the waters. Many of these reports are conflicting. Some say that the total watercraft pollution is equivalent to that created by a city of half a million people. Other reports state that the contribution of watercraft pollution is negligible in relationship to that created by municipalities and shore-based industries.

"Regardless of the amount, pollution by watercraft contributes to the total problem. It should be and can be controlled. Pumping raw wastewater into waterways can cause diseases such as infectious hepatitis, dysentery, typhoid, shigellosis, paratyphoid fevers, and others. Raw wastewater, in addition to causing health problems, is unsightly and can lower real estate values of shore property. Polluted waters also will eliminate aquatic life and other wildlife."

With public concern for the pollution problem at an all-time high, it is likely that proposed federal legislation may be passed in some form. The present proposal is to define the word vessel to include every description of watercraft used, or capable of being used, as a means of transportation on the navigable waters of the United States.

Assuming that the federal legislation is enacted in substantially its presently proposed form, there will remain several broad areas needing early California legislation and regulation. One such area is that of the thousands of pleasure boats operating in fresh water locations which are not made subject to the proposed new federal legislation but where there may be an actual hazard from disease. Another area that needs California regulation consists of marinas where unregulated or insufficiently regulated waste disposal from boats may result in pollution or nuisance.

One technical detail that has frustrated those dealing with this problem in California is the argument of some boaters that until shore-side facilities are provided for pumpout of waste holding facilities, the boaters should not be required to install them. The other side of the coin is that the installation of shore-side facilities has been held up because those responsible say that until boats are equipped with holding facilities, shore connections are not needed. The Study Panel believes that these fronts must both be attacked at the same time. The recommendations below are designed to achieve this.

The Study Panel makes the following specific recommendations as a start toward effective state action to control vessel pollution:

Separate legislation should be enacted at the earliest opportunity to give the regional boards authority:

1. To hold marina, harbor and port operators responsible for posting of notices, construction of convenient on-shore toilet facilities, on-shore waste receiving or holding tanks, and/or dock-side sewage connections when a regional board has prohibited discharges of waste into waters of the state at these marinas, harbors and ports.

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2. In the event the dock or marina operator should fail to implement these programs and conduct his operation so as to avoid the discharge of waste in an area where prohibited by a regional board, he should be compelled to do so.

3. As an alternate to 1. and 2., the provisions in the recommended houseboat legislation could be broadened to apply to marinas.

If the pending federal legislation passes it would in a sense be complementary to the above recommendation because shore-side facilities are essential if on-board facilities of the holding variety are approved by the federal government. If this federal legislation does not pass, the State Water Resources Control Board should expedite a study of a state program as compatible as possible with those programs adopted by other states establishing criteria for on-board facilities and a program requiring their installation. The study should give full consideration to vessel type, size and the costs and benefits involved. It should also give consideration to the development of regulations adapted to California where those generally well suited to Wisconsin (an example) might not be appropriate or necessary.

The Study Panel believes it is not practicable to regulate small boats that do not have toilets, and that state regulation of boats to achieve control over occasional discharge of pleasure craft into the open waters of the ocean is not necessary.

The problem of waste from large ships has proved exceedingly complicated. The pending federal legislation includes them, but only as to sanitary wastes. There are many other types of wastes that can be extremely damaging to the environment, including galley wastes, bilge pump-out, and other washed-down waste, depending upon the function of the vessel. Since large vessels have a long life, it will be many years after the adoption of federal criteria requiring the installation of ship-board treatment and/or holding devices before all the thousands of vessels in international and coast-wide service can be fitted with approved devices. In fact, even if this occurs, there will be great difficulty in insuring proper operation of these facilities.

The state should launch a one-year study as necessary to supplement current studies by the U. S. Navy and Coast Guard on the provision of dock-side facilities, flexible facilities to connect to and receive waste from ships of existing design.

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CHAPTER IX

PROBLEMS NEEDING FURTHER STUDY

Time or circumstances did not permit the needed study, the full development of background issues and facts, or the full discussion with vitally concerned parties needed in connection with several important problems that relate to the water quality control program.

A. FISH AND GAME CODE SECTION 5650

One of California's agencies most vitally concerned with the quality of the waters of the state is the Department of Fish and Game. Its wardens and deputies are located in all regions of California, enforcing not only fishing laws and regulations, but also helping to make sure that no pollution occurs which would damage fish or wildlife. Fish and Game also is consulted with respect to water quality objectives needed in policies (proposed to be renamed water quality control plans) and in waste discharge requirements.

Two of the more important sections in the Fish and Game Code are 5650 and 5651 which provide:

> 5650: It is unlawful to deposit in, permit to pass into, or place where it can pass into the waters of this state any of the following:
>
> (a) Any petroleum, acid, coal or oil tar, lampblack, aniline, asphalt, bitumen, or residuary product of petroleum, or carbonaceous material or substance.
>
> (b) Any refuse, liquid or solid, from any refinery, gas house, tannery, distillery, chemical works, mill or factory of any kind.
>
> (c) Any sawdust, shavings, slabs, edgings.
>
> (d) Any factory refuse, lime, or slag.
>
> (e) Any cocculus indicus.
>
> (f) Any substance or material deleterious to fish, plant life, or bird life.
>
> 5651. Whenever it is determined by the department that a continuing and chronic condition of pollution exists, the department shall report such condition to the appropriate regional water pollution (quality) control board, and shall cooperate with and act through such board in obtaining correction in accordance with any laws administered by such board for control of practices for sewage and industrial waste disposal.

On its face, section 5650 is so sweeping in its prohibitions that it literally prohibits practically any and every discharge of waste into the waters

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state, including discharges of waste in full compliance with waste discharge requirements issued by a regional board, and regardless of the fact that nearly all requirements adopt the informal recommendations of representatives of Fish and Game. The state board should immediately initiate appropriate steps to achieve a resolution of this problem.

B. WASTE DISPOSAL FROM MOBILE HOMES

This problem has been ignored to date in many areas of the state, and will become increasingly acute.

C. PREVENTION OF LAKE EUTROPHICATION

Eutrophication and its consequent abnormal algal growths in the Tahoe Keys at Lake Tahoe is largely the result of natural processes at work in semienclosed areas of the lake. Jurisdiction of the regional boards is based upon discharges of waste, yet only very minor man-made wastes are understood to be involved in this eutrophication at the Tahoe Keys. Similar algal growths occur in other enclosed portions of Lake Tahoe waters, as well as other bodies of water throughout the state, located apart from houses and people. It follows that city or county ordinances or additional state laws are needed to cope with this type of problem. The specific problem at the Tahoe Keys may be headed towards solution by the adoption and enforcement of ordinances that will require circulation of water in these areas sufficient to prevent eutrophication.

D. INDUSTRIAL WASTE HAULING

Consideration was given to the problem of indiscriminate dumping by industrial waste haulers in the Los Angeles and San Francisco metropolitan areas. Suggestions ranged from the regional board licensing of waste haulers to requiring the establishment of local ordinances for such activities. The regulation of waste haulers is a complicated subject involving local government, regulation of the waste dumps, and policing. It is recommended that the State Water Resources Control Board, in conjunction with the regional boards, develop and implement a program for regulation of industrial waste haulers and make necessary legislative recommendations to the next session of the Legislature.

E. DELAYED POLLUTION

This problem arises, for example, where gravel pits are converted to dump sites, subject during filling to what are considered to be tight and appropriate regulations to prevent seepage of toxic wastes into the groundwaters or to runoff into surface waters of the state. After the dump site is filled and covered, the surface above the gravel pit is developed as a subdivision or for another purpose. Then pollution is found, and traced to a leak or seepage - possibly caused by an earthquake or land subsidence - from the dump waste. Problem: What to do, who is to do it, and who is to pay for correction.

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F. POSSIBLE NEED TO REVISE HEALTH AND SAFETY CODE, SECTION 6644

One sanitary district believes strongly that present requirements of section 6644 of the Health and Safety Code should be amended to modify its two-third majority requirement where sewer works essential to public health are involved. The district's recommendations are:

1. Amend section 6644 to require a three-fifths rather than a two-thirds favorable vote for bond issues. A precedent already exists in the case of the San Francisco Bay Rapid Transit enabling legislation.

2. Add section 6644.1 to allow passage of bonds by a simple majority in the event a county health officer finds that sewers are necessary as a health measure. This proposal is the same as the original section 6644.1 which was on the books for many years, but which expired on September 1, 1965.

G. OTHER PROBLEMS PREVIOUSLY DISCUSSED

In addition to the foregoing matters requiring further study, the Legislature should immediately initiate intensive studies to find solutions to a number of other water quality problems discussed in earlier sections of this report. These studies should cover problems of local waste facility financing, (including the possibility of a state grant program), control and use of pesticides and fertilizers, prevention, clean up and abatement of oil pollution, and the disposal of large-vessel wastes by dock-side facilities or other means.

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A P P E N D I X A

RECOMMENDED CHANGES TO THE

WATER CODE

BUSINESS AND PROFESSIONS CODE

GOVERNMENT CODE

HARBORS AND NAVIGATION CODE

and

HEALTH AND SAFETY CODE

ERRATA

PAGE NO.	
31	Paragraph (o) - Change "contract" to "contact"
93	Section 13608, 3rd line - Change "Chapter 5" to "Chapter 6"

ADDITIONAL OR MODIFIED RECOMMENDATIONS BY THE STATE WATER RESOURCES CONTROL BOARD

The State Water Resources Control Board on March 20, 1969, adopted the recommendations herein for transmittal to the California Legislature as State Board recommendations, but indicated that it would have several minor and additional changes. They are as follows:

1. Section 13203, on page 15, revise section to read:

> 13203. The official designation of each regional board shall be: "California Regional Water Quality Control Board, _____."

The purpose of this amendment would be to make clear by the title that the board in question is a regional board, and not the regional office of California's State Board.

For clarification, section 13200(c) on page 13, line 16, should be revised to read in part:

> (a) North ~~coastal~~ Coast region, . . .

Also for clarification, section 13200(c) on page 13, line 35, should be revised to read in part:

> (c) Central ~~coastal~~ Coast region, . . .

(The effect of these changes for clarification would be, for example, the title:

> "California Regional Water Quality Control Board, North Coast", not "North coastal".)

Other changes would be needed to all sections which refer by title to the name of the regional boards. These changes would be numerous, but are considered to be important.

2. Section 1243, on page 4, make the first sentence, which starts on line 44, subsection (a). Make the second sentence subsection (b).

These two sentences are sufficiently unrelated that the subsection approach would add clarity.

3. In section 13201(a), on page 14, in line 42, delete:

> "in the Resources Agency."

This matter is already covered by an amendment to Government Code, section 12805, which is section 25 of the bill, on page 41. The purpose of this amendment would be to clarify intra-agency relationships.

4. Section 13163(a), revise to read in part:

> 13163(a). The state board shall coordinate water-quality-related investigations of state agencies, recognizing that other state agencies have primary statutory responsibility for conducting such investigations, and shall consult with the concerned regional boards in implementing this section.

INDEX TO CHANGES TO THE WATER CODE*

DIVISION, Chapter, Article or Section	New Number	Old Number	Heading	Nature of Change
DIVISION	1.	1.	GENERAL STATE POWERS OVER WATER	none
Sec.	175.	175.		amend.
"	183.	183.		"
"	185.	185.		"
"	186.	186.		"
"	230.	230.		"
"	231.	231.		"
DIVISION	2.	2.	WATER	none
Part	1.	1.	General Provisions	"
Sec.	1058.	1058.		amend.
"	1075.	1075.		"
Part	2.	2.	Appropriation of Water	none
Sec.	1242.5	none		new
"	1243.	1243.		amend.
"	1257.	1257.		"
"	1258.	1258.		"
"	1259.	none		new
Part	3.	3.	Determination of Water Rights	none
Chap.	2.5	none	Adjudications to Protect the Quality of Groundwater	new
Secs.	2100.-2103.	none		new
DIVISION	6.	6.	CONSERVATION DEVELOPMENT, etc.	none
Part	6.	6.	Water Development Projects	none
Sec.	12617.1	none		new
"	12923.1	"		"
DIVISION	7.	7.	WATER QUALITY	none
Chap.	1.	1.	Policy	"
Sec.	13000.	13000. 13000.1 13000.2		amend.
"	13001.	13003. 13000.3		"
"	13002.	13001.		amend; new in part

*Unindexed changes include Sections 11010. and 11551.6(new) of the Business and Professions Code; Sections 11558., 11558.1(new), 11563., 11563.1(new), and 12805. of the Government Code; Sections 151. and 152.(repeal) of the Harbors and Navigation Code; and Sections 4458.(repeal),and 5410. of the Health and Safety Code.

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DIVISION, Chapter, Article or Section	New Number	Old Number	Heading	Nature of Change
Chap.	2.	2.	Definitions	none
Sec.	13050.	13005.		amend; new in part.
"	--	13006.		repeal.
"	13060.	--		new
Chap.	3.	3.	State Water Quality Control	none
Art.	1.	none	State Water Resources Control Board	new
Sec.	13100.	"		"
Art.	2.	1.	Water Quality Advisory Comm.	amend.
Sec.	13120.	13015.		"
"	13121.	13016.		"
"	13022.	13017.		"
"	13023.	13018.		"
"	13024.	13019.		"
Art.	3.	none	State Policy for Water Quality Control	new
Sec.	13140.	13022.1 13022.2		amend.
"	13141.	none		new
"	13142.	"		"
"	13143.	"		"
"	13144.	"		"
"	13145.	13022.2		amend.
"	13146.	part of 13022.1		"
"	13147.	13022.4		"
"	none	13025.		repeal; replaced by 13320.
"	"	13025.5		
Art.	4.	2.	Other Powers and Duties of the State Board	amend.
Sec.	13160.	in part, 13600.		new; amend.
"	13161.	none		new
"	13162.	13024.		amend.
"	13163.	none		new
"	13164.	parts of 13022.1 13022.3		amend.
"	13165.	13025.7		"
"	13166.	none		new
"	13167.	"		"
"	13168.	13020.		amend.

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DIVISION, Chapter, Article or Section	New Number	Old Number	Heading	Nature of Change
Chap.	4.	4.	Regional Water Quality Control	amend.
Art.	1.	1.	Organization and Membership of Regional Boards	"
Sec.	13200.	13040.		"
"	13201.	13041.		"
"	13202.	13042.		"
"	--	13042.5		repeal; see 13201.
"	13203.	--		new
"	13204.	13043.		amend.
"	13205.	13044.		"
"	13206.	13045.		"
Art.	2.	2.	General Provisions Relating to Powers and Duties of Regional Boards	"
Sec.	13220.	13050.		"
"	13221.	13051.		"
"	13222.	--		new
"	13223.	none		"
"	13224.	in part, 13052.(e)		amend.
"	13225.	13052.		"
Art.	3.	none	Regional Water Quality Control Plans	new
Sec.	13240.	13052.(e)		amend.
"	13241.	none		new
"	13242.	"		"
"	13243.	13054.3		amend.
"	13244.	in part, 13052.2		"
"	13245.	in part, 13052.2		"
"	13246.	in part, 13052.2		"
"	13247.	13052.3		"
Art.	4.	none	Waste Discharge Requirements	new
Sec.	13260.	in part, 13053. 13054.		new; amend.
"	13261	13054.4		"
"	13262.	in part, 13063.		"
"	13263.	13002. 13054. 13054.1 13054.2		"

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DIVISION, Chapter, Article or Section	New Number	Old Number	Heading	Nature of Change
Sec.	13264.	none		new
"	13265.	"		"
"	13266.	"		"
"	13267.	13055.		amend.
"	13268.	13055.1		"
"	13269.	in part, 13054.		new; amend.
Chap.	5.	part of 4.	Enforcement and Implementation	new
Art.	1.	none	Administrative Enforcement and Remedies by Regional Boards	"
Sec.	13300.	"		"
"	13301.	13060.		amend.
"	13302.	none		new
"	13303.	"		"
"	13304.	"		"
"	13305.	"		"
Art.	2.	"	Administrative Enforcement and Remedies by the State Board	"
Sec.	13320.	13025. 13025.5		new; amend.
"	13321.	none		new
Art.	3.	"	Judicial Review and Enforcement	"
Sec.	13330.	in part, 13063.		new; amend.
"	13331.	none		new
Art.	4.	4.	Summary Judicial Abatement	amend.
Sec.	13340.	13080.		"
Art.	5.	none	Civil Monetary Remedies	new
Sec.	13350.	"		"
Art.	6.	"	General Provisions Relating to Enforcement and Review	"
Sec.	13360.	13064.		amend.
"	13361.	none		new
Chap.	6.	5.	State Financial Assistance	amend.
Art.	1.	1.	State Water Quality Control Fund	none
Sec.	13400.	13100.		amend.
"	13401.	13101.		"
Art.	2.	2.	Loans to Local Agencies	none
Sec.	13410.	13110.		amend.
"	13411.	13111.		"
"	13412.	13112.		"
"	13413.	13112.5		"

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DIVISION, Chapter, Article or Section	New Number	Old Number	Heading	Nature of Change
Sec.	13414.	13113.		amend.
"	13415.	13114.		"
"	none	13115.		repeal.
"	13416.	13125.		amend.
"	13417.	13126.		"
Art.	--	3.		repeal.
"	3.	--	State Water Pollution Cleanup and Abatement Account	new
Sec.	13340.-13342.	none		new
Chap.	7.	6.	Water Reclamation	amend.
Art.	1.	1.	Short Title	none
Sec.	13500.	13500.		amend.
Art.	2.	2.	Declaration of Policy	none
Sec.	13510.	13510.		amend.
"	13511.	13511.		"
"	13512.	13512.		"
Art.	3.	3.	State Assistance	none
Sec.	13515.	13515.		amend.
Art.	4.	4.	Regulation of Reclamation	"
Sec.	13520.	13520.		"
"	13521.	13521.		"
"	13522.	13522.		"
"	13523.	13523.		"
"	13524.	none		new
"	13525.	"		"
"	13526.	"		"
"	13527.	13524.		amend.
"	13528.	13525.		"
Art.	5.	5.	Surveys and Investigations	none
Sec.	13530.	13530.		amend.
Art.	6.	none	Waste Well Regulation	new
Sec.	13540.	"		"
"	13541.	"		"
Chap.	8.	6.5	Federal Assistance for Treatment Facilities	amend.
Sec.	13600.	13600.		"
"	13601.	13601.		"
"	13602.	13602.		none
"	13603.	13603.		"
"	13604.	13604.		amend.
"	13605.	none		new
"	13606.	"		"
"	13607.	13605.		none
"	13608.	none		new

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DIVISION, Chapter, Article or Section	New Number	Old Number	Heading	Nature of Change
Chap.	9.	none	Waste Treatment Plant Operator Qualifications	new
Sec.	13625.-13630.	"		"
Chap.	10.	7.	Water Wells and Cathodic Protection Wells	none
Art.	1.	1.	Declaration of Policy	none
"	1.5	2.	Definitions	amend.
"	2.	3.	Reports	"
"	4.	4.	Quality Control	none
Sec.	13800.	13800.		"
"	13801.	13801.		amend.
"	13802.	13802.		"
"	13803.	13803.		none
"	13804.	13804.		amend.
"	13805.	13805.		"
"	13806.	13806.		"
Chap.	11.	none	Discharges from Houseboats on or in the Waters of the State	new
Secs.	13900.-13908.	"		new

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An act to amend Sections 175, 183, 185, 186, 230, 231, 1058, 1075, 1243, 1257, and 1258 of, to add Sections 1242.5, 1259, 12617.1, and 12923.1 to, to add Chapter 2.5 (commencing with Section 2100) to Part 3, Division 2 of, to repeal Division 7 (commencing with Section 13000) of, and to add Division 7 (commencing with Section 13000) to, the Water Code, to amend Section 11010 of, and to add Section 11551.6 to, the Business and Professions Code, to amend Sections 11558, 11563, and 12805 of, and to add Sections 11558.1 and 11563.1 to, the Government Code, to amend Section 151 of, and to repeal Section 152 of, the Harbors and Navigation Code, to amend Section 5410 of, and to repeal Section 4458 of, the Health and Safety Code

* * * * *

WATER CODE

DIVISION 1. GENERAL STATE POWERS OVER WATER

Chapter 2. Administration Generally

Article 3. State Water Resources Control Board

* * * * *

Section 1. Section 175 of the Water Code is amended to read:

175. There is in the Resources Agency the State Water Resources Control Board consisting of five members appointed by the Governor. One of the members appointed shall be an attorney admitted to practice law in this state who is qualified in the fields of water supply and water

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rights, one shall be a registered civil engineer under the laws of this state who is qualified in the fields of water supply and water rights, one shall be a registered civil engineer under the laws of this state who is experienced in sanitary engineering and who is qualified in the field of water quality, one shall be qualified in the field of water quality, and one member shall not be required to have specialized experience.

Each member shall represent the state at large and not any particular portion thereof and shall serve full time. The appointments so made by the Governor shall be subject to confirmation by the Senate at the next regular or special session of the Legislature, and the refusal or failure of the Senate to confirm an appointment shall create a vacancy in the office to which the appointment was made.

(Note. It is understood that members of the state board are considering the advisability of eliminating the word "Resources" from "State Water Resources Control Board". Such a change would help in avoiding confusion between the names and authority of the state board and the Department of Water Resources. The Study Panel would support such a change. One other state (Virginia) has a comparable board named "State Water Control Board".)

Section 2. Section 183 of the Water Code is amended to read:

183. The board may hold any hearings and conduct any investigations in any part of the state necessary to carry out the powers vested in it, and for such purposes has the powers conferred upon heads of departments of the state by Article 2 (commencing with section 11180), Chapter 2, Part 1, Division 3, Title 2 of the Government Code.

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Any hearing or investigation by the board, ~~except~~ including hearings pursuant to section 13245 but excluding all other hearings or investigations pursuant to Division 7 of this code, may be conducted by any member upon authorization of the board, and he shall have the powers granted to the board by this section, but any final action of the board shall be taken by a majority of the members of the board at a meeting duly called and held.

All hearings held by the board or by any member thereof shall be open and public.

(Note. Amendment would permit hearing pursuant to section 13245 conducted by less than a full state board on a water quality control plan (now called a policy) proposed by a regional board. There is no intention to minimize the importance of hearings within a region on such plans. However, the state board members will be very busy, and there are a total of over 250 areas in California which will eventually be subject to separate water quality control plans. Although the hearing pursuant to section 13245 might be conducted by less than the full board, the full state board would be required to consider the results of that hearing, and to decide as a full board whether to approve the regional water quality control plan.)

Section 3. Section 185 of the Water Code is amended to read:

185. The board shall adopt rules for the conduct of its affairs in conformity, as nearly as practicable, with the provisions of Chapter ~~4~~ 4.5 (commencing at section 11370), Part 1, Division 3, Title 2 of the Government Code.

(Note. To correct an error.)

Section 4. Section 186 of the Water Code is amended to read:

186. The board shall have such powers, and may employ such legal counsel and other personnel and assistance,

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as may be necessary or convenient for the exercise of its duties under Division 2 (commencing with section 1000), except Part 4 (commencing with section 4000) and Part 6 (commencing with section 5900) thereof, Part 2 (commencing with section 10500) of Division 6, and Division 7 (commencing with section 13000) of this code.

For the purpose of administration, the board shall organize itself, with the approval of the Governor, in the manner it deems necessary properly to segregate and conduct the work of the board. The work of the board shall be divided into at least two divisions, known as the Division of Water Rights and the Division of Water Quality ~~Control~~. The board shall appoint a chief of each division who shall supervise the work thereof and act as technical adviser to the board on functions under his jurisdiction.

The Attorney General shall represent the board and the state in litigation concerning affairs of the board unless another state agency, represented by the Attorney General, is a party to the action. In such case the legal counsel of the board shall represent the board. Sections 11041, 11042, and 11043 of the Government Code are not applicable to the State Water Resources Control Board. The legal counsel of the board shall advise and furnish legal services, except representation in litigation, to the regional boards upon their request.

* * * * *

Chapter 2.5. Miscellaneous Powers of Department

Article 2. Surveys, Investigations, And Distribution of Water

* * * * *

Section 5. Section 230 of the Water Code is amended to read:

230. The department, either independently or in cooperation with any person or any county, state, federal, or other agency, or upon the request of the State Water Resources Control Board, to the extent funds are allocated therefor, shall conduct surveys and investigations relating to the reclamation of water from sewage ~~or other~~ wastes for beneficial purposes, including but not limited to the determination of quantities of such water presently wasted, and possibilities of use of such water for recharge of underground storage or for agricultural or industrial uses; and shall report to the Legislature and to the appropriate ~~regional~~ California water quality control board thereon, annually.

(Note. Amendment conforms to new definition of waste.)

Section 6. Section 231 of the Water Code is amended to read:

231. The department, either independently or in cooperation with any person or any county, state, federal or other agency, shall investigate and survey conditions of damage to quality of underground waters, which conditions are or may be caused by improperly constructed, abandoned or defective wells through the interconnection of strata or the introduction of surface waters into underground waters. The department shall report to the appropriate ~~regional~~ California water ~~pollution~~ quality control board its

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recommendations for minimum standards of well construction in any particular locality in which it deems regulation necessary to protection of quality of underground water, and shall report to the Legislature from time to time, its recommendations for proper sealing of abandoned wells.

(Note. Amendment to correct oversight.)

* * * * *

DIVISION 2. WATER

Part 1. General Provisions

Chapter 2. Administrative Provisions Generally

* * * * *

Section 7. Section 1058 of the Water Code is amended to read:

1058. The board may make such reasonable rules and regulations as it may from time to time deem advisable in carrying out its powers and duties under this ~~division~~ code.

(Note. Amendment would authorize state board to issue regulations with respect to water quality under the provisions of division 7.)

* * * * *

Chapter 3. Witnesses and Production Of Evidence

Section 8. Section 1075 of the Water Code is amended to read:

1075. As used in this chapter, "proceeding" means any inquiry, investigation, hearing, ascertainment,

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or other proceeding ordered or undertaken by the board pursuant to this ~~division~~ code.

(Note. Amended definition would include proceedings relating to water quality pursuant to division 7. The effect of the amendment would be to authorize the state board to administer oaths and issue subpoenas for the attendance and giving of testimony by witnesses and for the production of evidence in proceedings relating to water quality as well as in proceedings relating to water rights.)

* * * * *

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Part 2. Appropriation of Water*

Chapter 1. General Provisions

* * * * *

Section 9. Section 1242.5 is added to the Water Code to read:

1242.5. The board may, whenever it is in the public interest, approve appropriation by storage of water to be released for the purpose of protecting or enhancing the quality of other waters which are put to beneficial uses.

(Note. New section. Would specifically authorize board to approve intended use from projects, such as New Melones, which contemplate some storage and conservation of water to improve downstream

*The State Water Resources Control Board (operative on December 1, 1967) was created by Chapter 284, Statutes of 1967, by consolidating the functions of the predecessor 14-member, part-time State Water Quality Control Board and the 3-member, full-time State Water Rights Board. The consolidation was intended to facilitate consideration of the interrelationships between water quantity and water quality.

Water Code section 174 provides in part:

> "It is also the intention of the Legislature to combine the water rights and the water pollution and water quality functions of state government to provide for consideration of water pollution and water quality, and availability of unappropriated water whenever applications for appropriation of water are granted or waste discharge requirements or water quality objectives are established."

Section 1258 provides in part:

> "In acting upon applications to appropriate water, the board shall consider water quality objectives ..." (See section 1258, below, as proposed to be amended.)

The proposed new sections and amendments to sections in Part 2 are intended to help implement the coordinated consideration of water quality and water rights.

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water quality for protection of beneficial uses. Will make California law consistent with Federal Water Pollution Control Act (33 U.S.C. 466 et seq.), particularly with its section 3(b) (1), which provides:

> "In the survey or planning of any reservoir by the Corps of Engineers, Bureau of Reclamation, or other federal agency, consideration shall be given to inclusion of storage for regulation of streamflow for the purpose of water quality control, except that any such storage and water releases shall not be provided as a substitute for adequate treatment or other methods of controlling waste at the source." (Underscoring added.)

The proposed California statute is worded a little differently than the federal statute because of the provisions of California Constitution, Article XIV, section 3, which requires:

> ". . . that the water resources of the State be put to beneficial use . . . "

The federal language, "for the purpose of water quality control", is not a beneficial use in and of itself. Downstream beneficial uses should exist and should require the level of water quality to be protected or enhanced by the storage of water and subsequent regulation of streamflow. To comply with California's Constitution, it is proposed to require that water stored pursuant to this section be released for the purpose of protecting or enhancing the quality of the waters which are put to beneficial uses.

Concern has been expressed that the proposed storage and subsequent release of water would result in water not put to a beneficial use. This would be contrary to the stated statutory purpose. It would also be contrary to the mandate of the section of the California Constitution quoted above, which prohibits:

> ". . . unreasonable use or unreasonable method of use or unreasonable method of diversion of water."

Section 10. Section 1243 of the Water Code is amended to read:

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1243. The use of water for recreation and preservation and enhancement of fish and wildlife resources is a beneficial use of water. In determining the amount of water available for appropriation ~~for other beneficial~~ uses, the board shall take into account, whenever it is in the public interest, the amounts of water ~~required for recreation and the preservation and enhancement of fish and wildlife resources~~ needed to remain in the source for protection of beneficial uses, including any uses specified to be protected in any relevant water quality control plan established pursuant to Division 7 (commencing with Section 13000) of this code.

This section shall not be construed to affect riparian rights.

(Note. Section proposed to be amended consistent with section 1258. Section 1243 relates to the quantity of water which the board decides, acting in the public interest, should remain in the source, and therefore be unavailable as unappropriated water until it has served the purpose for which reserved. Amendment would authorize board to look broadly at water quality of whole stream.

The intent here and in section 1257, as amended, is to integrate completely the administration of water rights and water quality.)

* * * * *

Chapter 2. Applications to Appropriate Water

* * * * *

Section 11. Section 1257 of the Water Code is amended to read:

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1257. In acting upon applications to appropriate water, the ~~State Water Rights Board~~ board shall consider the relative benefit to be derived from all beneficial uses of the water concerned including, but not limited to, use for domestic, irrigation, municipal, industrial, preservation and enhancement of fish and wildlife, recreational, mining and power purposes, and any uses specified to be protected in any relevant water quality control plan, and may subject such appropriations to such terms and conditions as in its judgment will best develop, conserve, and utilize in the public interest, the water sought to be appropriated.

(Note. Amendment would expressly permit board to consider water quality when evaluating relative benefit to be derived from all beneficial uses of the water concerned. Enhancement of fish and wildlife already recognized in section 1243.)

Section 12. Section 1258 of the Water Code is amended to read:

1258. In acting upon applications to appropriate water, the board shall consider water quality ~~objectives~~ control plans which have been established pursuant to ~~law~~ Division 7 (commencing with Section 13000) of this code, and may subject such appropriations to such terms and conditions as it finds are necessary to carry out such ~~objectives~~ plans.

(Note. See definition of "water quality control plan" in division 7. The language of the present law equates "water quality control policy" with "objectives". The word "plan" has been substituted for "objectives" (or "policy") because "plan" is the appropriate word in the revised law.)

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Section 13. Section 1259 is added to the Water Code, to read:

1259. After notice and a public hearing, the board may reserve from appropriation water in such locations and quantities and for such seasons of the year as in its judgment is required in the public interest to implement water quality control plans established pursuant to Division 7 of this code. Such reservations shall be subject to periodic review and revision in the light of changed conditions.

(Note. New section. Under existing law board decisions have no express statutory scope or status outside the applications to which they relate. Reservation from appropriation would not be so limited, but any reservation would be subject to periodic review and revision.)

* * * * *

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Section 14. Chapter 2.5 (commencing with section 2100) is added to Part 3, Division 2 of the Water Code, to read:

Chapter 2.5. Adjudications to Protect The Quality of Groundwater*

2100. After the department has submitted to the board plans and recommendations for the protection of the quality of groundwater pursuant to sections 12617.1 or 12923.1 of this code, or in reliance upon investigation by any governmental agency, the board may file an action in the superior court to restrict pumping, or to impose physical solutions, or both, to the extent necessary to prevent destruction of or irreparable injury to the quality of such water. In such action, any of the claimants to the use of the affected water may be named as defendants. In any

* Note. New chapter would authorize state board to begin an action in the superior court for the protection of the quality of groundwater, when indicated by an investigation and plans or recommendations of the Department of Water Resources pursuant to proposed new sections 12617.1 or 12923.1 of this code. The board could also rely upon the investigation of another governmental agency.

Note the following required steps: (1) An investigation by some responsible governmental agency, indicating the quality of certain groundwater to be threatened with irreparable injury; (2) A public hearing by the state board; (3) A determination of the necessity of an adjudication in order to control the pumpage or impose a physical solution; (4) Intervention in any pending adjudication proceeding, or one in which appropriate jurisdiction has been retained; (5) A determination whether a local public agency will undertake the adjudication; (6) An action filed by the state board, only if other alternatives fail.

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watershed or groundwater basin wherein (a) all or substantially all of the rights to water have been adjudicated and the court has retained continuing jurisdiction arising from said adjudication, or (b) wherein such action is pending, any such proceedings by the board shall be undertaken only by intervention by the board in such existing action.

2101. (a) Before filing or intervening in any such action the board shall hold a public hearing on the necessity for restricting groundwater pumping or for a physical solution in order to protect the quality of water from destruction or irreparable injury.

(b) In the event the board decides that the rights to the use of the groundwater must be adjudicated in order to require the restriction of pumping or physical solution necessary to preserve it from destruction or irreparable injury to quality, the board shall first determine whether any local public agency overlying all or a part of the groundwater basin will undertake such adjudication of water rights. If such local agency commences an adjudication, the board shall take no further action, except that the board may, through the Attorney General, become a party to such action.

(c) In the event no local agency commences such action within 90 days after notice of the decision of the board, the board may file such action.

2102. At any time after the filing of a complaint or intervening pursuant to Section 2100, the board may apply to the court for a preliminary injunction equitably

restricting and apportioning the reduction in the pumping of water without requiring bond.

2103. When a preliminary injunction has been granted pursuant to Section 2102, the final judgment shall equitably compensate in quantities of water for such variations as there may be between the rights of parties to the use of water on which such preliminary injunction is based, and as such rights are determined in the final judgment.

* * * * *

Part 6. Water Development Projects

Chapter 1. Investigation of Projects

* * * * *

Section 15. Section 12617.1 is added to the Water Code, to read:

12617.1. The department, in making investigations and plans for water projects and for the solution of the water problems of the state pursuant to Sections 12616 and 12617, shall include plans and recommendations for the protection of the quality of the waters affected, including downstream waters, with respect to all sources of impairment and factors affecting quality. In doing so, the department shall cooperate with counties, cities, state agencies, and public districts to the end that planning for water quality control shall be coordinated to the maximum extent possible. Such plans and recommendations shall be transmitted to the State Water Resources Control Board and

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to the appropriate California water quality control boards for their consideration in the adoption of state policy for water quality control, water quality control plans, and waste discharge requirements.

(Note. The main purpose of this section is to make certain that water quality is considered in the course of all major investigations and plans for water projects made by the Department of Water Resources.

Of course, DWR would be expected to submit to the state board, pursuant to section 13163, the plans for and results of all such investigations. This proposed section, next to those authorizing DWR to make the investigations, would be expected to point up water quality considerations at the start of DWR's investigation procedure. It would also lay the foundation for possible adjudication to protect the quality of groundwater, pursuant to section 2100, et seq.)

* * * * *

Chapter 7.5. Protection of Ground Water Basins

* * * * *

Section 16. Section 12923.1 is added to the Water Code to read:

12923.1. The results of the investigations and studies conducted and the plans and design criteria developed by the department pursuant to this article shall be transmitted to the State Water Resources Control Board and to the appropriate California water quality control boards for their consideration in the adoption of state policy for water quality control, water quality control plans and waste discharge requirements.

(Note. New section comparable to section 12617.1. It relates to procedures for the protection of the quality of groundwater pursuant to the Porter-Dolwig Ground Water Basin Protection Law. An adjudication to protect the quality of groundwater, pursuant to section 2100, et seq., might be indicated.)

* * * * *

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Sec. 17. Division 7 (commencing with Section 13000) of the Water Code is repealed.

Sec. 18. Division 7 (commencing with Section 13000) is added to the Water Code, to read:

DIVISION 7. WATER QUALITY

Chapter 1. Policy

13000. The Legislature finds and declares that the people of the state have a primary interest in the conservation, control, and utilization of the water resources of the state, and that the quality of all the waters of the state shall be protected for use and enjoyment by the people of the state.

The Legislature further finds and declares that activities and factors which may affect the quality of the waters of the state shall be regulated to attain the highest water quality which is reasonable, considering all demands being made and to be made on those waters and the total values involved, beneficial and detrimental, economic and social, tangible and intangible.

The Legislature further finds and declares that the health, safety and welfare of the people of the state require that there be a statewide program for the control of the quality of all the waters of the state; that the state must be prepared to exercise its full power and jurisdiction to protect the quality of waters in the state from degradation originating inside or outside the boundaries of the state; that the waters of the state are

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increasingly influenced by interbasin water development projects and other statewide considerations; that factors of precipitation, topography, population, recreation, agriculture, industry and economic development vary from region to region within the state; and that the statewide program for water quality control can be most effectively administered regionally, within a framework of statewide coordination and policy.

(Note. Replaces the present secs. 13000, 13000.1, and 13000.2.

The first paragraph of new section 13000 uses a declaration of the importance of conservation, control and utilization of the water resources of the state as establishing the foundation for regulation to protect the quality of the waters of the state which is referred to in the second paragraph.

The second paragraph is intended to represent the present interpretation of section 13000.2, which section is generally liked but given widely different interpretations because of the ambiguous phrase, "maximum benefit".

The third paragraph is based on the present section 13000, particularly its second paragraph, but avoids repetition as much as possible.

The new section is rearranged to introduce in order ideas consistent with the needs for conservation, control and utilization of water resources, regulation to attain the highest quality which is reasonable, and administration of water quality control by regional boards within a framework of state coordination and policy.

In the Preliminary Report the second paragraph of section 13000 had concluded with references both to desirable esthetic conditions and to waste disposal and assimilation. It is now proposed to delete both these references and to conclude this important paragraph with language found in the "long-range goals for water quality

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control" at the bottom of page 13 of the Preliminary Report. This language identifies the different kinds of values that might have to be considered in evaluating the "highest water quality which is reasonable", as applied to a specific situation.

"Esthetic enjoyment", which had been in the Preliminary Report, is included in the definition of "beneficial uses" in section 13050 (f). Waste disposal and assimilation are not included in the definition of "beneficial uses", but they are recognized as part of the necessary facts of life, to be evaluated and subject to reasonable consideration and action by the regional boards. Section 13263 (derived from section 13054.2) provides that a regional board need not utilize the full waste assimilation capacity of the receiving waters.)

13001. It is the intent of the Legislature that the state board and each regional board shall be the principal state agencies with primary responsibility for the coordination and control of water quality. The state board and regional boards in exercising any power granted in this division shall conform to and implement the policies of this chapter and shall, at all times, coordinate their respective activities so as to achieve a unified and effective water quality control program in this state.

(Note. First sentence is present section 13003. Second sentence is based on present section 13000.3.)

13002. No provision of this division or any ruling of the state board or a regional water quality control board is a limitation:

(a) On the power of a city or county or city and county to adopt and enforce additional regulations, not in conflict therewith, imposing further conditions, restric-

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tions, or limitations with respect to the disposal of waste or any other activity which might degrade the quality of the waters of the state.

(b) On the power of any city or county or city and county to declare, prohibit, and abate nuisances.

(c) On the power of the Attorney General, at the request of a regional board, the state board, or upon his own motion, to bring an action in the name of the people of the State of California to enjoin any pollution or nuisance.

(d) On the power of a state agency in the enforcement or administration of any provision of law which it is specifically permitted or required to enforce or administer.

(e) On the right of any person to maintain at any time any appropriate action for relief against any private nuisance as defined in the Civil Code or for relief against any contamination or pollution.

(Note. Present section 13001. A new subsection (c) has been added because of the decision in People v. New Penn Mines, Inc., 212 Cal. App. 2d 667.)

(Note. Present section 13002. First sentence to be deleted, and balance in modified section 13263. (g). Said deletion does not suggest any attempt to interfere with constitutionally protected rights to the use of water.)

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Chapter 2. Definitions

13050. As used in this division:

(a) "State board" means the State Water Resources Control Board.

(b) "Regional board" means any California water quality control board for a region as specified in section 13200.

(c) "Person" also includes any city, county, district, the state or any department or agency thereof.

(d) "Waste" includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation of whatever nature.

(Note. Combines and replaces the former definitions of "sewage" and "other waste". Much industrial and other waste is now collected with sewage and disposed of in plants referred to as "waste disposal plants". The "Suggested State Water Pollution Control Act" (Gindler, p. 308*) has no separate definition of sewage.

The proposed new definition of waste is intended to be as all-inclusive as the present definition of "sewage" and "other waste". The proposed new definition also adds a specific reference to gaseous or radioactive substances, each of which is included in the definition of "wastes" in the "Suggested State Water Pollution Control Act".

The present definitions of "sewage" and "industrial waste" or "other waste" have been interpreted in Opinions of the Attorney General to include the following:

* References to Gindler are to Waters and Water Rights, Volume 3, "Water Pollution and Quality Controls", the Allen Smith Co., Indianapolis (1967), by Burton J. Gindler.

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1. Drainage into surface streams or lakes of water from inoperative or abandoned mine tunnels that have leached through ore dumps and tailings and contains harmful materials which, but for the mining operations, would not be present at all or in the amounts now found. 26 Ops. Cal. Atty. Gen. 88 (1955)

2. The current drainage, flow, or seepage into waters of the state of harmful concentrations of all the following listed materials constitutes the discharge of waste over which a regional board has jurisdiction:

a. Bark, slash, sawdust, and other debris resulting from logging operations;

b. Earth eroded from tractor trails and other areas which have been denuded of protective vegetation by logging operations;

c. Garbage, ashes, rubbish, mixed refuse, and solid industrial waste found in dumps;

d. Return irrigation or drainage water from agricultural operations containing materials not present prior to use;

e. Liquids containing harmful materials which arise in one stratum intercepted by a water, oil, or gas well and flow through the well into other intercepted strata containing water of good quality. 27 Ops. Cal. Atty. Gen. 182. (1956)

3. The discharge of water from a hydroelectric plant is industrial waste. Change in stream temperature caused by hydroelectric operation might constitute a pollution. Wastes from agricultural operations including insecticides, pesticides, herbicides and other chemicals constitute (industrial) waste. 43 Ops. Cal. Atty. Gen. 302. (1964)

It is intended that the proposed definition of waste will be interpreted to include all the materials, etc., which the Attorney General has interpreted to be included in the definitions of "sewage", "industrial waste", and "other waste".)

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(e) "Waters of the state" means any water, surface or underground, including saline waters, within the boundaries of the state.

(Note. Deletes last part of present definition because recent court decisions raise questions as to whether sections 170, 171 and 172 of the Government Code accurately reflect boundaries of the state. Note that (1) other sections may control ocean discharges outside "waters of the state," where discharges would or might affect waters of the state, and (2) other sections may be used to control activities of California citizens outside state boundaries. See Skiriote v. Florida, 313 U.S. 69 (1941), and 34 Ops. Cal. Atty. Gen. 260 (1959). See also added phrase in paragraph 3 of proposed new section 13000 and new section 13260.)

(f) "Beneficial uses" of the waters of the state that may be protected against quality degradation include, but are not necessarily limited to, domestic, municipal, agricultural and industrial supply; power generation; recreation; esthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves.

(Note. This proposed new definition relates to protection of the quality of surface and ground waters of the state. Section 1257 of this code relates only to particular beneficial uses to be considered in connection with appropriation and usually some consumptive use of unappropriated waters of the state. The new definition is based in part on the definition in "Statewide Policy for the Control of Water Quality", as adopted and amended by State Board Resolutions 67-7, and 67-36, respectively, and on section 1243 of this code.

The Statewide Policy definition is as follows:

"Beneficial Use of the water resources of the state is that use of water that is, in general, productive of public benefit, which promotes the peace, health, safety, and welfare of the people of the state.

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1. Beneficial uses of the waters of the state that may be protected against damage resulting from quality degradation include but are not necessarily limited to:

a. Domestic and municipal supply;

b. Agricultural supply;

c. Industrial supply (including power generation);

d. Propagation, sustenance and harvest of fish, aquatic life (including shell fish) and wildlife;

e. Recreation;

f. Esthetic enjoyment;

g. Navigation.

2. Waste disposal, dispersion and assimilation are economic beneficial uses of water but shall be regulated as required to protect other beneficial uses. These economic beneficial uses shall be considered in the process of establishing a water quality control policy."

After careful consideration, the portion of the quoted definition calling waste disposal, etc., "economic beneficial uses of water", was not included in the proposed new definition. All recognized categories of beneficial uses of water require varying degrees of water quality for their protection, and this protection is directed largely against the effects of waste disposal. Under these circumstances it would be very confusing to refer to waste disposal, dispersion and assimilation as any kind of beneficial uses of water. However, this omission is not intended to question the obvious facts that ultimately the residual substances remaining after treatment of wastes must, in most instances, reach waters of the state, and economic benefits to a waste discharger result from the discharge of waste either directly or indirectly into the waters of the state, and that these economic benefits relate inversely to the cost of treatment. These economic values are recognized in paragraph 2 of section 13000. In connection with the establishment

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of water quality objectives in regional water quality control plans (now called policies), "it is recognized that it may be possible for the quality of water to be changed to some degree without unreasonably affecting beneficial uses." (Section 13241.) Section 13263 (derived from section 13054.2) also provides that a regional board need not utilize the full waste assimilation capacity of the receiving waters.)

(g) "Quality of the water" or "quality of the waters" refers to chemical, physical, biological, bacteriological, radiological, and other properties and characteristics of water which affect its use.

(Note. Based on language in the definition of pollution in the federally suggested state act. This phrase is also used in a context other than that of pollution, and a separate definition is therefor used.)

(h) "Water quality objectives" means the limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area.

(Note. New section, consistent with and explanatory of present usage. An important part of "water quality control plans", as defined herein, and of waste discharge requirements.

The constituents or characteristics include, but are not limited to, temperature, dissolved oxygen, biochemical oxygen demand, chloride, bacterial population density, appearance, odor, taste, and various measures of populations of aquatic biota.

The Federal Water Pollution Control Act, as amended by the Water Quality Act of 1965, (33 U.S.C. 466, et seq.), provides in part in Section 10 (c) (1) for the adoption before June 30, 1967, of "(A) water quality criteria

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applicable to interstate waters . . . and (B) a plan for the implementation and enforcement of the water quality criteria adopted . . . such State criteria and plan shall thereafter be the water quality standards applicable to such interstate waters . . ." Note that in the foregoing context, the federal use of the word standards includes the plan for implementation and enforcement. The Federal Act intermingles usage of the phrase "water quality standards" and "water quality criteria".

California has consistently used the phrase "water quality objectives", in lieu of "criteria" or "standards". "Procedures for Formulating Water Quality Control Policy", adopted by the state and regional boards on June 6, 1966, is authority for this use, in reliance upon statutory authority. The state board has stated that the term "criteria", as used by the FWPCA in their "Guidelines for Establishing Water Quality Standards", will be considered synonymous with water quality objectives as used in California's "Statewide Policy for Water Quality Control", adopted on March 7, 1967. The Secretary of the Interior has stated his concurrence with this interpretation.

In view of the confused and interchangeable usage of the words "standards" and "criteria" in the FWPC Act, and the consistent and widespread usage of "water quality objectives" in California, it is recommended that present usage of "water quality objectives" be continued.)

(i) "Water quality control" means the regulation of any activity or factor which may affect the quality of the waters of the state and includes the prevention and correction of water pollution and nuisance.

(Note. New section, consistent with present usage. Reference to water pollution and nuisance results in deletion as surplusage of sections or portions of sections which relate to water pollution control. For example, present section 13022 to be deleted, and phrase "water pollution" (control) removed from sections in Article 3 of Chapter 3.)

(j) "Water quality control plan" consists of a designation or establishment for the waters within a

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specified area of (1) beneficial uses to be protected, (2) water quality objectives, and (3) a program of implementation needed for achieving water quality objectives.

(Note. New section, consistent with present practice. Word "plan" substituted for "policy" to be more descriptive and avoid multiple use and misuse of word "policy".)

(k) "Contamination" means an impairment of the quality of the waters of the state by waste to a degree which creates a hazard to the public health through poisoning or through the spread of disease. "Contamination" shall include any equivalent effect resulting from the disposal of waste, whether or not waters of the state are affected.

(Note. Word "actual" before "hazard" deleted at suggestion of State Department of Public Health, to make section more enforceable. New definition of "waste" used. No other change suggested.)

(l) "Pollution" means an alteration of the quality of the waters of the state by waste to a degree which unreasonably affects (1) such waters for beneficial uses, or (2) facilities which serve such beneficial uses. "Pollution" may include "contamination".

(Note. Modification of present definition by: 1. Eliminating phrase "does not create an actual hazard to the public health," consistent with ruling of Attorney General that a "pollution" and a "contamination" may exist simultaneously in the same waters and be attacked simultaneously by the appropriate regulatory agencies. 26 Ops. Cal. Atty. Gen. 253. (Caution. Simultaneous contamination and pollution cover only particular situations. Individual analysis of each situation required.)

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2. Eliminating word "adversely" for same reason that word "actual" before "hazard" is proposed to be eliminated from definition of contamination. Word "adversely" suggests that harm to quality of waters of state must be immediate and direct, and allows no reasonable discretion required for future growth and other considerations.

3. Reference to facilities which serve beneficial uses is added because of certain past damage to channel linings and inability to correct problem under existing law.

Judicious action by the regional boards, based on the facts of different cases and different areas, is the key to establishment of water quality objectives and waste discharge requirements. In a negative way, reasonableness is also the key to pollution: it is the unreasonable effect upon beneficial uses of water, caused by waste, that constitutes pollution.)

(m) "Nuisance" means anything which (1) is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property, and (2) affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal, and (3) occurs during,or as a result of,the treatment or disposal of wastes.

(Note. The present definition of nuisance is considered to be practically unenforceable because of its requirements of proof of the vague terms "damages" and "unreasonable practices", as well as its non-applicability to treatment plants, with respect to which most nuisance complaints are directed.

The opening language of the proposed definition was copied from Civil Code section 3479, and the language in the middle was copied from Civil Code section 3480. The concluding language is based on the present definition,

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expanded to include treatment as well as the disposal of wastes.)

(n) "Reclaimed water" means water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur.

(Note. The amendment is recommended because the end product is water, not waste water. "Direct" use, within the meaning of this definition, occurs when treated water is applied to another use without any prior commingling with other water.

"Controlled use" may best be explained by illustrations. Example 1: Below the Whittier Narrows is an area where the groundwater is recharged with reclaimed water, water reclaimed from waste water of a consistent high quality. Here the control is exercised in the recharge operation, which precedes the pumpage and use by others of the groundwater. A discharge of waste into a surface stream would be an example of non-control, would result in commingling with other water, and would not constitute "reclaimed water". Example 2: The reclamation project of the Santee County Water District, near San Diego. At least some of the reclaimed water enters the recreation reservoir, not directly, but by a controlled seepage through a porous ground area.)

(o) "Citizen or domiciliary" of the State of California includes a foreign corporation having substantial business contracts in the State of California or subject to service of process in this state.

* * * * *

(Note. Definition of "district attorney" deleted. The Attorney General is the usual legal representative of state agencies, such as the regional boards. The Attorney General is designated herein to represent the state and regional boards in all civil enforcement proceedings. The Central Valley Regional

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Board is located in all or parts of 33 counties. Amendment would permit civil enforcement proceedings by dealing with one attorney instead of 33. All criminal enforcement would remain with local district attorneys.)

(13006. Note. The following definition in section 13006 has been omitted:

"No act or event shall be deemed 'threatened' or 'threatening' within the meaning of this division unless there is a reasonable probability that the act or event will occur."

The purpose is to eliminate an undesirable restrictive effect of the present definition, which seems to say that an act or event must be more probable than not ("reasonable probability") before it is "threatened" or "threatening" under the definition. However, an act or event should be subject to regulation as "threatened" or "threatening" where the consequences could be extremely serious (such as a health hazard) even though it is less than 50% probable. The omission of the definition "threatened" or "threatening" now in section 13006 will permit the boards to consider that balance between the likelihood of an occurrence and the seriousness of its consequence in determining whether an act or event is "threatening" or "threatened".)

(13008. Note. Repealed in 1968 by AB 1381, Chapter _____.)

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13060. This division shall be known as and may be cited as the "State Water Quality Control Act".

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Chapter 3. State Water Quality Control

Article 1. State Water Resources Control Board

13100. There is in the Resources Agency the State Water Resources Control Board, the organization, membership, and some of the duties of which are provided for in Article 3 (commencing with Section 174) of Chapter 2 of Division 1 of this code.

(Note. New article. Present chapter fails to give any organizational background of the state board. Amendment to section 1075 would extend to proceedings under this division state board power to administer oaths and issue subpoenas.)

Article 2. Water Quality Advisory Committee

13120. There is in the State Water Resources Control Board a Water Quality Advisory Committee to provide information and advice to the board on state and regional problems and technical matters. The committee shall consist of the chairman of each of the nine regional water quality control boards or his designee and nine members appointed by the Governor. Of the nine members appointed by the Governor, one person with specialized knowledge shall be selected from each of the following fields:

(a) Agricultural science, including water use and drainage.

(b) Aquatic biology.

(c) Economics.

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(d) Environmental sciences.

(e) Industrial waste problems.

(f) Municipal waste problems.

(g) Oceanography.

(h) Recreational water use.

(i) Urban planning.

The members of the existing committee shall continue to serve until the expiration of their terms at which time the Governor shall appoint members in accordance with the foregoing categories.

Insofar as practical, the Governor shall appoint members in such manner as to afford representation on the committee of all parts of the state.

All members appointed to the committee shall serve for a term of four years.

(Note. Statute now provides appointive membership of advisory committee to be from same kinds of organizations and backgrounds already represented by regional board membership, including their chairmen. See section 13201. Change would bring to advisory group representation of new and important fields of expert knowledge. It is expected that most of the appointments on the basis of specialized knowledge will be of persons with broad, practical experience.)

13121. The committee shall meet at least once each quarter. The committee may meet jointly with the state board. All meetings shall be open and public.

13122. The committee shall annually elect one of its members chairman. Ten of the members of the committee shall constitute a quorum for the purpose of transacting any business of the committee.

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13123. Each member of the committee shall be entitled to receive twenty-five dollars for each day while on official business of the committee in addition to his actual necessary expenses.

(Note. Amendment recommended consistent with section 13205.)

13124. The state board may consult with and seek the advice of the committee with regard to state board responsibilities relating to water quality control and shall do so prior to adopting state policy for water quality control pursuant to subdivisions (a) and (d) of Section 13142. The committee shall advise the board on such matters.

Article 3. State Policy for Water Quality Control*

13140. The state board shall formulate and adopt state policy for water quality control. Such policy shall be adopted in accordance with the provisions of this article and shall be in conformity with the policies set forth in Chapter 1 (commencing with Section 13000).

13141. State policy for water quality control adopted or revised in accordance with the provisions of this article and regional water quality control plans approved or revised in accordance with section 13245 shall become a part of the California Water Plan.

*If this article adopted, all previously adopted policies (water quality control plans, herein) which relate to interstate or coastal waters, etc., (sec. 13142 (d)) should be reviewed by state board to see if further proceedings needed.

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(Note. New section. See present section 13022.2.)

13142. State policy for water quality control shall consist of all or any of the following:

(a) Water quality principles and guidelines for long-range resource planning, including ground water and surface water management programs, and control and use of reclaimed water.

(b) Water quality objectives at key locations for planning and operation of water resource development projects and for water quality control activities.

(c) Water quality control plans adopted by the state board for interstate or coastal waters or other waters of interregional or statewide interest.

(d) Other principles and guidelines deemed essential by the state board for water quality control.

(Note. New section defines "state policy for water quality control".)

13143. State policy for water quality control shall be periodically reviewed and may be revised.

(Note. New.)

13144. During the process of formulating or revising state policy for water quality control the state board shall consult with and carefully evaluate the recommendations of concerned federal, state, and local agencies.

(Note. New. See old section 13022.3.)

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13145. The state board shall take into consideration the effect of its actions pursuant to this chapter on the California Water Plan as adopted or revised pursuant to Division 6 of this code, and on any other general or coordinated governmental plan looking toward the development, utilization, or conservation of the waters of the state.

(Note. Revised section 13022.2.)

13146. State offices, departments and boards shall comply with state policy for water quality control in carrying out activities which affect water quality unless otherwise directed or authorized by statute, in which case they shall advise the board in writing why they do not comply.

(Note. Revised and renumbered part of section 13022.1.)

13147. The state board shall not adopt state policy for water quality control unless a public hearing is first held respecting the adoption of such policy. At least 90 days in advance of such hearing the state board shall notify any affected regional boards, and shall give notice of such hearing by publication within the affected region pursuant to Section 6061 of the Government Code. The regional boards shall submit written recommendations to the state board at least 20 days in advance of the hearing.

(Note. Replaces section 13022.4.)

(Note. Sections 13025 and 13025.5 recommended to be repealed and replaced by Article 2 of Chapter 5.)

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Article 4. Other Powers and Duties

Of the State Board

13160. The state board is designated as the state water pollution control agency for all purposes stated in the Federal Water Pollution Control Act and any other federal act, heretofore or hereafter enacted.

(Note. New section. Also replaces the second paragraph of old section 13600.)

13161. The state board shall annually determine state needs for water quality research and recommend projects to be conducted.

(Note. New section. Would prevent duplication as well as point out needs.)

13162. The state board shall administer any statewide program of research in the technical phases of water quality control which may be delegated to it by law and may accept funds from the United States or any person to that end. The state board may conduct such a program independently, or by contract or in cooperation with any federal or state agency, including any political subdivision of the state, or any person or public or private organization.

13163. (a) The state board shall coordinate water quality related investigations of state agencies, and shall consult with the concerned regional boards in implementing this section.

(b) The state board from time to time shall evaluate the need for water quality related investigations to effectively develop and implement state policy for water quality control and shall transmit its recommendations for

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investigations to affected or concerned federal, state, and local agencies. The affected state agencies shall comply with the recommendations or shall advise the state board in writing why they do not comply with such recommendations.

(c) State agencies shall submit to the state board plans for and results of all investigations that relate to or have an effect upon water quality for review and comment.

(Note. New section. The Legislature has delegated authority to conduct water quality related investigations to various state agencies. The Water Code includes the following delegations of such authority:

Department of Water Resources: Water Code sections 226, 229, 230, 231, 12616, 12617, and 12920 - 12923.

Regional boards: Water Code section 13267 herein (present section 13055. modified).)

13164. The state board shall formulate, adopt and revise general procedures for the formulation, adoption and implementation by regional boards of water quality control plans. During the process of formulating or revising such procedures, the state board shall consult with and evaluate the recommendations of any affected regional boards and may seek the advice of the Water Quality Advisory Committee.

(Note. Revised and renumbered portions of sections 13022.1 and 13022.3.)

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13165. The state board may require any state or local agency to investigate and report on any technical factors involved in water quality control.

(Note. Revised former section 13025.7.)

13166. The state board, with the assistance of the regional boards, shall prepare and implement a statewide water quality information storage and retrieval program. Such program shall be coordinated and integrated to the maximum extent practicable with data storage and retrieval programs of other agencies.

(Note. New section.)

13167. The state board shall implement a public information program on matters involving water quality, and shall maintain an information file on water quality research and other pertinent matters.

(Note. New section. Information and educational material available to municipal governments, civic organizations and schools can result in local backing of needed projects on a voluntary basis. State board should support regional boards because almost all public contact is with the regional boards.)

13168. The state board shall allocate to the regional boards from funds appropriated to the state board such part thereof as may be necessary for the administrative expenses of such boards. The regional boards shall submit annual budgets to the state board. Subject to the provisions of Chapter 3 (commencing with Section 13290) of Part 3, Division 3, Title 2 of the Government Code and any other laws giving the Department of Finance fiscal and

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budgetary control over state departments generally, the state board shall prepare an annual budget concerning its activities and the activities of the regional boards.

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Chapter 4. Regional Water Quality Control

Article 1. Organization and Membership Of Regional Boards

13200. The state is divided, for the purpose of this division, into nine regions:

(a) North coastal region, which comprises all basins including Lower Klamath Lake and Lost River Basins draining into the Pacific Ocean from the California-Oregon state line southerly to the southerly boundary of the watershed of Estero de San Antonio and Stemple Creek in Marin and Sonoma Counties.

(b) San Francisco Bay region, which comprises San Francisco Bay, Suisun Bay, from Sacramento River and San Joaquin River westerly from a line which passes between Collinsville and Montezuma Island and follows thence the boundary common to Sacramento and Solano Counties and that common to Sacramento and Contra Costa Counties to the westerly boundary of the watershed of Markley Canyon in Contra Costa County, all basins draining into the bays and rivers westerly from this line, and all basins draining into the Pacific Ocean between the southerly boundary of the north coastal region and the southerly boundary of the watershed of Pescadero Creek in San Mateo and Santa Cruz Counties.

(c) Central coastal region, which comprises all basins, including Carrizo Plain in San Luis Obispo and

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Kern Counties, draining into the Pacific Ocean from the southerly boundary of the watershed of Pescadero Creek in San Mateo and Santa Cruz Counties to the southeasterly boundary, located in the westerly part of Ventura County, of the watershed of Rincon Creek.

(d) Los Angeles region, which comprises all basins draining into the Pacific Ocean between the southeasterly boundary, located in the westerly part of Ventura County, of the watershed of Rincon Creek and a line which coincides with the southeasterly boundary of Los Angeles County from the ocean to San Antonio Peak and follows thence the divide between San Gabriel River and Lytle Creek drainages to the divide between Sheep Creek and San Gabriel River drainages.

(e) Santa Ana region, which comprises all basins draining into the Pacific Ocean between the southeasterly boundary of the Los Angeles region and a line which follows the drainage divide between Muddy and Moro Canyons from the ocean to the summit of San Joaquin Hills; thence along the divide between lands draining into Newport Bay and into Laguna Canyon to Niguel Road; thence along Niguel Road and Los Aliso Avenue to the divide between Newport Bay and Aliso Creek drainages; thence along that divide and the southeasterly boundary of the Santa Ana River drainage to the divide between Baldwin Lake and Mojave Desert drainages; thence along that divide to the divide between Pacific Ocean and Mojave Desert drainages.

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(f) San Diego region, which comprises all basins draining into the Pacific Ocean between the southern boundary of the Santa Ana region and the California-Mexico boundary.

(g) Central Valley region, which comprises all basins including Goose Lake Basin draining into the Sacramento and San Joaquin Rivers to the easterly boundary of the San Francisco Bay region near Collinsville. The Central Valley region shall have section offices in the Sacramento Valley and the San Joaquin Valley.

(h) Lahontan region, which comprises all basins east of the Santa Ana, Los Angeles and Central Valley regions from the California-Oregon boundary to the southerly boundary located in Los Angeles and San Bernardino Counties of the watersheds draining into Antelope Valley, Mojave River Basin and Dry Lake Basin near Ivanpah.

(i) Colorado River Basin region, which comprises all basins east of the Santa Ana and San Diego regions draining into the Colorado River, Salton Sea and local sinks from the southerly boundary of the Lahontan region to the California-Mexico boundary.

The regions defined and described in this section shall be as precisely delineated on official maps of the department and include all of the areas within the boundaries of the state.

For purposes of this section the boundaries of the state extend three nautical miles into the Pacific Ocean

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from the line of mean lower low water marking the seaward limits of inland waters and three nautical miles from the line of mean lower low water on the mainland and each offshore island.

(Note. Change proposed in (a) to north coastal region boundary because present regional boundary along center line of Tomales Bay makes that bay subject to jurisdiction of two regional boards. No problem has arisen yet, but change would prevent occurrence of such a problem.

Recommendation for section offices in the Sacramento Valley and the San Joaquin Valley, in (g), are made because of the large size of the Central Valley region, and the hydrologic problems in the delta that would result from dividing the Central Valley region into two regions.

The definition of coastal waters added to this section is intended to recognize the extent of state jurisdiction over coastal waters as being consistent with primary state responsibility for water quality in this area under the Federal Water Pollution Control Act as amended (33 U. S. Code 466 et seq.) and is not intended to affect the definition of coast line as that term is used in the Submerged Lands Act of 1953. (43 U. S. Code sections 1301-1315.)

It is recommended that the sense of the disclaimer in the preceeding paragraph should be expressed in a note printed on the face of each official map prepared by the department pursuant to Water Code section 13200. Hopefully such a disclaimer would safeguard against the possibility that a map delineating regional board boundaries might be used against the State of California in future litigation involving mineral deposits in submerged land.

Reference to "department" in this division, unless otherwise specified, means the "Department of Water Resources".)

13201. (a) There is in the Resources Agency a regional board for each of the regions described in section 13200. Each board shall consist of the following nine

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members appointed by the Governor, each of whom shall represent and act on behalf of all the people of the region and shall reside or have a principal place of business within the region:

(1) One person associated with water supply, conservation, and production;

(2) One person associated with irrigated agriculture;

(3) One person associated with industrial water use;

(4) One person associated with municipal government;

(5) One person associated with county government;

(6) One person from a responsible nongovernmental organization associated with recreation, fish, or wildlife;

(7) Three persons not specifically associated with any of the foregoing categories, two of whom shall have special competence in areas related to water quality problems.

(b) Insofar as practicable, appointments shall be made in such manner as to result in representation on the board from all parts of the region.

(Note. The constitution of the regional board membership has been revised. On one hand, the expertise brought to boards by members in the

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specific fields has been retained and expanded. On the other hand, the composition of the regional boards has been broadened to emphasize that all board members represent the people of the region and not any special interest of waste discharges. This emphasis seems useful and necessary.

By inadvertence, regional boards were removed from the Resources Agency by Executive Reorganization Plan No. 1 of 1968. It is intended that the regional boards be restored promptly as members of the Resources Agency by an amendment of Gov. Code section 12805, consistent with this section.)

13202. Each member of a regional board shall be appointed for a term of four years. Vacancies shall be immediately filled by the Governor for the unexpired portion of the terms in which they occur.

13203. The official designation of each regional board shall be: "California Water Quality Control Board, _____ Region".

(Note. Although regional boards operate in a semi-autonomous manner, they are state boards. Their unexplained title of "_____ Regional Board" has lead to endless confusion, particularly with respect to proposals to consolidate them with local agencies. A new title is proposed that will identify them clearly as state boards.)

13204. Each regional board shall hold at least six regular meetings each calendar year and such additional special sessions as shall be called by the chairman or any two members of the regional board.

13205. Each member of the regional boards shall be entitled to receive twenty-five dollars for each day while on official business of the board in addition to his actual necessary expenses.

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(Note. Change would add provision for entitlement of twenty-five dollars per day while on official business of the board. More meetings will be required in the future, and board members may be called upon to participate in hearing panels.

Regional boards are regulatory agencies performing an important decision-making function.)

13206. Public officers, whether elected or appointed, may be appointed to, and may serve contemporaneously as members of, a regional board.

Article 2. General Provisions Relating To Powers and Duties of Regional Boards

13220. Each regional board shall:

(a) Establish an office.

(b) Select one of its members as chairman at the first regular meeting held each year.

(c) Appoint as its confidential employee, exempt from civil service, under paragraph (5) of subdivision (a) of Section 4 of Article XXIV of the Constitution, and fix the salary of, an executive officer who shall meet technical qualifications as defined by the State Water Resources Control Board. The executive officer shall serve at the pleasure of the regional board.

(d) Employ such other assistants as may be determined necessary to assist the executive officer.

13221. Members of the regional board shall be empowered to administer oaths and issue subpoenas for the attendance and giving of testimony by witnesses and for the

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production of evidence in any proceeding before the board in any part of the region. The provisions of Chapter 3 (commencing with section 1075) of Part 1 of Division 2 of this code (Witnesses and Production of Evidence) shall apply to regional boards within their own regions, where they shall have the same power as the state board within the state.

13222. Pursuant to such guidelines as the state board may establish, each regional board shall adopt regulations to carry out its powers and duties under this division.

(Note. New section, based on language in section 1058. Would include regulations covering organization and procedures at business meetings.)

13223. (a) Each regional board may delegate any of its powers and duties vested in it by this division to its executive officer excepting only the following: (1) the promulgation of any regulation; (2) the issuance, modification, or revocation of any water quality control plan, water quality objectives, or waste discharge requirement; (3) the issuance, modification, or revocation of any cease and desist order; (4) the holding of any hearing on water quality control plans; and (5) the application to the Attorney General for judicial enforcement but excluding cases of specific delegation in a cease and desist order and excluding the cases described in sections 13002(c) and 13340.

(b) Whenever any reference is made in this division to any action that may be taken by a regional board, such reference includes such action by its executive officer pursuant to powers and duties delegated to him by the regional board.

(Note. New section.)

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13224. Each regional board may issue policy statements relating to any water quality matter within its jurisdiction.

13225. Each regional board, with respect to its region, shall:

(a) Obtain coordinated action in water quality control, including the prevention and abatement of water pollution and nuisance.

(b) Encourage and assist in self-policing waste disposal programs, and upon application of any person, advise the applicant of the condition to be maintained in any disposal area or receiving waters into which the waste is being discharged.

(c) Require as necessary any state or local agency to investigate and report on any technical factors involved in water quality control or to obtain and submit analyses of water.

(d) Request enforcement by appropriate federal, state and local agencies of their respective water quality control laws.

(e) Recommend to the state board projects which the regional board considers eligible for any financial assistance which may be available through the state board.

(f) Report to the state board and appropriate local health officer any case of suspected contamination in its region.

(g) File with the state board, at its request, copies of the record of any official action.

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(h) Take into consideration the effect of its actions pursuant to this chapter on the California Water Plan adopted or revised pursuant to Division 6 (commencing with section 10000) of this code and on any other general or coordinated governmental plan looking toward the development, utilization or conservation of the water resources of the state.

(i) Encourage regional planning and action for water quality control.

(Note. Several amendments. Consideration was given to language to require the formation of regional agencies for waste collection, treatment, etc. It was concluded that specific statutory language for this purpose should await legislative consideration (anticipated for the 1970 session) of improved annexation legislation which would permit and require community cooperation in this and other fields of urban governmental services. Regional boards should continue, pursuant to subsection (i), to emphasize the need for regional planning and action by local agencies.

Reference to formal and informal meetings deleted as an unnecessary limitation.

Subsection (d) modified for clarification and word "respective" added. Subsection (e) of present statute removed to Article 3. Subsection (g), formerly (h), broadened. New subsection (h) based on section 13052.1. Subsection (i) combined with (c), and modified to eliminate restriction to wells of water analyses.)

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Article 3. Regional Water Quality Control Plans

13240. Each regional board shall formulate and adopt water quality control plans for all areas within the region. Such plans shall conform to the policies set forth in Chapter 1 (commencing with section 13000) of this division and any state policy for water quality control. During the process of formulating such plans the regional boards shall consult with and consider the recommendations of affected state and local agencies. Such plans shall be periodically reviewed and may be revised.

(Note. This section is based on section 13052(e).

See definition of "water quality control plan". It consists of the designation for the waters within a specified area of (1) beneficial uses to be protected, (2) water quality objectives to protect those uses, and (3) a program of implementation or enforcement.

Although plans are to be periodically reviewed, water quality objectives should be set on a long-range basis. If a review shows that there has been no change in beneficial uses, and that the objectives properly and reasonably protect those uses, there would probably be no need to change the objectives. A change to another beneficial use, as from irrigation to domestic or municipal use, could require the upgrading of objectives. Any reasonable adjustment should be made.)

13241. Each regional board shall establish such water quality objectives in water quality control plans as in its judgment will ensure the reasonable protection of beneficial uses and the prevention of nuisance; however, it is recognized that it may be possible for the quality

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of water to be changed to some degree without unreasonably affecting beneficial uses. Factors to be considered by a regional board in establishing water quality objectives shall include but not necessarily be limited to all of the following:

(a) Past, present, and probable future beneficial uses of water.

(b) Environmental characteristics of the hydrographic unit under consideration.

(c) Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area.

(d) Economic considerations.

(Note. New section.)

13242. The program of implementation for achieving water quality objectives shall include, but not be limited to:

(a) A description of the nature of actions which are necessary to achieve the objectives, including recommendations for appropriate action by any entity, public or private.

(b) A time schedule for the actions to be taken.

(c) A description of surveillance to be undertaken to determine compliance with objectives.

(Note. New section.)

13243. A regional board, in a water quality control plan or in waste discharge requirements, may specify

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certain conditions or areas where the discharge of waste, or certain types of waste, will not be permitted.

(Note. Based on section 13054.3. Word "direct" before "discharge" has been deleted, to cover situations, as in certain lava areas, where an indirect discharge can threaten domestic water supplies as much as a direct discharge can do so. "Certain types of waste" added to cover situations where a complete prohibition of discharges is not required or desired.)

13244. The regional boards shall not adopt any water quality control plan unless a public hearing is first held, after the giving of notice of such hearing by publication in the affected county or counties pursuant to section 6061 of the Government Code. When the plan proposes to prohibit discharges of waste pursuant to section 13243, similar notice shall be given by publication pursuant to section 6061.3 of the Government Code.

(Note. Based on section 13052.2)

13245. A water quality control plan, or a revision thereof, shall not become effective unless and until it is approved by the state board. The state board may approve such plan, or return it to the regional board for further consideration and resubmission to the state board. Upon resubmission the state board may either approve or, after a public hearing in the affected region, revise and approve such plan.

(Note. Based on section 13052.2, but in case of deadlock would permit state board to revise plan after holding hearing in local region.)

13246. The state board shall act upon any water quality control plan within 60 days after the regional

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board has submitted such plan to the state board, or 90 days after resubmission of such plan.

(Note. The 60-day provision based on section 13052.2.)

13247. State offices, departments, and boards, in carrying out activities which may affect water quality, shall comply with water quality control plans approved by the state board unless otherwise directed or authorized by statute, in which case they shall indicate to the regional boards in writing their authority for not complying with such plans.

(Note. Based on present section 13052.3. Eliminates ambiguous word "cognizance".)

Article 4. Waste Discharge Requirements

13260. (a) Any person discharging waste or proposing to discharge waste within any region, other than into a community sewer system, and any person who is a citizen, domiciliary, or political agency or entity of this state discharging waste or proposing to discharge waste outside the boundaries of the state in a manner that could affect the quality of the waters of the state within any region, shall file with the regional board of that region a report of the discharge, containing such information as may be required by the board.

(b) Every such person discharging waste shall file with the regional board of that region a report of

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any material change or proposed change in the character, location, or volume of the discharge.

(c) Each report under this section shall be sworn to or submitted under penalty of perjury.

(d) Each report under this section shall be accompanied by a filing fee of not to exceed _____ dollars ($_____) according to a reasonable fee schedule established by the state board.

(Note. The state board is now studying possible amounts of filing fees to accompany reports, and is expected to conclude its study in the near future, in time to amend this section accordingly.)

(e) When a report filed by any person pursuant to this section is not adequate in the judgment of the regional board, the board may require such person to supply such additional information as it deems necessary.

(Note. Based on existing sections 13053 and 13054. If forms are used for reports of waste discharges, the same should be adopted by regional board regulation, pursuant to section 13222, and should show statements to be made under penalty of perjury.

For waiver of the filing of reports, see section 13269.

Waiver provision relates in part to fact that many local health agencies, city and county, are available and must continue to play a major role in controlling and eliminating domestic waste problems. Local control is by enforcement of ordinances regarding underground disposal of sewage from individual premises, both residential and commercial. Waiver provision can and should also be used to relate to farming and other land use as long as reasonable practices are observed.

It will be necessary for the state board to establish by regulation what constitutes a "material change", referred to in (b), or guidelines with respect thereto.

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Filing fees in (d) would contribute to Clean-Up and Abatement Account in section 13441.)

13261. Any person failing to furnish a report under section 13260 when so requested by a regional board or falsifying any information provided under said section is guilty of a misdemeanor.

(Note. Based on section 13054.4.)

13262. The Attorney General, at the request of the regional board, shall petition the superior court for the issuance of a temporary restraining order, temporary injunction, or permanent injunction, or combination thereof, as may be appropriate, requiring any person not complying with section 13260 to comply therewith.

13263. (a) The regional board, after any necessary hearing, shall prescribe requirements as to the nature of any proposed discharge, existing discharge, or material change therein, except discharges into a community sewer system, with relation to the conditions existing from time to time in the disposal area or receiving waters upon or into which the discharge is made or proposed. The requirements shall implement relevant water quality control plans, if any have been adopted, and shall take into consideration the beneficial uses to be protected, the water quality objectives reasonably required for that purpose, other waste discharges, the need to prevent nuisance, and the provisions of section 13241.

(b) A regional board, in prescribing requirements, need not authorize the utilization of the full

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waste assimilation capacities of the receiving waters.

(c) The requirements may contain a time schedule, subject to revision in the discretion of the board.

(d) The board may prescribe requirements although no discharge report has been filed.

(e) Upon application by any affected person or on its own motion, the regional board may review and revise requirements. All requirements shall be reviewed periodically.

(f) The regional board shall notify in writing the person making or proposing the discharge or the change therein of the discharge requirements to be met. After receipt of such notice, the person so notified shall provide adequate means to meet such requirements.

(g) No discharge of waste into the waters of the state, whether or not such discharge is made pursuant to waste discharge requirements, shall create a vested right to continue such discharge. All discharges of waste into waters of the state are privileges, not rights.

(Note. Based on sections 13002, 13054, 13054.1, and 13054.2.

Subsection (b) authorizes the regional board, among other things, to maintain a margin of safety in its requirements to assure protection of all beneficial uses.)

13264. (a) No such person shall initiate any new discharge of waste or make any material change in any discharge prior to the filing of the report required by section 13260 nor shall any such person do so thereafter

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and prior to (1) the issuance of waste discharge requirements pursuant to section 13263, (2) the expiration of 120 days after his compliance with section 13260, or (3) the regional board's waiver pursuant to section 13269, whichever of (1), (2), or (3) occurs first.

(b) The Attorney General, at the request of a regional board, shall petition the superior court for the issuance of a temporary restraining order, preliminary injunction, or permanent injunction, or combination thereof, as may be appropriate, prohibiting forthwith any person who is violating or threatening to violate this section from (1) discharging the waste in question or (2) making any material change therein, whichever of (1) or (2) is applicable.

(Note. Section does not apply to existing discharges, unless a material change. The prohibition of this section would not apply in cases where the filing of a report of waste discharge is waived by the regional board, because then there would be no "report required by section 13260". The regional board could require that a report be filed, but then waive the provisions of this section pursuant to section 13269.

Minimum required processing time from receipt of a report of waste discharge to adoption of a resolution specifying requirements is about 60 days. Some boards will meet only once every 60 days. A report received 10 days after a board meeting would have to be processed in either 50 days or 110 days. 120 days appears to be a reasonable time to allow for processing requirements without undue burden on regional board staffs. Regional board could take as long as necessary to prescribe waste discharge requirements, but could not prohibit the discharge pursuant to this section after expiration of the 120 days until after issuance of the discharge requirements.)

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13265. Any person discharging waste in violation of section 13264, after such violation has been called to his attention in writing by the regional board, is guilty of a misdemeanor. Each day of such discharge shall constitute a separate offense.

13266. Pursuant to such regulations as the regional board may prescribe, each city, county, or city and county shall notify the regional board of the filing of a tentative subdivision map, or of any application for a building permit which may involve the discharge of waste, other than discharges into a community sewer system and discharges from dwellings involving five-family units or less.

(Note. New section. This section will help regional boards anticipate water quality problems before they develop.)

13267. (a) A regional board, in establishing or reviewing any water quality control plan or waste discharge requirements, or in connection with any action relating thereto, may investigate the quality of any waters of the state within its region.

(b) In such an investigation, the regional board may require that any person discharging or proposing to discharge waste within its region or any citizen or domiciliary, or political agency or entity of this state discharging or proposing to discharge waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, such

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technical or monitoring program reports as the board may specify; provided that the burden, including costs, of such reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained therefrom.

When requested by the person furnishing a report, the portions of a report which might disclose trade secrets or secret processes shall not be made available for inspection by the public but shall be made available to governmental agencies for use in making studies; provided, however, that such portions of a report shall be available for use by the state or any state agency in judicial review or enforcement proceedings involving the person furnishing the report.

(c) In such an investigation, the regional board may inspect the facilities of any such person to ascertain whether the purposes of this division are being met and waste dishcarge requirements are being complied with. Such inspection shall be made with the consent of the owner or possessor of such facilities or, if such consent is refused, with a warrant duly issued pursuant to the procedure set forth in Title 13 (commencing with section 1822.50) of Part 3, Code of Civil Procedure; provided, however, that in the event of an emergency affecting the public health or safety such inspection may be made without consent or the issuance of a warrant.

(Note. Section 13055, modified. The warrant procedure is added to meet legal requirements.)

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13268. Any person failing or refusing to furnish technical or monitoring program reports as required by subdivision (b) of section 13267 or falsifying any information provided therein is guilty of a misdemeanor.

13269. The provisions of subdivision (a) and (b) of section 13260, subdivision (a) of section 13263, or subdivision (a) of section 13264 may be waived by a regional board as to a specific discharge or a specific type of discharge where such waiver is not against the public interest. Such waiver shall be conditional and may be terminated at any time by the board.

(Note. New section. Combines waiver provisions.)

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Chapter 5. Enforcement and Implementation*

Article 1. Administrative Enforcement and Remedies by Regional Boards

13300. Whenever a regional board finds that a discharge of waste is taking place or threatening to take place within its region that violates or will violate requirements prescribed by the regional board or that the waste collection, treatment, or disposal facilities of a discharger

* When a regional board finds an actual or threatened violation of its waste discharge requirements is occurring, it can issue administrative orders to obtain compliance. It can also direct the discharger to clean up or pay for the costs of clean up of a waste; and, in the case of nonoperating facilities (e.g., abandoned mines), it can enforce a lien on the property involved to repay costs of correction by the board or other public agency.

Any aggrieved person -- e.g., discharger, downstream user, conservationist organization -- may appeal a decision of a regional board to the state board upon the ground that the regional board's decision is too strict or that it is not strict enough.

Any aggrieved person may appeal a state board decision to the superior court, but failure to do so does not preclude a challenge to the validity of a board decision during enforcement proceedings that may be brought thereafter -- e.g., to enjoin violation of regional or state board orders.

Normally, the boards may only specify the end result and cannot specify the means to be undertaken by the discharger to achieve those ends -- an approach carried over from the prior act. During judicial proceedings, however, the court may find that a decree simply prohibiting a certain discharge cannot do the job (e.g., in the case of a city, whose sewer system cannot be closed down); and in such a case, the court may specify means to be undertaken by the discharger for compliance with its decree.

In an emergency situation, the state may seek summary judicial abatement of a harmful discharge or condition.

Civil monetary remedies (sometimes called "civil penalties") may be recovered from a discharger in a judicial proceeding where intentional or negligent violations of board orders are involved.

All civil actions are to be brought by the Attorney General in the name of the People of the State of California.

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are approaching capacity, the board may require the discharger to submit for approval of the board, with such modifications as it may deem necessary, a detailed time schedule of specific actions the discharger shall take in order to correct or prevent a violation of requirements.

13301. When a regional board finds that a discharge of waste is taking place or threatening to take place within its region in violation of requirements or discharge prohibitions prescribed by the regional board, the board may issue an order to cease and desist and direct that those persons not complying with the requirements or discharge prohibitions (a) comply forthwith, (b) comply in accordance with a time schedule set by the board, or (c) in the event of a threatened violation, take appropriate remedial or preventive action. In the event of an existing or threatened violation of waste discharge requirements in the operation of a community sewer system, cease and desist orders may restrict or prohibit the volume, type, or concentration of waste that might be added to such system. Cease and desist orders may be issued directly by a board, after notice and hearing, or in accordance with the procedure set forth in section 13302.

(Note. Based in part on present procedures in section 13060. The Study Panel does not approve of the former practice of using cease and desist orders to assist waste dischargers in obtaining federal financial assistance under P.L. 660, 84th Congress. It is understood that the state board is in the process of revising its regulations to eliminate this practice.)

13302. (a) Hearings for consideration of issuance of a cease and desist order may be conducted by hearing

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panels designated by the regional board, each panel to consist of three or more members of the board as it may specify. A member of the board may serve on more than one panel.

(b) Due notice of the hearing shall be given to all affected persons. After the hearing, the panel shall report its proposed decision and order to the regional board and shall supply a copy to all parties who appeared at the hearing and requested a copy. Members of the panel are not disqualified from sitting as members of the board in deciding the matter. The board, after making such independent review of the record and taking such additional evidence as may be necessary, may adopt, with or without revision, the proposed decision and order of the panel.

13303. Cease and desist orders of the board shall become effective and final as to the board upon issuance thereof. Copies shall be served forthwith by registered mail upon the person being charged with the violation of the requirements and upon other affected persons who appeared at the hearing and requested a copy.

13304. (a) Any person who discharges waste into the waters of this state in violation of any waste discharge requirement or other order issued by a regional board, or who intentionally or negligently causes or permits any waste to be deposited where it is discharged into the waters of the state and creates a condition of pollution or nuisance, shall upon order of the regional board clean up such waste or abate the effects thereof. Upon failure of any person to comply with such cleanup or abatement order, the Attorney General,

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at the request of the board, shall petition the superior court for that county for the issuance of an injunction requiring such person to comply therewith. In any such suit, the court shall have jurisdiction to grant a prohibitory or mandatory injunction, either preliminary or permanent, as the facts may warrant.

(b) If such waste is cleaned up or the effects thereof abated by any governmental agency after issuance of a cleanup or abatement order, such person shall be liable to that governmental agency to the extent of the reasonable costs actually incurred in cleaning up such waste or abating the effects thereof. The amount of such costs shall be recoverable in a civil action by, and paid to, such governmental agency and the state board to the extent of the latter's contribution to the cleanup costs from the State Water Pollution Cleanup and Abatement Account.

(Note. New section. If this section and section 13350 (civil monetary remedies) are enacted, section 151 of the Harbors and Navigation Code should be amended (see below) and section 152 should be repealed.)

13305. (a) Upon determining that a condition of pollution or nuisance exists which has resulted from a nonoperating industrial or business location within its region, a regional board may cause notice of such condition to be posted upon the property in question. The notice shall state that such condition constitutes either a condition of pollution or nuisance which must be abated by correction of such condition, otherwise it will be corrected by the city, county, other public agency, or regional board at the

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property owner's expense. Such notice shall further state that all property owners having any objections to the proposed correction of such condition may attend a hearing to be held by the board at a time not less than 10 days from the posting of the notice.

(b) Notice of the hearing prescribed in this section shall be given in the county where the property is located pursuant to section 6061 of the Government Code.

(c) In addition to posting and publication, notice as required in this section shall be mailed to the property owners as their names and addresses appear from the last equalized assessment roll.

(d) At the time stated in the notices, the board shall hear and consider all objections or protests, if any, to the proposed correction of the condition, and may continue the hearing from time to time.

(e) After final action is taken by the board on the disposition of any protests or objections, or in case no protests or objections are received, the board shall request the city, county, or other public agency in which the conditions of pollution or the nuisance exists to abate it. In the event that such city, county, or other public agency does not abate such condition within a reasonable time the board shall cause the condition to be abated. It may proceed by force account, contract or other agreement or any other method deemed most expedient by the board, and shall apply to the state board for the necessary funds.

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(f) The owner of the property on which the condition exists, or is created, is liable for all reasonable costs incurred by the board or any city, county, or public agency in abating the condition and the amount of the cost for abating the condition upon the property in question shall constitute a lien upon the property and notice of such lien and the amount thereof shall be recorded in the county in which the property is located. Such lien may be foreclosed by an action brought by the city, county, other public agency, or state board, on behalf of the regional board, for a money judgment. Money recovered by a judgment in favor of the state board shall be returned to the State Water Pollution Cleanup and Abatement Account.

(g) As used in this section, the words "nonoperating" or "not in operation" mean the business is not conducting routine operations usually associated with that kind of business.

(Note. Legislative finding and declaration relating to this section is not proposed to be included in Water Code, and is placed near end of this proposed legislative bill.)

Article 2. Administrative Enforcement And Remedies by the State Board

13320. (a) Upon petition by any aggrieved person or upon its own motion, the state board may at any time review any action or failure to act by a regional board under Article 4 (commencing with section 13260) of Chapter 4 of this division or under Chapter 5 (commencing with section 13300) of this division.

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(b) The evidence before the state board shall consist of (1) the record before the regional board, and (2) any other relevant evidence which, in the judgment of the state board, should be considered to effectuate and implement the policies of this division.

(c) The state board may find the regional board action or inaction to be appropriate and proper. Upon finding that the action of the regional board, or the failure of the regional board to act, was inappropriate or improper, the state board may (1) direct that the appropriate action be taken by the regional board, (2) refer the matter to any other state agency having jurisdiction, (3) take the appropriate action itself, or (4) any combination of the foregoing. In taking any such action, the state board is vested with all the powers of the regional boards under this division.

(d) In the event a waste discharge in one region affects the waters in another region and there is any disagreement between the regional boards involved as to the requirements which should be established, either regional board may submit the disagreement to the state board which shall determine the applicable requirements.

(Note. Based on repealed sections 13025 and 13025.5. The state board has a discretion whether to review any action or failure to act by a regional board. The state board will have to provide, by regulations, criteria to guide further proceedings before a regional board in a matter on review before the state board.)

13321. (a) In the case of a review by the state board under section 13320, the state board, upon notice and

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a hearing, may stay in whole or in part the effect of the decision and order of a regional board or of the state board.

(b) If a petition is filed with the superior court to review a decision of the state board, any stay in effect at the time of the filing of the petition shall remain in effect by operation of law for a period of twenty days from the date of the filing of such petition.

Article 3. Judicial Review and Enforcement

13330. (a) Within thirty days after service of a copy of a decision and order issued by the state board under section 13320, any aggrieved party may file with the superior court a petition for a writ of mandate for review thereof. Failure to file such an action shall not preclude a party from challenging the reasonableness and validity of a decision or order of a regional board or the state board in any judicial proceedings brought to enforce such decision or order or for other civil remedies.

(b) The evidence before the court shall consist of the record before the state board, including the regional board's record, and any other relevant evidence which, in the judgment of the court, should be considered to effectuate and implement the policies of this division. In every such case, the court shall exercise its independent judgment on the evidence.

(c) Except as otherwise provided herein, the provisions of subdivisions (e) and (f) of section 1094.5 of the Code of Civil Procedure shall govern proceedings hereunder.

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13331. (a) Upon the failure of any person or persons to comply with any cease and desist order issued by a regional board or the state board, the Attorney General, upon request of the board, shall petition the superior court for the issuance of a preliminary or permanent injunction, or both, as may be appropriate, restraining such person or persons from continuing the discharge in violation of the cease and desist order.

(b) The evidence before the court shall consist of the record before the regional board or state board, or both, and any other relevant evidence which, in the judgment of the court, should be considered to effectuate and implement the policies of this division. In every such case, the court shall exercise its independent judgment on the evidence.

(c) The court shall issue an order directing defendants to appear before the court at a time and place certain and show cause why the injunction should not be issued. The court may grant such prohibitory or mandatory relief as may be warranted.

(d) The court may stay the operation of the cease and desist order. Any such stay may be imposed or continued only if it is not against the public interest.

Article 4. Summary Judicial Abatement

13340. Whenever a regional board finds that a discharge of waste within its region is taking place or threatening to take place which does or will cause a condition of pollution or nuisance, constituting an emergency requiring immediate action to protect the public health, welfare, or

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safety, the Attorney General, upon request of the board, shall petition the superior court to enjoin such discharge. The court shall have jurisdiction to grant such prohibitory or mandatory injunctive relief as may be warranted by way of temporary restraining order, preliminary injunction, and permanent injunction.

Article 5. Civil Monetary Remedies

13350. (a) Any person who intentionally or negligently violates any cease and desist order hereafter issued, reissued, or amended by a regional board or the state board may be liable civilly in a sum of not to exceed six thousand dollars ($6,000) for each day in which any violation occurs.

(b) The Attorney General, upon request of the regional or state board, shall petition the superior court to impose, assess and recover such sums.

(Note. The concept of civil monetary remedies (or civil penalties) is not new in the California law. Section 151 of the Harbors and Navigation Code authorizes recovery of a civil penalty of $6,000 for any intentional or negligent spilling of oil into state waters. See also section 17536 of the Business and Professions Code ($2,500 civil penalty for each violation of prohibition against false advertising.)

A recent review of the laws of other states shows that a substantial number include civil penalties or fines, many times along with possible imprisonment. The Wisconsin statute provides for a $5,000 fine for each day of violation.)

Article 6. General Provisions Relating To Enforcement and Review

13360. No waste discharge requirement or other order of a regional or state board or decree of court issued under the provisions of this division shall specify

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the design, location, type of construction or particular manner in which compliance may be had with such requirement, order or decree, and the person so ordered shall be permitted to comply therewith in any lawful manner; provided, however, that if the court, in an action for an injunction brought pursuant to section 13331, finds that the enforcement of an injunction restraining the discharger from discharging waste would be impracticable, the court shall have the power to issue any order reasonable under the circumstances requiring specific measures to be undertaken by the discharger to comply with the discharge requirements, order or decree.

13361. (a) Every civil action brought under the provisions of this division at the request of a regional board or the state board shall be brought by the Attorney General in the name of the People of the State of California and any such actions relating to the same discharge may be joined or consolidated.

(b) Any civil action brought pursuant to this division shall be brought in a county in which the discharge is made, or proposed to be made.

(c) In any civil action brought pursuant to this division in which a temporary restraining order, preliminary injunction, or permanent injunction is sought, it shall not be necessary to allege or prove at any stage of the proceeding that irreparable damage will occur should the temporary restraining order, preliminary injunction, or permanent injunction not be issued, or that the remedy at law is inadequate, and the

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temporary restraining order, preliminary injunction, or permanent injunction shall issue without such allegations and without such proof.

(Note. Subsection (c) merely confirms the rule of law that would be applicable even in its absence.)

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Chapter 6. State Financial Assistance

Article 1. State Water Quality Control Fund

13400. As used in this chapter, unless otherwise apparent from the context:

(a) "Fund" means the State Water Quality Control Fund.

(b) "Public agency" means any city, county, district, or other political subdivision of the state.

(c) "Facilities means either or both (1) facilities for the collection, treatment, or export of sewage when necessary to prevent water pollution or (2) facilities to reclaim waste waters and to convey reclaimed water.

(Note. See definition of "reclaimed water" in section 13050.)

13401. The State Water Quality Control Fund is continued in existence. The following moneys in the fund are appropriated, without regard to fiscal years, for expenditure by the state board in making loans to public agencies in accordance with the provisions of this chapter:

(a) The balance of the original moneys deposited therein.

(b) Any money repaid thereto.

(c) Any remaining balance of the money in the fund deposited therein after the specific appropriations for loans to the South Tahoe Public Utility District, the

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North Tahoe Public Utility District, the Tahoe City Public Utility District, the Truckee Sanitary District, and to any other governmental entity in the areas served by such districts have been made.

Article 2. Loans to Local Agencies

13410. Applications for construction loans under this chapter shall include:

(a) A description of the proposed facilities.

(b) A statement of facts showing the necessity for the proposed facilities and showing that funds of the public agency are not available for financing such facilities and that the sale of revenue or general obligation bonds through private financial institutions is impossible or would impose an unreasonable burden on the public agency.

(c) A proposed plan for repaying the loan.

(d) Other information as required by the state board.

13411. Upon a determination by the state board, after consultation with the State Board of Public Health, that (a) the facilities proposed by an applicant are necessary to the health or welfare of the inhabitants of the state, (b) that the proposed facilities meet the needs of the applicant, (c) that funds of the public agency are not available for financing such facilities and that the sale of revenue or general obligation bonds through private financial institutions is impossible or would impose an unreasonable burden on the public agency, (d) that the

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proposed plan for repayment is feasible, (e) in the case of facilities proposed under section 13100(c) (1) that such facilities are necessary to prevent water pollution, and (f) in the case of facilities proposed under section 13100(c) (2) that such facilities will produce reclaimed water and that the public agency has adopted a feasible program for use thereof, the state board, subject to approval by the Director of Finance, may loan to the applicant such sum as it determines is not otherwise available to the public agency to construct the proposed facilities.

13412. No loan shall be made to a public agency unless it executes an agreement with the state board under which it agrees to repay the amount of the loan, with interest, within 25 years following, at the election of the state board and with the concurrence of the Director of Finance, a 10-year moratorium on principal and interest payments. Except as otherwise provided in this section, the interest shall be at a rate equal to the average, as determined by the state board, of the net interest costs to the state on the sales of general obligation bonds of the state that occurred during the calendar year immediately preceding the calendar year in which the interest falls due. The interest falling due after the moratorium shall be payable at the last rate applied during the moratorium. However, when the applicable average of the net interest costs to the state is not a multiple of one-tenth of 1 percent, the interest rate shall be at the multiple of one-tenth of 1 percent next above the applicable average of the net interest costs.

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The interest rate applicable to any loan made pursuant to this chapter for which an application was filed prior to January 1, 1967, shall be at the rate of 2 percent.

13413. It is the policy of this state that, in making construction loans under this article, the state board should give special consideration to facilities proposed to be constructed by public agencies in areas in which further construction of buildings has been halted by order of the Department of Public Health or a local health department, or both, or notice has been given that such an order is being considered; provided, however, that each of the public agencies designated in this section shall otherwise comply with all of the other provisions of this chapter.

13414. All money received in repayment of loans under this chapter shall be paid to the State Treasurer and credited to the fund.

13415. (a) Loans may be made by the state board to public agencies to pay not more than one-half of the cost of studies and investigations made by such public agencies in connection with waste water reclamation.

(b) Not more than a total of two hundred thousand dollars ($200,000) shall be loaned pursuant to this section in any fiscal year, and not more than fifty thousand dollars ($50,000) shall be loaned to any public agency in any fiscal year pursuant to this section. In the event that less than two million dollars ($2,000,000) is available in any fiscal year for loans under this article, then not

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more than 10 percent of the available amount shall be available for loans for studies and investigations pursuant to this section.

(c) Applications for such loans shall be made in such form, and shall contain such information, as may be required by the state board.

(d) Such loans shall be repaid within a period not to exceed 10 years, with interest at a rate established in the manner provided in section 13112.

13416. Before a public agency may enter into a contract with the state board for a construction loan under this chapter, the public agency shall hold an election on the proposition of whether or not the public agency shall enter into the proposed contract and more than 50 percent of the votes cast at such election must be in favor of such proposition.

13417. The election shall be held in accordance with the following provisions:

(a) The procedure for holding an election on the incurring of bonded indebtedness by such public agency shall be utilized for an election of the proposed contract as nearly as the same may be applicable. Where the law applicable to such agency does not contain such bond election procedure, the procedure set forth in the Revenue Bond Law of 1941 (Chapter 6 (commencing with section 54300) Part 1, Division 2, Title 5 of the Government Code), as it may now or hereafter be amended, shall be utilized as nearly as the same may be applicable.

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(b) No particular form of ballot is required.

(c) The notice of the election shall include a statement of the time and place of the election, the purpose of the election, the general purpose of the contract, and the maximum amount of money to be borrowed from the state under the contract.

(d) The ballots for the election shall contain a brief statement of the general purpose of the contract substantially as stated in the notice of the election, shall state the maximum amount of money to be borrowed from the state under the contract, and shall contain the words "Execution of contract--Yes" and "Execution of contract--No".

(e) The election shall be held in the entire public agency except where the public agency proposes to contract with the state board on behalf of a specified portion, or of specified portions, of the public agency, in which case the election shall be held in such portion or portions of the public agency only.

Article 3. State Water Pollution Cleanup And Abatement Account

13440. There is in the State Water Quality Control Fund the State Water Pollution Cleanup and Abatement Account (hereinafter called the "account"), to be administered by the state board.

13441. There is to be paid into the account all moneys from the following sources:

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(a) All moneys appropriated by the Legislature for the account.

(b) All moneys contributed to the account by any person and accepted by the state board.

(c) One-half of all moneys collected by way of criminal penalty and all moneys collected civilly under any proceeding brought pursuant to any provision of this division.

(d) All moneys collected by the state board for the account under section 13304.

(e) All moneys paid for the filing of a report of discharge under section 13260.

13442. Upon application by a public agency with authority to clean up a waste or abate the effects thereof, the state board may order moneys to be paid from the account to the agency to assist it in cleaning up the waste or abating its effects on waters of the state. The agency shall not become liable to the state board for repayment of such moneys, but this shall not be any defense to an action brought pursuant to subdivision (b) of section 13303 for the recovery of moneys paid hereunder.

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Chapter 7. Water Reclamation

Article 1. Short Title

13500. This chapter shall be known as and may be cited as the Water Reclamation Law.

Article 2. Declaration of Policy

13510. It is hereby declared that the people of the state have a primary interest in the development of facilities to reclaim water containing waste to supplement existing surface and underground water supplies and to assist in meeting the future water requirements of the state.

13511. The Legislature finds and declares that a substantial portion of the future water requirements of this state may be economically met by beneficial use of reclaimed water.

The Legislature further finds and declares that the utilization of reclaimed water by local communities for domestic, agricultural, industrial, recreational, and fish and wildlife purposes will contribute to the peace, health, safety and welfare of the people of the state. Use of reclaimed water constitutes the development of "new basic water supplies" as that term is used in Chapter 5 (commencing with section 12880) of Part 6 of Division 6.

13512. It is the intention of the Legislature that the state undertake all possible steps to encourage development of water reclamation facilities so that reclaimed water may be made available to help meet the growing water requirements of the state.

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Article 3. State Assistance

13515. In order to implement the policy declarations of this chapter, the state board is authorized to provide loans for the development of water reclamation facilities, or for studies and investigations in connection with water reclamation, pursuant to the provisions of Chapter 6 (commencing with section 13400) of this division.

Article 4. Regulation of Reclamation*

13520. As used in this article "reclamation criteria" are the levels of constituents of reclaimed water, and means for assurance of reliability under the design concept which will result in reclaimed water safe from the standpoint of public health, for the uses to be made.

* Section 13050(n) provides: "'Reclaimed water' means water which, as a result of treatment of waste, is suitable for a direct beneficial use or a controlled use that would not otherwise occur."

To assure the protection of public health when reclaimed water is used, section 13521 provides for the establishment of statewide reclamation criteria by the State Department of Public Health. It is then the duty of each regional board, when it finds that a specific situation requires such action, to establish water reclamation requirements pursuant to section 13523. Note that such water reclamation requirements shall include, or be in conformance with, the statewide reclamation criteria.

Establishment of and compliance with water reclamation requirements are of particular importance when a direct use (not an indirect, controlled use) is made of the reclaimed water. Note that section 13524 provides that waste discharge requirements (in addition to water reclamation requirements) may also be established if a discharge is involved.

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13521. The State Department of Public Health shall establish statewide reclamation criteria for each varying type of use of reclaimed water where such use involves the protection of public health.

13522. Whenever the State Department of Public Health finds that a contamination exists as a result of use of reclaimed water, the department shall order the contamination abated in accordance with the procedure provided for in Chapter 6 (commencing with section 5400) of Part 3, Division 5 of the Health and Safety Code.

13523. Each regional board, after consulting with and receiving the recommendations of the State Department of Public Health, and if it determines such action to be necessary to protect the public health, safety, or welfare, shall establish water reclamation requirements for water which is used or will be used as reclaimed water. Such requirements shall include, or be in conformance with, the statewide reclamation criteria established pursuant to this article. The regional board may require the submission of a pre-construction report for the purpose of determining compliance with the reclamation criteria.

13524. Upon refusal or failure of any person or persons to comply with any water reclamation requirements established by a regional board pursuant to this article, the regional board establishing the requirements may certify the facts to the Attorney General who shall petition the superior court for the county in which the violation or threatened violation occurs for the issuance of a mandatory

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injunction requiring such person or persons to comply with such water reclamation requirements, and proceedings thereon shall be conducted in the same manner as in any other action brought for an injunction pursuant to Chapter 3 (commencing with section 525), Title 7, Part 2 of the Code of Civil Procedure.

13525. No person shall use reclaimed water for any purpose for which reclamation criteria have been established until water reclamation requirements have been established therefor pursuant to this article. The Attorney General, at the request of a regional board shall petition the superior court of the county in which the violation occurs for an injunction pursuant to Chapter 3 (commencing with section 525) of Title 7 of Part 2 of the Code of Civil Procedure, to enjoin any act, actual or threatened, in violation of this section.

13526. Any person who, after such action has been called to his attention in writing by the regional board, uses reclaimed water for any purpose for which reclamation criteria have been established prior to the establishment of water reclamation requirements, is guilty of a misdemeanor.

13527. In administering any statewide program of financial assistance for water pollution or water quality control which may be delegated to it pursuant to Chapter 6 (commencing with section 13400) of this division, the state board shall give added consideration to water quality control facilities providing optimum water reclamation and use of reclaimed water.

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Nothing in this chapter prevents the appropriate regional board from establishing waste discharge requirements if a discharge is involved.

13528. No provision of this chapter shall be construed as affecting the existing powers of the State Department of Public Health.

Article 5. Surveys and Investigations

13530. The department, either independently or in cooperation with any person or any county, state, federal, or other agency, or on request of the state board, to the extent funds are allocated therefor, shall conduct surveys and investigations relating to the reclamation of water from waste pursuant to section 230.

Article 6. Waste Well Regulation

13540. No person shall construct, maintain or use any waste well extending to or into a subterranean water-bearing stratum that is used or intended to be used as, or is suitable for, a source of water supply for domestic purposes. Notwithstanding the foregoing, when a regional board finds that water quality considerations do not preclude controlled recharge of such stratum by direct injection, and when the State Board of Public Health, following a public hearing, finds the proposed recharge will not impair the quality of water in the receiving aquifer as a source of water supply for domestic purposes, reclaimed water may be injected by a well into such stratum. The State Board of Public Health may make and enforce such regulations pertaining thereto as it deems proper. Nothing

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in this section shall be construed to affect the authority of the state board or regional boards to prescribe and enforce requirements for such discharge.

13541. As used in this article, "waste well" includes both of the following:

(a) Any hole dug or drilled into the ground, and intended for use as a water supply, which has been abandoned and is being used for the disposal of waste.

(b) Any hole dug or drilled into the ground, used or intended to be used for the disposal of waste.

(Note. Health and Safety Code section 4458 is recommended to be repealed. In amended form it is proposed to be reenacted as this section.)

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Chapter 8. Federal Assistance for Treatment Facilities

13600. The state board shall administer any program of financial assistance for water quality control which may be delegated to it by law, and may accept funds from the United States or any person to that end.

13601. The state board, in cooperation with the regional boards, shall survey the statewide need for waste collection, treatment and disposal facilities which will be required during the five-year period, January 1, 1968, to December 31, 1972, inclusive, to adequately protect the waters of the state for beneficial use. The state board shall also, biennially, commencing in 1970, survey the need for facilities which will be required by public agencies for the ensuing five-year period. The state board may request a local public agency operating such facilities to transmit to its regional board a report on the following:

(1) A summary of the construction or improvement of its waste collection, treatment and disposal facilities and amounts expended therefor.

(2) An estimate of its needs for the five-year period, January 1, 1968, to December 31, 1972, inclusive, and for any ensuing five-year period.

The state board shall review the information contained in the reports made by the local public agencies. The state board shall submit to the Legislature findings and conclusions as to the anticipated local, state, and federal financing necessary to provide the needed facilities for such periods.

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13602. The state board shall make no commitment or enter into any agreement pursuant to an exercise of authority under this chapter until it has determined that any money required to be furnished as the state's share of project cost is available for such purpose.

13603. The Governor may request the funds required to finance the state's share of project costs for each fiscal year through inclusion of the anticipated state's share in the annual Budget Bill. In no case, however, shall funds under this chapter be appropriated by the Legislature prior to 1968, nor until the findings of need have been reported and evaluated by the Legislature.

13604. The state board shall review and approve each waste collection, treatment, and disposal project for which an application for a grant under the act has been made. The state board shall, in reviewing each project, determine whether such project is in conformity with statewide policies for control of water pollution and water quality and in conformity with policies with respect to water pollution control and water quality control adopted by regional water quality control boards, and shall certify that such project is entitled to priority over other eligible projects on the basis of financial as well as water pollution control needs.

13605. For the purpose of reviewing applications for grants made pursuant to authority granted in section 13600, the state board shall give added consideration to applicants having facilities providing optimum water reclamation and use of reclaimed water.

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13606. If an application states that the applicant is not able to finance the project, the state board shall consider whether the applicant should be required to levy a sewerage service charge. If the state board determines a sewerage service charge is necessary to pay such costs, the state board shall not approve the grant application unless, as a condition to such approval, the applicant agrees to levy a reasonable and equitable sewerage service charge in connection with the proposed project.

Any such applicant, not otherwise authorized, is authorized by this section to levy a sewerage service charge pursuant to such an agreement, and shall levy such charge in the manner provided in the agreement.

13607. All money appropriated by the Legislature for the state's share of the project costs shall be appropriated without regard to fiscal years, or shall augment an appropriation without regard to fiscal years.

13608. After January 1, 1971, no application for a grant under the Federal Water Pollution Control Act, or amendment thereof, or pursuant to Chapter 5 (commencing with section 13400) of this division, shall be accepted by the state board unless such application contains assurances that at least one person responsible for plant operations meets or will meet operator training qualifications, adopted pursuant to Chapter 9 (commencing with section 13625) of this division for the proposed plant, as well as the plant in current operation.

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Chapter 9. Waste Treatment Plant Operator Qualifications

13625. The State Water Resources Control Board is the state agency which is authorized to represent the state and its local governmental agencies in administering any federal or state funds available for waste treatment plant operator training.

13626. The state board shall classify types of sewage treatment plants for the purpose of determining the levels of competence necessary to operate them. The state board shall adopt and promulgate regulations setting forth the types of plants and the factors on which the state board based its classification.

13627. The state board shall develop and specify in its regulations the training necessary to qualify an operator for each level of competence for each type of plant. Prior to establishment of such training qualifications the state board shall consult with the Governor's Advisory Council on Public Service Training. The state board may accept experience in lieu of qualification training.

13628. The state board may approve courses of instruction at higher educational institutions which will qualify operators for each level of competence. The state board shall also approve courses of instruction given by professional associations, or other nonprofit private or public agencies which shall be deemed equivalent to courses of instruction given by higher educational institutions.

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13629. The state board may provide technical and financial assistance to organizations providing operator training programs.

13630. Prior to approving any courses for operator training, the state board shall appoint an advisory committee to assist it in carrying out its responsibilities under this chapter.

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Chapter 10. Water Wells and Cathodic Protection Wells

Article 1. Declaration of Policy

13700. The Legislature finds that the greater portion of the water used in this state is obtained from underground sources and that such waters are subject to impairment in quality and purity, causing detriment to the health, safety and welfare of the people of the state. The Legislature therefore declares that the people of the state have a primary interest in the location, construction, maintenance, abandonment and destruction of water wells and cathodic protection wells, which activities directly affect the quality and purity of underground waters.

Article 2. Definitions

13711. "Cathodic protection well," as used in this chapter, means any artificial excavation in excess of 50 feet constructed by any method for the purpose of installing equipment or facilities for the protection electrically of metallic equipment in contact with the ground, commonly referred to as cathodic protection.

Article 3. Reports

13750. Every person who hereafter intends to dig, bore, or drill a water well or cathodic protection well, or who intends to deepen or reperforate any such well, or to abandon or destroy any such well, shall file with the department a notice of intent to engage in such construction, alteration, destruction, or abandonment prior to commencing

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such construction, alteration, destruction, or abandonment; provided, that when such construction, alteration, destruction or abandonment must be accomplished immediately in order to prevent damage to persons or property due to the loss of an existing water supply, such notice shall be filed with the department as soon as possible thereafter, but in any event not more than five days after commencement of such construction, alteration, destruction, or abandonment or repair.

The report shall be made on forms furnished by the department and shall contain such information as the department may require, including, but not limited to: (a) description of the well site sufficiently exact to permit location and identification of the well; (b) proposed date of construction of the well; (c) the use for which the well is intended; (d) the work to be done and a description of type of construction; and (e) in event of late filing, the reasons therefor.

13751. Every person who hereafter digs, bores or drills a water well or cathodic protection well, or abandons or destroys any such well, or who deepens or reperforates any such well, shall file with the department a report of completion of such well within 30 days after its construction or alteration has been completed.

The report shall be made on forms furnished by the department and shall contain such information as the department may require, including, but not limited to:

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(a) description of the well site sufficiently exact to permit location and identification of the well; (b) detailed log of the well; (c) description of type of construction; (d) details of perforation; and (e) methods used for sealing off surface or contaminated waters.

13752. Reports made pursuant to section 13751 shall not be made available for inspection by the public but shall be made available to governmental agencies for use in making studies; provided, that any report shall be made available to any person who obtains a written authorization from the owner of the well.

13753. Every person who hereafter converts for use as a water well or cathodic protection well, any oil or gas well originally constructed under the jurisdiction of the Department of Conservation pursuant to the provisions of Article 4 (commencing with section 3200), Chapter 1, Division 3 of the Public Resources Code, shall comply with all provisions of this chapter.

13754. Failure to comply with any provision of this article, or willful and deliberate falsification of any report required by this article, is a misdemeanor.

Before commencing prosecution against any person, other than for willful and deliberate falsification of any report required by this article, the person shall be given reasonable opportunity to comply with the provisions of this article.

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13755. Nothing in this chapter shall affect the powers and duties of the State Department of Public Health with respect to water and water systems pursuant to Chapter 7 (commencing with section 4010) of Division 5 of the Health and Safety Code. Every person shall comply with this chapter and any regulation adopted pursuant thereto, in addition to standards adopted by any city or county.

Article 4. Quality Control

13800. The department, after such studies and investigations pursuant to section 231 as it finds necessary, on determining that water well and cathodic protection well construction, maintenance, abandonment, and destruction standards are needed in an area to protect the quality of water used or which may be used for any beneficial use, shall so report to the appropriate regional water quality control board and to the State Department of Public Health. The report shall contain such recommended standards for water well and cathodic protection well construction, maintenance, abandonment, and destruction as, in the department's opinion, are necessary to protect the quality of any affected water.

13801. The regional board upon receipt of a report from the department shall hold a public hearing on the need to establish such well standards for the area involved. The regional board may hold such a public hearing with respect to any area regardless of whether a report has been received from the department if it has information that such standards may be needed.

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makes such a determination it shall so report to the affected county or city and also recommend the well standards, or the modification of the county or city well standards, which it determines are necessary.

13805. If a county or city fails to adopt an ordinance establishing water well and cathodic protection well construction, maintenance, abandonment, and destruction standards within 180 days of receipt of the regional board's report of its determination that such standards are necessary pursuant to section 13802, or fails to adopt or modify such well standards in the manner determined as necessary by the regional board pursuant to section 13804 within 90 days of receipt of the regional board's report, the regional board may adopt standards for water well and cathodic protection well construction, maintenance, abandonment, and destruction for the area. Such regional board well standards shall take effect 30 days from the date of their adoption by the regional board and shall be enforced by the city or county and have the same force and effect as if adopted as a county or city ordinance.

13806. Any action, report, or determination taken or adopted by a regional board or any failure of a regional board to act pursuant to this article, or any county or city ordinance in the event of the failure of a regional board to review such ordinance pursuant to section 13804, may be reviewed by the state board on its own motion, and shall be reviewed by the state board on the request of

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any affected person, county, or city, in the same manner as other action or inaction of the regional board is reviewed pursuant to section 13320. The state board has the same powers as to the review of action or inaction of a regional board or of a county or city ordinance under this article as it has as to other action or inaction of a regional board under section 13320, including being vested with all the powers granted a regional board under this article, with like force and effect if it finds that appropriate action has not been taken by a regional board. Any action of a regional board under this article or any county or city ordinance affected by the review of the state board shall have no force or effect during the period of the review by the state board.

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Chapter 11. Discharges from Houseboats on or in the Waters of the State

13900. The Legislature finds and hereby declares that discharges from houseboats in or on the waters of the state constitute a significant source of waste as defined in section 13050; that discharges of waste from houseboats in or on the waters of the state may impair the beneficial uses of the waters of the state to the detriment of the health, safety, and welfare of the people of the state; and that the discharges of waste from houseboats are not adequately regulated. The Legislature therefore declares that the people of the state have a primary interest in the coordination and implementation of the regulation of discharges of waste from houseboats on or in the waters of the state.

13901. As used in this article, "houseboat" means a watercraft or industrial or commercial structure on or in the waters of the state, floating or nonfloating, which is designed or fitted out as a place of habitation and is not principally used for transportation. "Houseboat" includes platforms, and waterborne hotels and restaurants.

"City or county" means any city, county, city and county, or port authority.

13902. Each regional board shall investigate its region to determine areas in which discharges of waste from houseboats are inadequately regulated by local ordinance.

13903. Each regional board shall notify each affected city or county, the State Department of Public Health

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and the State Department of Harbors and Watercraft of areas of inadequate regulation by ordinance of discharges of waste from houseboats and shall recommend provisions necessary to control the discharges of waste from houseboats into the waters.

13904. Each such affected city or county shall within 120 days of receipt of the notice from the regional board, adopt an ordinance for control of discharges of waste from houseboats within the area for which notice was given by the board. A copy of such ordinance shall be sent to the regional board on its adoption and the regional board shall transmit such ordinance to the state board, the State Department of Public Health and the State Department of Harbors and Watercraft.

13905. Such city or county ordinance shall take effect 60 days from the date of adoption by the city or county, unless the regional board holds a public hearing on the matter and determines that the city or county ordinance is not sufficiently restrictive to protect the quality of the waters affected. If the board makes such a determination, it shall so report to the affected city or county and also recommend the ordinance, or modification of the city or county ordinance, which it determines is necessary.

13906. If a city or county fails to adopt an ordinance controlling discharges of waste from houseboats within 120 days of receipt of the regional board's notice pursuant to section 13903, or fails to adopt or modify such ordinance in the manner determined as necessary by the

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regional board pursuant to section 13905, within 90 days of receipt of the regional board's notice, the regional board may adopt regulations necessary for the control of discharges of waste from houseboats for the area designated. Such regional board standards shall take effect 30 days from the date of their adoption and shall be enforced by the city or county and have the same force and effect as if adopted as a city or county ordinance.

13907. Any action, report, determination, or regulation taken or adopted by a regional board, or any failure of a regional board to act may be reviewed by the state board, and shall be reviewed by the state board on the request of any city or county. The state board has all powers as to the review of action or inaction of a regional board under this article as it has to other action or inaction of a regional board, including all powers granted to a regional board to initially determine areas in which discharges of waste from houseboats are inadequately regulated by local ordinance and to adopt standards when a city or county fails to do so, if the state board finds that appropriate action has not been taken by a regional board. Any action of a regional board under this chapter or any city or county ordinance affected by the review of the state board shall have no force or effect during the period of the review by the state board.

13908. No provision in this chapter and no action thereunder by a regional board or the state board is a limitation on the power of a city or county to adopt and enforce additional ordinances or regulations not in conflict therewith

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imposing further conditions, restrictions, or limitations with respect to the discharges of waste from houseboats.

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Section 19. Section 11010 of the Business and Professions Code is amended to read:

11010. Prior to the time when subdivided lands are to be offered for sale or lease, the owner, his agent or subdivider shall notify the commissioner in writing of his intention to sell or lease such offering.

The notice of intention shall contain the following information:

(a) The name and address of the owner.

(b) The name and address of the subdivider.

(c) The legal description and area of lands.

(d) A true statement of the condition of the title to the land, particularly including all encumbrances thereon.

(e) A true statement of the terms and conditions on which it is intended to dispose of the land, together with copies of any contracts intended to be used.

(f) A true statement of the provisions, if any, that have been made for public utilities in the proposed subdivision, including water, electricity, gas and, telephone, and sewerage facilities.

(g) A true statement of the use or uses for which the proposed subdivision will be offered.

(h) A true statement of the provisions, if any, limiting the use or occupancy of the parcels in the subdivision.

(i) A true statement of the maximum depth of fill used, or proposed to be used on each lot, and a true statement on the soil conditions in the subdivision supported by engineering reports showing the soil has been, or will be,

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prepared in accordance with the recommendations of a registered civil engineer.

(j) A true statement of the amount of indebtedness which is a lien upon the subdivision or any part thereof, and which was incurred to pay for the construction of any onsite or offsite improvement, or any community or recreational facility.

(k) A true statement or reasonable estimate, if applicable, of the amount of any indebtedness which has been or is proposed to be incurred by an existing or proposed special district, entity, taxing area or assessment district, within the boundaries of which, the subdivision, or any part thereof, is located, and which is to pay for the construction or installation of any improvement or to furnish community or recreational facilities to such subdivision, and which amounts are to be obtained by ad valorem tax or assessment, or by a special assessment or tax upon the subdivision, or any part thereof.

(l) Such other information as the owner, his agent, or subdivider, may desire to present.

Section 20. Section 11551.6 is added to the Business and Professions Code, to read:

11551.6. The governing body of any city or county shall determine whether the discharge of waste from the proposed subdivision into an existing community sewer system would result in violation of existing requirements prescribed by a California water quality control board pursuant to Division 7 (commencing with section 13000) of the Water Code.

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In the event that the governing body finds that the proposed waste discharge would result in or add to violation of requirements of the regional board, it may disapprove the tentative map or maps of the subdivision.

Section 21. Section 11558 of the Government Code is amended to read:

11558. An annual salary of twenty thousand five hundred dollars ($20,500) shall be paid to each of the following:

(a) Each member of the Adult Authority.

(b) Each member of the Board of Equalization.

~~(c) Each member of the State Water Resources Control Board.~~

~~(d)~~ (c) Each member of the Unemployment Insurance Appeals Board.

~~(e)~~ (d) Each member of the Youth Authority.

~~(f)~~ (e) Deputy Director of Employment.

Section 22. Section 11558.1 is added to the Government Code, to read:

11558.1. An annual salary of twenty-five thousand dollars ($25,000) shall be paid to each of the following:

(a) Each member of the State Water Resources Control Board.

Section 23. Section 11563 of the Government Code is amended to read:

11563. In addition to the salaries provided for them elsewhere in this article, an annual amount of five

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hundred dollars ($500) shall be paid to each of the following:

(a) President of the Public Utilities Commission.

(b) Chairman of the Adult Authority.

(c) Chairman of the Alcoholic Beverage Control Appeals Board.

(d) Chairman of the Board of Barber Examiners.

(e) Chairman of the Board of Equalization.

(f) Chairman of the Unemployment Insurance Appeals Board.

~~(g) Chairman of the Water Rights Board.~~

Section 24. Section 11563.1 is added to the Government Code, to read:

11563.1. In addition to the salaries provided for in section 11558.1, an additional amount of 5 percent shall be paid to each of the following:

(a) Chairman of the State Water Resources Control Board.

Section 25. Section 12805 of the Government Code is amended to read:

12805. The Resources Agency consists of the State Air Resources Board, the Colorado River Board, the Office of Nuclear Energy, the State Water ~~Rights Board, the State Water Quality~~ Resources Control Board, and each California water ~~pollution~~ quality control board, and the following departments: Conservation; Fish and Game; Harbors and Water craft; Parks and Recreation; and Water Resources.

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Section 26. Section 151 of the Harbors and Navigation Code is amended to read:

151. ~~Except where permitted pursuant to the provisions of Chapter 4 (commencing with section 13040) of Division 7 of the Water Code, any person that intentionally or negligently causes or permits any oil to be deposited in the water of this state, including but not limited to navigable waters, shall be liable civilly in an amount not exceeding six thousand dollars ($6,000) and, in addition, shall be liable to any governmental agency charged with the responsibility for cleaning up or abating any such oil for all actual damages, in addition to the reasonable costs actually incurred in abating or cleaning up the oil deposit in such waters.~~ Any person for whom waste discharge requirements have not been established pursuant to Division 7 (commencing with section 13000) of the Water Code, who intentionally or negligently causes or permits any oil to be deposited in the water of this state, including but not limited to navigable waters, resulting in a condition of pollution or nuisance as defined in section 13050 of the Water Code, shall be liable civilly in an amount not exceeding six thousand dollars ($6,000). The amount of the ~~civil penalty~~ recovery which is assessed pursuant to this section shall be based upon the amount of discharge and the likelihood of permanent injury and shall be recoverable in a civil action by, and paid to, such a governmental agency charged with the responsibility for cleaning up or abating

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any such oil. If more than one such agency has responsibility for the waters in question, the agency which conducts the any cleaning or abating activities shall be the agency authorized to proceed under this section, but if more than one agency is involved, the court shall allocate among them the amount of the recovery hereunder.

Section 27. Section 152 of the Harbors and Navigation Code is repealed.

~~152. The agency cleaning up the oil deposit shall notify, in writing, the appropriate regional water quality control board of the nature of the deposit and of the corrective action taken or contemplated.~~

Section 28. Section 4458 of the Health and Safety Code is repealed.

~~4458. No person shall construct, maintain or use any sewer well extending to or into a subterranean water-bearing stratum that is used or intended to be used as, or is suitable for, a source of water supply for domestic purposes, except that where a regional water pollution control board finds that water quality considerations do not preclude controlled recharge of such stratum by direct injection, water reclaimed from sewage may be injected by a well into such stratum after a public hearing and a finding by the State Board of Public Health that the proposed recharge will not impair the quality of water in the receiving aquifer as a source of water supply for domestic purposes. Said board may make and enforce such regulations pertaining~~

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thereof as it deems proper. Nothing in this section shall be construed to affect the authority of the State Water Pollution Control Board or regional water pollution control boards to prescribe and enforce requirements for such discharge.

~~"Sewer well"~~ as used in this section includes all of the following:

~~(a)~~ Any hole dug or drilled into the ground, and intended for use as a water supply, which has been abandoned and is being used for the disposal of sewage.

~~(b)~~ Any hole dug or drilled into the ground, used or intended to be used for the disposal of sewage.

Section 29. Section 5410 of the Health and Safety Code is amended to read:

5410. As used in this chapter:

(a) ~~"Sewage"~~ means any and all waste substance, liquid or solid, associated with human habitation, or which contains or may be contaminated with human or animal excreta or excrement, offal, or any feculent matter "Waste includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation of whatever nature.

~~(b)~~ "Other waste" means any and all liquid or solid waste substance, not sewage, from any producing, manufacturing or processing operation of whatever nature.

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~~(e)~~ (b) "Person" as used in this article also includes any city, county ~~and any~~, district, the state or any department or agency thereof.

~~(d)~~ (c) "Waters of the state" means any ~~waters~~ water, surface or underground, including saline waters, within the boundaries of the state ~~as defined and described in section 1 of Article XXI of the Constitution and as given greater precision in sections 170, 171, and 172 of the Government Code.~~

~~(e)~~ (d) "Contamination" means an impairment of the quality of the waters of the state by sewage ~~or other~~ waste to a degree which creates ~~an actual~~ a hazard to the public health through poisoning or through the spread of disease. "Contamination" shall include any equivalent effect resulting from the disposal of sewage ~~or other~~ waste, whether or not waters of the state are affected.

~~(f)~~ (e) "Pollution" means an ~~impairment~~ alteration of the quality of the waters of the state by sewage ~~or other~~ waste to a degree which ~~does not create an actual hazard to the public health but which does adversely and~~ unreasonably ~~affect~~ affects (1) such waters for ~~domestic, industrial, agricultural, navigational, recreational or other~~ beneficial ~~use~~ uses, or (2) facilities which serve such beneficial uses. "Pollution" may include "contamination".

~~(g)~~ (f) "Nuisance" means ~~damage to any community by odors or unsightliness resulting from unreasonable practices in the disposal of sewage or other wastes~~ anything which (1)

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is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property, and (2) affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal, and (3) occurs during, or as a result of, the treatment or disposal of wastes.

~~(h)~~ (g) "Regional board" means any ~~regional~~ California water quality control board created pursuant to section ~~13041~~ 13201 of the Water Code.

Section 30. Notwithstanding the provisions of this act, all members of a regional water quality control board on the effective date of this act shall continue to serve as members of such board pursuant to section 13201 of the Water Code for the remainder of the term for which they were appointed. The Governor shall appoint two additional members to each regional board who shall meet the qualifications of category (7) of subdivision (a) of section 13201 of the Water Code. The term of one member so appointed to the board, who shall be designated by the Governor, shall expire on September 30, 1972, and the term of the other such member shall expire on September 30, 1973, and thereafter such members shall be appointed for a term of four years.

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Section 31. To the extent that the disciplines specified in subdivisions (a) through (i), inclusive, of section 13120 of the Water Code closely relate to fields represented by the membership of the Water Quality Advisory Committee at the time of the effective date of this act, appointments to the committee, as they occur, shall be made in accordance with the discipline which relates to the field represented by the member whose term has expired.

Section 32. Notwithstanding the provisions of subdivision (c) of section 13220, any person incumbent in the position of executive officer of a regional water quality control board on the effective date of the amendment of subdivision (c) of section 13050 of the Water Code at the 1963 Regular Session of the Legislature, shall continue to serve at the pleasure of his appointing board.

Section 33. The Legislature hereby finds and declares that over the years chronic and continuing conditions of pollution and nuisance have resulted from the physical and geographic locations of property once used as industrial or business sites but not in operation. The Legislature further finds and declares that such conditions cannot be effectively dealt with pursuant to other regulatory authority exercised by a regional water quality control board, since continuing discharges are not usually involved and the industry or businesses are not in operation and since the owners of such property are frequently absent from the board's jurisdiction and cannot readily be

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required to abate the condition. The Legislature, therefore, further finds and declares that it is imperative, in order to remedy conditions of pollution and nuisance emanating from nonoperating industrial or business locations, such as mines, that regional water quality control boards be authorized to regulate such conditions in the manner provided in section 13305 of the Water Code.

Section 34. This act shall become operative on January 1, 1970.

Section 35. There is hereby appropriated from the General Fund the sum of _____dollars ($_____) to the State Water Resources Control Board for the purposes of this act.

Section 36. This act is intended to implement the legislative recommendations of the final report of the State Water Resources Control Board submitted to the 1969 Regular Session of the Legislature entitled "Recommended Changes in Water Quality Control," prepared by the Study Project-Water Quality Control Program.

Section 37. This act shall be known as the "California Water Quality Improvement Act of 1969."

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A P P E N D I X B

FINES AND PENALTIES

FOR WATER POLLUTION IN VARIOUS STATES

FINES AND PENALTIES FOR WATER POLLUTION IN VARIOUS STATES

(Note that in many states each day of violation constitutes a separate offense)

State	Statute Cited	Maximum Fine	Maximum Imprisonment	Added Penalties
Alabama	Ala. Code Tit. 22, Sec. 140-(p) & (q) (Recomp. 1967)	$10,000	--	a
Alaska	Stat. Sec. 46.05.210 (1962)	500	30 days	b
Florida	Fla. Stat. Ann. Sec. 403.161 (Supp. 1969)	1,000	1 year	b, c
Idaho	Idaho Code Sec. 39-118 C. (Supp. 1967)	1,000	1 year	a, b, c, d
Kentucky	Ky. Rev. Stat. 220.990 (1962)	1,000	1 year	b, c
Maine	38 MRSA Sec. 571 (1964)	5,000	any term of years	--
Massachussetts	Mass. Ann. Laws Ch. 111, Sec. 162 (1967)	500	1 year	b
Michigan	Mich. Stat. Ann. Sec. 3.529(1) (Supp. 1968)	No maximum specified (Minimum 500)	--	a, c ($500/day)
Mississippi	Sec. 7106-127(a) & (b) Miss. Code Ann. (1966 Cum. Supp.)	3,000	1 year	b, c, d
Montana	Sec. 69-4908 Rev. Codes of Mont. (1967 Cum. Supp.)	1,000	1 year	b

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State	Statute Cited	Maximum Fine	Maximum Imprisonment	Added Penalties
Nebraska	RRS 1943, (1967 Cum. Supp.) Sec. 71-3009 (1) & (2)	$ 500	60 days	c($10/day), d
New Hampshire	RSA 148:3 (1964)	1,000	1 year	--
New York	N.Y. Public Health Law Sec. 1252 (1968 Cum. Supp.)	500	1 year	b, c
North Carolina	Gen. Stat. Sec. 143-215.6(b) (Supp. 1967)	1,000	--	c
Ohio	Rev. Code Ann. Sec. 6111.99 Anderson, 1954	500	1 year	b
Oklahoma	Okla. Stat. Ann. Tit. 82 Sec. 937(b) (Supp. 1968)	500	90 days	b, c
Pennsylvania	Pa. Stat. Ann. Tit. 35 Sec. 691.401 (1964)	500	60 days	c*
Rhode Island	R.I. General Laws Sec. 46-12-14 (1956)	500	30 days	b, c
Tennessee	Sec. 70-317 T.C.A. (1955)	500	--	--
Virginia	Va. Code Ann. Sec. 62.1-194.1 (1968 Repl.)	500	1 year	a, b, c
West Virginia	W. Va. Code Ann. Sec. 20-5A-19 (1968 Supp.)	✗	✗	✗
Wisconsin	Sec. 144.57 W.S.A. (1968 Supp.)	5,000	--	c

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State	Statute Cited	Maximum Fine	Maximum Imprisonment	Added Penalties
Wyoming	Sec. 35-195 Wyoming Statutes Ann. (1959)	$ 1,000	1 year	b

EXPLANATORY NOTES

a - Civil action (in addition to set penalties) may be brought against polluter for any damages or injury resulting from his polluting.

b - Both imprisonment and fine may be imposed.

c - Every day that such conduct continues shall constitute a separate offense or violation.

d - Polluter is also liable for any expenses incurred by the state board or commission responsible for enforcing the act, or in removing or terminating the cause of pollution.

* - PENNSYLVANIA--statute cited states that: "Any person who shall continue to violate the provisions of this section, after conviction in a summary proceeding . . ., shall be guilty of a misdemeanor, and upon conviction shall be sentenced to pay a fine of not . . . more than $10,000 and prison sentences not . . . more than one year. Each day during which this section is violated shall constitute a separate offense." (Emphasis added.)

/ - WEST VIRGINIA--statute cited provides for a graduated sentencing for violations in the following manner:

First offense - maximum fine - $ 100
Second offense - maximum fine - $ 500
Third offense - maximum fine - 1,000 or 6 months in jail, or both.

Each day the violation is continued constitutes a separate offense.

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A P P E N D I X C

INTERAGENCY PROGRAMMING COMMITTEE

FOR

WATER QUALITY CONTROL AND MANAGEMENT ACTIVITIES

and

A PROPOSAL FOR THE COORDINATED STORAGE AND RETRIEVAL

OF WATER QUALITY INFORMATION

INTERAGENCY PROGRAMMING COMMITTEE
FOR
WATER QUALITY CONTROL AND MANAGEMENT ACTIVITIES

A. MEMBERSHIP

The membership of this group shall be composed of individuals familiar with their departmental programs and policies and who have management decision responsibilities. Generally, representatives from the various departments will be at the Division or Bureau Chiefs' level. The following departments having major water quality (management and fiscal) responsibilities should be represented:

1. State Water Resources Control Board, Chairman
2. Resources Agency
3. Department of Agriculture
4. Department of Conservation
5. Department of Finance
6. Department of Fish and Game
7. Department of Public Health
8. Department of Water Resources
9. Colorado River Board

Staff support for the committee's functioning will be provided by the State Water Resources Control Board

B. OBJECTIVES

To assure that the total state program for the control and management of water quality is adequate to meet state and local needs and to assure maximum efficiency

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in the conduct of individual state agency activities which form a part of the total state program.

C. ACTIVITIES

1. Identify specific activities (i.e., in the general areas of basic data, surveillance, investigations, monitoring, research, enforcement, pollution cleanup, etc.) required to carry out statutory responsibilities and statewide policy for water quality control, and recommend priorities for the activities identified.

2. Recommend the assignment of specific activities to the proper state agencies with the objective of achieving maximum efficiency and benefit to the state with due consideration for the statutory responsibilities of the affected agencies.

3. Develop procedures for continuing coordination and evaluation of departmental activities and programs to assure that the objectives are met and that duplication of effort is avoided.

D. RESOLUTION OF CONFLICTS

1. In the event that the Committee cannot agree to priorities of activities or to departmental assignments, after review by the respective directors, the Committee shall recommend referral of unresolved issues to the Secretary for Resources.

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2. In the event that there is conflict between Agencies' viewpoints the Secretary will resolve any issues jointly with Secretaries of other affected Agencies.

A PROPOSAL FOR THE COORDINATED STORAGE AND RETRIEVAL OF WATER QUALITY INFORMATION

The Subcommittee on Intergovernmental Relations decided at its meeting on December 17, 1968, to recommend to the Study Panel that all water quality information generated in the state should be handled in a coordinated manner through an Information Storage and Retrieval Center.

All water-related data (water quantity and quality, land and water use, etc.) should eventually be handled by such a Center. That data which can be computerized should be; that which cannot or should not be computerized should be stored in a catalogue or library and coded in such a manner that efficient retrieval is possible.

The attached diagram indicates handling of water quality data only. All other water-related data would be handled in a similar manner.

The purpose of the Information Screening and Processing Section is to assure uniformity of procedures and to provide screening of data for integrity and usability. The Section could be composed of representatives of several

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of the agencies who use the center, and could include persons who are familiar with various data collection programs and with data handling and programming techniques. The Section is shown on the diagram as being located in the Resources Agency. It could be located in a member department or board of the Resources Agency for administrative purposes, provided a mechanism can be developed for assuring that the needs of other departments or boards are met.

It is estimated that the cost of operating the Section, exclusive of computer and programmer time, would be about $100,000.00 per year. This amount would cover about five people. Funding would come from agencies participating in the use of the Center, or it could be budgeted separately. No data analysis, other than very routine programs, is envisioned for the Section; it is assumed that data users will pay-as-they-go.

The Interagency Programming Committee, also proposed by the Subcommittee on Intergovernmental Relations, would provide valuable advice to the Section on water quality data needs. This proposal does not conflict with the recommendation that the State Water Resources Control Board "prepare and implement a statewide water quality information storage and retrieval program". The state board would merely act as an intermediate data screening and processing body for the regional boards to assure uniformity in the data submitted by them to be put in the Center.

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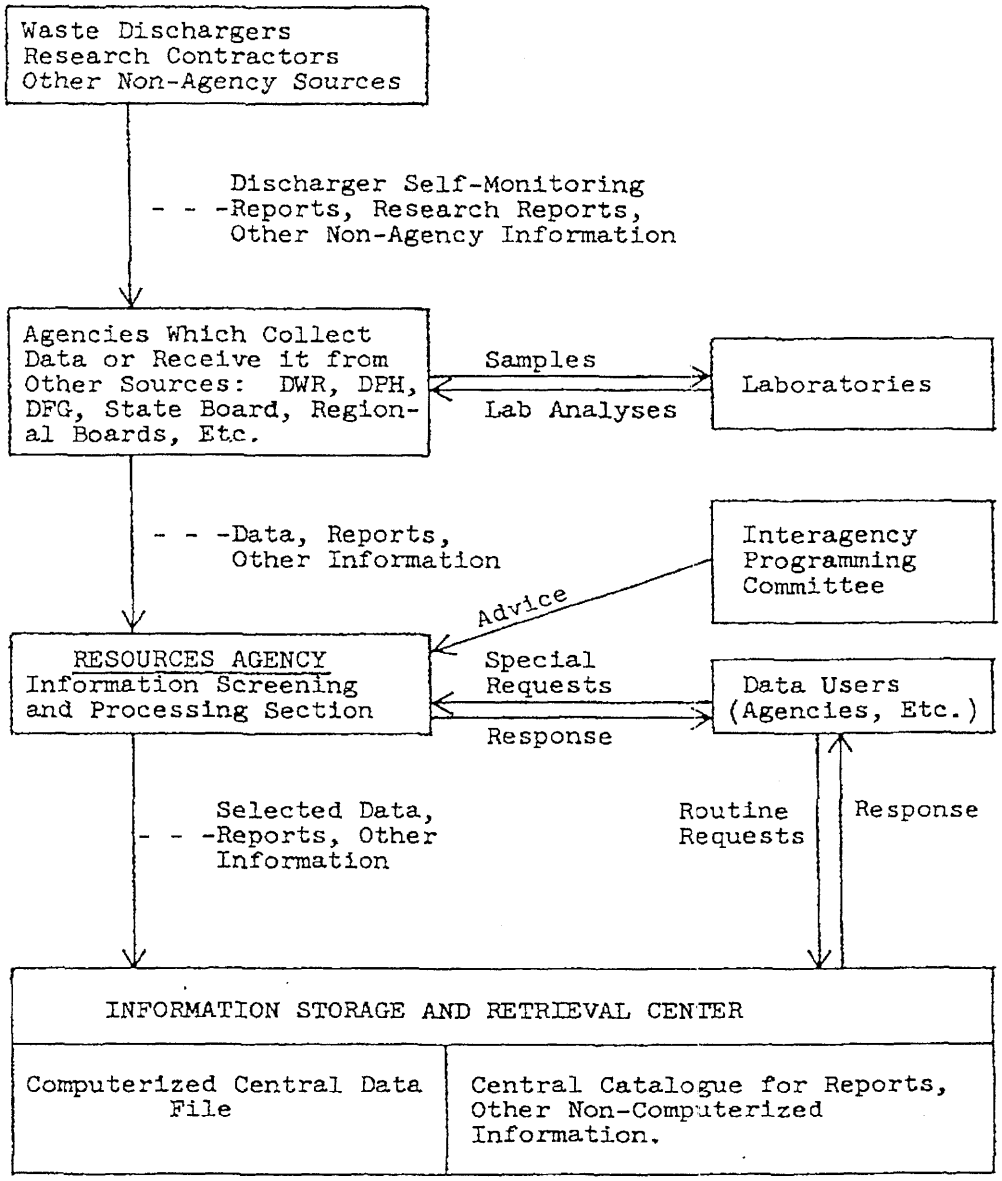
COORDINATED STORAGE AND RETRIEVAL
OF
WATER QUALITY INFORMATION*



* A part of a system for handling all water related data.

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A P P E N D I X D

MANPOWER REQUIREMENTS

UNIT EFFORT REQUIREMENTS FOR STATE BOARD PROGRAM ACTIVITIES

Program Activities	Estimated* Unit Effort Requirement (Man Weeks)	Estimated Annual Workload	Manpower Requirements (Man Weeks)	Professional Manpower Deficit		
				Need	Have	Deficit
ENVIRONMENTAL ANALYSES			294	7	3	4
Review Environmental Needs	**	**	84	2	-	2
Plan Formulation & Review	1.6	50	80	2	1	1
Policy Formulation & Review	1.3	97	130	3	2	1
COORDINATION	**		105	2.5	.5	2
Surveillance	0.2	210 separate water areas	42	1	.2	.8
Waste Discharge Review	1.0	21	21	.5	.1	.4
Data System	**	**	42	1	.2	.8
GRANT REVIEW	0.4	200 applications	84	2	1	1
Engineering Review	0.2		42	1	.5	.5
Processing	0.2		42	1	.5	.5
OPERATOR TRAINING			88	2	-	2
Development & Coordination	0.4		39	1	-	1
Supervision & Administration	0.025	2,000 operators	49	1	-	1

* Based on 42 man week year
** Cannot be numerically identified

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Program Activities	Estimated* Unit Effort Requirement (Man Weeks)	Estimated Annual Workload	Manpower Requirements (Man Weeks)	Professional Manpower Deficit		
				Need	Have	Deficit
RESEARCH	5.2	20 projects	105	2.5	.5	2
Evaluation	1.1	-	21	.5	.1	.4
Development	1.1	-	21	.5	.1	.4
Coordination & Management	3.0	-	63	1.5	.3	1.2
INVESTIGATIONS	1.3	100	126	3	1	2
Need Analyses	0.3		22	.6	.2	.40
Development	0.5		52	1.2	.4	.8
Liaison & Coordination	0.5		52	1.2	.4	.8
PROGRAM RECORDS CENTER	**			3	1	2
Answer Request for Information		3,600	42	1	.3	.7
Research & Preparation of Material for Public Presentation	0.6	75	42	1	.3	.7
State & Regional Board Publications	1.7	25	42	1	.4	.6
REGIONAL BOARD & ADVISORY COMMITTEE SUPPORT				4	2	2
Review by State Board of Regional Board Actions	1.26	100	126	3	1.5	1.5
Preparation - Agendas, Committee Agendas & Technical Support	0.42	100 items	42	1	.5	.5

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Program Activity	Estimated* Unit Effort Requirement (Man Weeks)	Estimated Annual Workload	Manpower Requirements (Man Weeks)	Professional Manpower Deficit		
				Need	Have	Deficit
CLERICAL SUPPORT	-	-	-	10	5	5
Support of Above 26 Professional Positions	-	-	-	10	5	5
TOTAL				36	14	22

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MANPOWER REQUIREMENTS FOR REGIONAL BOARDS

The nine regional boards presently have a deficit of 77 management, professional, and technical personnel; 3 administrative assistants; and 19 clerical personnel. The total deficit is 99 persons as compared to a present staff of 82.

The variance in the nature of work performed by the staff of different regional boards is such that uniform standards of staffing are impossible to prescribe. Water quality problems vary from region to region and so, therefore, must the water quality control program emphasis.

Some examples:

1. The San Francisco Bay Region is characterized by highly concentrated industrial and municipal developments which contribute liquid wastes to a common disposal area - the Bay. The overlapping effects of these discharges, and the complexity of the materials in the discharges, dictate frequent sampling and analysis of the entire Bay and all major discharges. Self-monitoring programs are numerous and complicated. Further, the quality of water in the Bay is affected by the amount and quality of inflow from the Central Valley Region, necessitating a direct interest in water project development inland.
2. The Santa Ana River Basin Regional Board is concerned primarily with groundwater problems - quantity problems as well as quality problems. Salt balances and sea water intrusion are important. Imported water

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can help or hinder, depending on its quality and where it is used. The effects of individual discharges may not be felt for months or years after discharge occurs, so long-term monitoring is necessary.

In an effort to lend some degree of standardization to regional staffs, the types of program activities carried out in all regions were listed in seven basic categories, some with subcategories. Each regional executive officer was then requested to indicate his "unit effort" requirement (e.g., 0.5 man-days per discharge inspection) and his estimated annual workload for the next five years (e.g., 1,000 inspections per year). Workload estimates were based on the assumption that existing "backlogs" of work would be caught up in two years and that all water quality control plans would be completed in five years.

The following tables contain the results of the executive officers' estimates:

Table 1: Unit Effort Requirements for Regional Board Program Activities

The requirements are all expressed in man-weeks per unit of work for uniformity. The original data were obtained in man-hours, man-days, man-weeks, and man-months, depending on the magnitude of time required. For instance, the time required to analyze a self-monitoring report was given in man-hours originally because less than a half-day is generally necessary.

Table 2: Estimated Annual Workload for Regional Board Program Activities

Data show the number of units of work in each category of activity. For instance, Region 5 estimates 4,500 discharge inspections per year.

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Table 3: Manpower Requirements for Regional Board Program Activities

This table shows the number of people required by each region for each activity. The numbers represent the product of Table 1 and Table 2, divided by 43 man-weeks per year, which is estimated to be the amount of time available per employee per year for program work. Following is a breakdown of employee time:

Program activities	43 weeks/year
Keeping current on technology	2
Sick Leave	2
Annual Leave (vacation)	3
Holidays	2
Total	52 weeks/year

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Table 1

UNIT REPORT REQUIREMENTS FOR REGIONAL BOARD PROGRAM ACTIVITIES

Program Activities	Regions									Median	Man Weeks Per:
	1	2	3	4	5	6	7	8	9		
1. Development of Plans	32	40	23	48	24	24	24	24	24	24	Plan
Policies	4	7.6	12	8	8	8	8	4.8	3	8	Policy
2. Establishment and Review of: a. Discharge requirements	2	.68	2	.8	.5	.5	.6	.7	1.96	.7	Discharge
b. Self-monitoring programs	2	.78	.26	.2	.2	.2	.2	.2	.2	.2	Program
3. Surveillance: a. Discharge Inspections	.26	.3	.17	.06	.1	.1	.14	.1	.07	.5	Inspection
b. Receiving water surveys	4	7.2	2	1	4	4	2	.4	1	2	Survey
Analysis of Data From: c. Self-monitoring reports	.125	.0125	.045	.0625	.025	.05	.05	.0175	.0075	.045	Report
4. Enforcement	3.5	0.9	0.7	1	2	2	2	2	3.2	2	Case
5. Review of Requests for Financial Assistance	1	.86	.46	.4	.4	.4	.4	.4	.1	.4	Request
6. Research & Special Investigations	48	54	48	64	48	8	8	18	13	48	Year
7. Miscellaneous a. Participation in regional or basin planning programs	4	15.6	1.52	2	8	24	8	8	6.4	8	Program
b. Water well stds.	-	8.8	5	22	12	12	8	12	8.4	8.8	Area
c. Wastewater reclam.	-	.56	.5	1.5	.5	.5	.4	.2	.76	.5	Discharge
d. Public information	10	8.8	14.8	32	16	4	4	4.8	14	10	Year
e. Treatment plant operator training	4	2.4	5	2	48	8	8	4.8	4	5	Year

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Table 2

ESTIMATED ANNUAL WORKLOAD FOR REGIONAL BOARD PROGRAM ACTIVITIES

Program Activities	Regions									Total	
	1	2	3	4	5	6	7	8	9		
1. Development of Plans and Policies	2	5	3	3	8	2	2	3	2	40	Plans/yr.
	2	7	2	2	8	1	3	1	2	28	Policies/yr.
2. Establishment and Review of:											
a. Discharge requirements	10	450	35	250	250	20	57	75	27	1174	Discharges/yr.
b. Self-monitoring programs	2	395	35	200	150	40	200	30	50	1102	Programs/yr.
3. Surveillance:											
a. Discharge inspections	200	372	240	2200	4500	400	760	400	700	9772	Inspections/yr.
b. Receiving water surveys	6	12	12	25	50	6	10	20	45	186	Surveys/yr.
Analysis of Data From:											
c. Self-monitoring reports	120	4000	200	1000	1800	100	880	530	1200	9830	Reports/yr.
4. Enforcement	2	72	20	90	30	5	7	9	6	241	Cases/yr.
5. Review of Requests for Financial Assistance	8	50	15	12	60	10	10	20	20	205	Requests/yr.
6. Research and Special Investigations	48	54	48	64	48	8	8	18	13	309	Man-weeks/yr.
7. Miscellaneous											
a. Participation in regional or basin planning programs	2	4	6	12	6	2	2	1	4	39	Programs/yr.
b. Water well standards	0	5	1	1	2	1	1	0.5	2	13.5	Areas/yr.
c. Wastewater reclamation	0	4	10	6	90	4	17	10	40	181	Discharges/yr.
d. Public information	10	8.8	14.8	32	16	4	4	4.8	13.5	107.9	Man-weeks/yr.
e Treatment plant operator training	4	2.4	5	2	48	8	8	4.8	4	86.2	Man-weeks/yr.

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Table 3

MANPOWER REQUIREMENTS FOR REGIONAL BOARD PROGRAM ACTIVITIES

Program Activities	Regions									Total
	1	2	3	4	5	6	7	8	9	
1. Development of Plans And Policies	1.49	4.65	1.60	3.35	10.00	1.12	1.12	1.67	1.12	26.12
	.19	1.24	.56	.37	1.49	.19	.56	.11	.14	4.85
2. Establishment and Review of:										
a. Discharge requirements	.47	7.12	1.63	4.65	2.91	.23	.80	1.22	1.23	20.26
b. Self-monitoring programs	.09	7.17	.21	.93	.70	.19	.93	.14	.23	10.59
3. Surveillance:										
a. Discharge inspections	1.21	2.60	.95	3.07	10.47	.93	2.48	.93	1.14	23.78
b. Receiving water surveys	.56	2.01	.56	.58	4.65	.56	.47	.19	1.05	10.63
Analysis of Data From:										
c. Self-monitoring reports	.35	1.16	.21	1.45	1.05	.12	1.02	.22	.21	5.79
4. Enforcement	.16	1.50	.33	2.10	1.40	.23	.33	.42	.45	6.92
5. Review of Requests for Financial Assistance	.19	1.00	.16	.11	.56	.09	.09	.19	.05	2.44
6. Research and Special Investigations	1.12	1.26	1.12	1.49	1.12	.19	.19	.42	.30	7.21
7. Miscellaneous										
a. Participation in regional or basin planning programs	.19	1.45	.21	.56	1.12	1.12	.37	.19	.60	5.81
b. Water well standards	0	1.02	.12	.51	.56	.28	.19	.14	.39	3.21
c. Wastewater reclamation	0	.05	.12	.21	1.05	.05	.16	.05	.71	2.40
d. Public information	.23	.20	.34	.74	.37	.09	.09	.11	.31	2.48
e. Treatment plant operator training	.09	.06	.12	.05	1.12	.19	.19	.11	.09	2.02
Totals	6.34	32.49	8.24	20.17	38.57	5.58	8.99	6.11	8.02	134.51

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APPENDIX E

ACKNOWLEDGMENTS

ACKNOWLEDGMENTS

Grateful appreciation is expressed to the many statewide organizations and state, regional, or other agencies whose representatives were members of or participated on subcommittees, and to those representatives themselves and other individuals who participated in the many subcommittee or special panel meetings whose deliberations lead to the formulation of Study Panel recommendations:

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Pacific Inter-Club Yacht Association	Douglas Boswell
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Sacramento Boating Industry Association	Lachlan M. Richards
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Our sincere thanks to you all, and to the many unnamed organizations and individuals who directly or indirectly made constructive contributions to the Study Project.

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ATTACHMENT 2

STATE OF CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD

ORDER WQ 2001- 15

In the Matter of the Petitions of

BUILDING INDUSTRY ASSOCIATION OF SAN DIEGO COUNTY
AND
WESTERN STATES PETROLEUM ASSOCIATION

For Review Of Waste Discharge Requirements Order No. 2001-01
for Urban Runoff from San Diego County
[NPDES No. CAS0108758]
Issued by the
California Water Quality Control Board,
San Diego Region

SWRCB/OCC FILES A-1362, A-1362(a)

BY THE BOARD:

On February 21, 2001, the San Diego Regional Water Quality Control Board (Regional Water Board) issued a revised national pollutant discharge elimination system (NPDES) permit in Order No. 2001-01 (permit) to the County of San Diego (County), the 18 incorporated cities within the County, and the San Diego Unified Port District. The permit covers storm water discharges from municipal separate storm sewer systems (MS4) throughout the County. The permit is the second MS4 permit issued for the County, although the first permit was issued more than ten years earlier.[1]

[1] NPDES permits generally expire after five years, but can be extended administratively where the Regional Water Board is unable to issue a new permit prior to the expiration date. As the record in this matter amply demonstrates, the Regional Water Board engaged in an extensive process of issuing draft permits, accepting comments, and holding workshops and hearings since at least 1995.

The permit includes various programmatic and planning requirements for the permittees, including construction and development controls, controls on municipal activities, controls on runoff from industrial, commercial, and residential sources, and public education. The types of controls and requirements included in the permit are similar to those in other MS4 permits, but also reflect the expansion of the storm water program since the first MS4 permit was adopted for San Diego County 11 years ago.[2]

On March 23, 2001, the State Water Resources Control Board (State Water Board or Board) received petitions for review of the permit from the Building Industry Association of San Diego County (BIA) and from the Western States Petroleum Association (WSPA).[3] The petitions are legally and factually related, and have therefore been consolidated for purposes of review.[4] None of the municipal dischargers subject to the permit filed a petition, nor did they file responses to the petitions.

I. BACKGROUND

MS4 permits are adopted pursuant to Clean Water Act section 402(p). This federal law sets forth specific requirements for permits for discharges from municipal storm sewers. One of the requirements is that permits "shall require controls to reduce the discharge of

[2] For a discussion of the evolution of the storm water program, consistent with guidance from the United States Environmental Protection Agency (U.S. EPA), see Board Order WQ 2000-11.

[3] On March 23, the State Water Board also received brief letters from the Ramona Chamber of Commerce, the North San Diego County Association of Realtors, the San Diego County Apartment Association, the National Association of Industrial and Office Properties, and the California Building Industry Association. All of these letters state that they are "joining in" the petition filed by BIA. None of the letters contain any of the required information for petitions, which is listed at Cal. Code of Regs., tit. 23, section 2050. These letters will be treated as comments on the BIA petition. To the extent the authors intended the letters be considered petitions, they are dismissed.

[4] Cal. Code of Regs., tit. 23, section 2054.

pollutants to the maximum extent practicable [MEP]." States establish appropriate requirements for the control of pollutants in the permits.

This Board very recently reviewed the need for controls on urban runoff in MS4 permits, the emphasis on best management practices (BMPs) in lieu of numeric effluent limitations, and the expectation that the level of effort to control urban runoff will increase over time.[5] We pointed out that urban runoff is a significant contributor of impairment to waters throughout the state, and that additional controls are needed. Specifically, in Board Order WQ 2000-11 (hereinafter, LA SUSMP order), we concluded that the Los Angeles Regional Water Board acted appropriately in determining that numeric standards for the design of BMPs to control runoff from new construction and redevelopment constituted controls to the MEP.[6]

The San Diego permit incorporates numeric design standards for runoff from new construction and redevelopment similar to those considered in the LA SUSMP order.[7] In addition, the permit addresses programmatic requirements in other areas. The LA SUSMP order was a precedential decision,[8] and we will not reiterate our findings and conclusions from that decision.[9]

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[5] Board Order WQ 2000-11.

[6] As explained in that Order, numeric design standards are not the same as numeric effluent limitations. While BIA contends that the permit under review includes numeric effluent limitations, it does not. A numeric design standard only tells the dischargers how much runoff must be treated or infiltrated; it does not establish numeric effluent limitations proscribing the quality of effluent that can be discharged following infiltration or treatment.

[7] The San Diego permit also includes provisions that are different from those approved in the LA SUSMP Order, but which were not the subject of either petition. Such provisions include the inclusion of non-discretionary projects. We do not make any ruling in this Order on matters that were not addressed in either petition.

[8] Government Code section 11425.60; State Board Order WR 96-1 (Lagunitas Creek), at footnote 11.

[9] BIA restates some of the issues this Board considered in the LA SUSMP order. For instance, BIA contends that it is inappropriate for the permit to regulate erosion control. While this argument was not specifically addressed in our prior Order, it is obvious that the most serious concern with runoff from construction is the potential for increased erosion. It is absurd to contend that the permit should have ignored this impact from urban runoff.

The petitioners make numerous contentions, mostly concerning requirements that they claim the dischargers will not be able to, or should not be required to, comply with. We note that none of the dischargers has joined in these contentions. We further note that BIA raises contentions that were already addressed in the LA SUSMP order. In this Order, we have attempted to glean from the petition issues that are not already fully addressed in Board Order Board Order WQ 2000-11, and which may have some impact on BIA and its members. WSPA restated the contentions it made in the petition it filed challenging the LA SUSMP order. We will not address those contentions again.[10] But we will address whether the Regional Water Board followed the precedent established there as it relates to retail gasoline outlets.[11]

[10] On November 8, 2001, following the October 31 workshop meeting that was held to discuss the draft order, BIA submitted a "supplemental brief" that includes many new contentions raised for the first time. (Interested persons who were not petitioners filed comments on the draft order asking the State Water Board to address some of these.) The State Water Board will not address these contentions, as they were not timely raised. (Wat. Code § 13320; Cal. Code of Regs., tit. 23, § 2050(a).) Specific contentions that are not properly subject to review under Water Code section 13320 are objections to findings 16, 17, and 38 of the permit, the contention that permit provisions constitute illegal unfunded mandates, challenges to the permit's inspection and enforcement provisions, objections to permit provisions regarding construction sites, the contention that post-construction requirements should be limited to "discretionary" approvals, the challenge to the provisions regarding local government compliance with the California Environmental Quality Act, and contentions regarding the term "discharge" in the permit. BIA did not meet the legal requirements for seeking review of these portions of the permit.

[11] On November 8, 2001, the State Water Board received eight boxes of documents from BIA, along with a "Request for Entry of Documents into the Administrative Record." BIA failed to comply with Cal. Code of Regs., tit. 23, section 2066(b), which requires such requests be made "prior to or during the workshop meeting." The workshop meeting was held on October 31, 2001. The request will therefore not be considered. BIA also objected in this submittal that the Regional Water Board did not include these documents in its record. The Regional Water Board's record was created at the time the permit was adopted, and was submitted to the State Water Board on June 11, 2001. BIA's objection is not timely.

II. CONTENTIONS AND FINDINGS[12]

Contention: BIA contends that the discharge prohibitions contained in the permit are "absolute" and "inflexible," are not consistent with the standard of "maximum extent practicable" (MEP), and financially cannot be met.

Finding: The gist of BIA's contention concerns Discharge Prohibition A.2, concerning exceedance of water quality objectives for receiving waters: "Discharges from MS4s which cause or contribute to exceedances of receiving water quality objectives for surface water or groundwater are prohibited." BIA generally contends that this prohibition amounts to an inflexible "zero contribution" requirement.

BIA advances numerous arguments regarding the alleged inability of the dischargers to comply with this prohibition and the impropriety of requiring compliance with water quality standards in municipal storm water permits. These arguments mirror arguments made in earlier petitions that required compliance with water quality objectives by municipal storm water permittees. (See, e.g., Board Orders WQ 91-03, WQ 98-01, and WQ 99-05.) This Board has already considered and upheld the requirement that municipal storm water discharges must not cause or contribute to exceedances of water quality objectives in the receiving water. We adopted an iterative procedure for complying with this requirement, wherein municipalities must report instances where they cause or contribute to exceedances, and then must review and improve BMPs so as to protect the receiving waters. The language in the permit in Receiving

[12] This Order does not address all of the issues raised by the petitioners. The Board finds that the issues that are not addressed are insubstantial and not appropriate for State Water Board review. (See *People v. Barry* (1987) 194 Cal.App.3d 158 [239 Cal.Rptr. 349]; Cal. Code Regs., tit. 23, § 2052.) We make no determination as to whether we will address the same or similar issues when raised in future petitions.

Water Limitation C.1 and 2 is consistent with the language required in Board Order WQ 99-05, our most recent direction on this issue.[13]

While the issue of the propriety of requiring compliance with water quality objectives has been addressed before in several orders, BIA does raise one new issue that was not addressed previously. In 1999, the Ninth Circuit Court of Appeals issued an opinion addressing whether municipal storm water permits must require "strict compliance" with water quality standards.[14] (*Defenders of Wildlife v. Browner* (9th Cir. 1999) 191 F.3d 1159.) The court in *Browner* held that the Clean Water Act provisions regarding storm water permits do not require that municipal storm-sewer discharge permits ensure strict compliance with water quality standards, unlike other permits.[15] The court determined that: "Instead, [the provision for municipal storm water permits] *replaces* the requirements of [section 301] with the requirement that municipal storm-sewer dischargers 'reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator . . . determines appropriate for the control of such pollutants'." (191 F.3d at 1165.) The court further held that the Clean Water Act does grant the permitting agency discretion to determine what pollution controls are appropriate for municipal storm water discharges. (*Id.* at 1166.) Specifically, the court stated

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[13] In addition to Discharge Prohibition A.2, quoted above, the permit includes Receiving Water Limitation C.1, with almost identical language: "Discharges from MS4s that cause or contribute to the violation of water quality standards (designated beneficial uses and water quality objectives developed to protect beneficial uses) are prohibited." Receiving Water Limitation C.2 sets forth the iterative process for compliance with C.1, as required by Board Order WQ 99-05.

[14] "Water quality objectives" generally refers to criteria adopted by the state, while "water quality standards" generally refers to criteria adopted or approved for the state by the U.S. EPA. Those terms are used interchangeably for purposes of this Order.

[15] Clean Water Act § 301(b)(1)(C) requires that most NPDES permits require strict compliance with quality standards.

that U.S. EPA had the authority either to require "strict compliance" with water quality standards through the imposition of numeric effluent limitations, or to employ an iterative approach toward compliance with water quality standards, by requiring improved BMPs over time. (*Id.*) The court in *Browner* upheld the EPA permit language, which included an iterative, BMP-based approach comparable to the language endorsed by this Board in Order WQ 99-05.

In reviewing the language in this permit, and that in Board Order WQ 99-05, we point out that our language, similar to U.S. EPA's permit language discussed in the *Browner* case, does not require strict compliance with water quality standards. Our language requires that storm water management plans be designed to achieve compliance with water quality standards. Compliance is to be achieved over time, through an iterative approach requiring improved BMPs. As pointed out by the *Browner* court, there is nothing inconsistent between this approach and the determination that the Clean Water Act does not mandate strict compliance with water quality standards. Instead, the iterative approach is consistent with U.S. EPA's general approach to storm water regulation, which relies on BMPs instead of numeric effluent limitations.

It is true that the holding in *Browner* allows the issuance of municipal storm water permits that limit their provisions to BMPs that control pollutants to the maximum extent practicable (MEP), and which do not require compliance with water quality standards. For the reasons discussed below, we decline to adopt that approach. The evidence in the record before us is consistent with records in previous municipal permits we have considered, and with the data we have in our records, including data supporting our list prepared pursuant to Clean Water Act section 303(d). Urban runoff is causing and contributing to impacts on receiving waters throughout the state and impairing their beneficial uses. In order to protect beneficial uses and to achieve compliance with water quality objectives in our streams, rivers, lakes, and the ocean, we

must look to controls on urban runoff. It is not enough simply to apply the technology-based standards of controlling discharges of pollutants to the MEP; where urban runoff is causing or contributing to exceedances of water quality standards, it is appropriate to require improvements to BMPs that address those exceedances.

While we will continue to address water quality standards in municipal storm water permits, we also continue to believe that the iterative approach, which focuses on timely improvement of BMPs, is appropriate. We will generally not require "strict compliance" with water quality standards through numeric effluent limitations and we will continue to follow an iterative approach, which seeks compliance over time.[16] The iterative approach is protective of water quality, but at the same time considers the difficulties of achieving full compliance through BMPs that must be enforced throughout large and medium municipal storm sewer systems.[17]

We have reviewed the language in the permit, and compared it to the model language in Board Order WQ 99-05. The language in the Receiving Water Limitations is virtually identical to the language in Board Order WQ 99-05. It sets a limitation on discharges that cause or contribute to violation of water quality standards, and then it establishes an iterative approach to complying with the limitation. We are concerned, however, with the language in Discharge Prohibition A.2, which is challenged by BIA. This discharge prohibition is similar to the Receiving Water Limitation, prohibiting discharges that cause or contribute to exceedance of

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[16] Exceptions to this general rule are appropriate where site-specific conditions warrant. For example, the Basin Plan for the Lake Tahoe basin, which protects an outstanding national resource water, includes numeric effluent limitations for storm water discharges.

[17] While BIA argues that the permit requires "zero contribution" of pollutants in runoff, and "in effect" contains numeric effluent limitations, this is simply not true. The permit is clearly BMP-based, and there are no numeric effluent limitations. BIA also claims that the permit will require the construction of treatment plants for storm water similar to the publicly-owned treatment works for sanitary sewage. There is no basis for this contention; there is no requirement in the permit to treat all storm water. The emphasis is on BMPs.

water quality objectives. The difficulty with this language, however, is that it is not modified by the iterative process. To clarify that this prohibition also must be complied with through the iterative process, Receiving Water Limitation C.2 must state that it is also applicable to Discharge Prohibition A.2. The permit, in Discharge Prohibition A.5, also incorporates a list of Basin Plan prohibitions, one of which also prohibits discharges that are not in compliance with water quality objectives. (See, Attachment A, prohibition 5.) Language clarifying that the iterative approach applies to that prohibition is also necessary.[18]

BIA also objects to Discharge Prohibition A.3, which appears to require that treatment and control of discharges must always occur prior to entry into the MS4: "Discharges into and from MS4s containing pollutants which have not been reduced to the [MEP] are prohibited."[19] An NPDES permit is properly issued for "discharge of a pollutant" to waters of the United States.[20] (Clean Water Act § 402(a).) The Clean Water Act defines "discharge of a pollutant" as an "addition" of a pollutant to waters of the United States from a point source. (Clean Water Act section 502(12).) Section 402(p)(3)(B) authorizes the issuance of permits for discharges "from municipal storm sewers."

We find that the permit language is overly broad because it applies the MEP standard not only to discharges "from" MS4s, but also to discharges "into" MS4s. It is certainly

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[18] The iterative approach is not necessary for all Discharge Prohibitions. For example, a prohibition against pollution, contamination or nuisance should generally be complied with at all times. (See, Discharge Prohibition A.1.) Also, there may be discharge prohibitions for particularly sensitive water bodies, such as the prohibition in the Ocean Plan applicable to Areas of Special Biological Significance.

[19] Discharge Prohibition A.1 also refers to discharges into the MS4, but it only prohibits pollution, contamination, or nuisance that occurs "in waters of the state." Therefore, it is interpreted to apply only to discharges to receiving waters.

[20] Since NPDES permits are adopted as waste discharge requirements in California, they can more broadly protect "waters of the state," rather than being limited to "waters of the United States." In general, the inclusion of "waters (footnote continued)

true that in most instances it is more practical and effective to prevent and control pollution at its source. We also agree with the Regional Water Board's concern, stated in its response, that there may be instances where MS4s use "waters of the United States" as part of their sewer system, and that the Board is charged with protecting all such waters. Nonetheless, the specific language in this prohibition too broadly restricts all discharges "into" an MS4, and does not allow flexibility to use regional solutions, where they could be applied in a manner that fully protects receiving waters.[21] It is important to emphasize that dischargers into MS4s continue to be required to implement a full range of BMPs, including source control. In particular, dischargers subject to industrial and construction permits must comply with all conditions in those permits prior to discharging storm water into MS4s.

Contention: State law requires the adoption of wet weather water quality standards, and the permit improperly enforces water quality standards that were not specifically adopted for wet weather discharges.

Finding: This contention is clearly without merit. There is no provision in state or federal law that mandates adoption of separate water quality standards for wet weather conditions. In arguing that the permit violates state law, BIA states that because the permit applies the water quality objectives that were adopted in its Basin Plan, and those objectives were not specifically adopted for wet weather conditions only, the Regional Water Board violated

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of the state" allows the protection of groundwater, which is generally not considered to be "waters of the United States."

[21] There are other provisions in the permit that refer to restrictions "into" the MS4. (See, e.g., Legal Authority D.1.) Those provisions are appropriate because they do not apply the MEP standard to the permittees, but instead require the permittees to demand appropriate controls for discharges into their system. For example, the federal regulations require that MS4s have a program "to reduce pollutants in storm water runoff from construction sites to the municipal storm sewer system . . . ." (40 C.F.R. § 122.26(d)(2)(iv)(D).)

Water Code section 13241. These allegations appear to challenge water quality objectives that were adopted years ago. Such a challenge is clearly inappropriate as both untimely, and because Basin Plan provisions cannot be challenged through the water quality petition process. (See Wat. Code § 13320.) Moreover, there is nothing in section 13241 that supports the claim that Regional Water Boards must adopt separate wet weather water quality objectives. Instead, the Regional Water Board's response indicates that the water quality objectives were based on all water conditions in the area. There is nothing in the record to support the claim that the Regional Water Board did not in fact consider wet weather conditions when it adopted its Basin Plan. Finally, Water Code section 13263 mandates the Regional Water Board to implement its Basin Plan when adopting waste discharge requirements. The Regional Water Board acted properly in doing so.

BIA points to certain federal policy documents that authorize states to promulgate water quality standards specific to wet-weather conditions.[22] Each Regional Water Board considers revisions to its Basin Plan in a triennial review. That would be the appropriate forum for BIA to make these comments.

Contention: BIA contends that the permit improperly classifies urban runoff as "waste" within the meaning of the Water Code.

Finding: BIA challenges Finding 2, which states that urban runoff is a waste, as defined in the Water Code, and that it is a "discharge of pollutants from a point source" under the federal Clean Water Act. BIA contends that the legislative history of section 13050(d) supports

[22] These documents do not support the claim that U.S. EPA and the Clinton Administration indicated that the absence of such regulations "is a major problem that needs to be addressed," as claimed in BIA's Points and Authorities, at page 18.

its position that "waste" should be interpreted to exclude urban runoff. The Final Report of the Study Panel to the California State Water Resources Control Board (March, 1969) is the definitive document describing the legislative intent of the Porter-Cologne Water Quality Control Act. In discussing the definition of "waste," this document discusses its broad application to "current drainage, flow, or seepage into waters of the state of harmful concentrations" of materials, including eroded earth and garbage.

As we stated in Board Order WQ 95-2, the requirement to adopt permits for urban runoff is undisputed, and Regional Water Boards are not required to obtain any information on the impacts of runoff prior to issuing a permit. (At page 3.) It is also undisputed that urban runoff contains "waste" within the meaning of Water Code section 13050(d), and that the federal regulations define "discharge of a pollutant" to include "additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by man." (40 C.F.R. § 122.2.) But it is the waste or pollutants in the runoff that meet these definitions of "waste" and "pollutant," and not the runoff itself.[23] The finding does create some confusion, since there are discharge prohibitions that have been incorporated into the permit that broadly prohibit the discharge of "waste" in certain circumstances. (See Attachment A to the permit.) The finding will therefore be amended to state that urban runoff contains waste and pollutants.

Contention: BIA contends that the Regional Water Board violated California Environmental Quality Act (CEQA).

[23] The Regional Water Board is appropriately concerned not only with pollutants in runoff but also the volume of runoff, since the volume of runoff can affect the discharge of pollutants in the runoff. (See Board Order WQ 2000-11, at page 5.)

Finding: As we have stated in several prior orders, the provisions of CEQA requiring adoption of environmental documents do not apply to NPDES permits.[24] BIA contends that the exemption from CEQA contained in section 13389 applies only to the extent that the specific provisions of the permit are required by the federal Clean Water Act. This contention is easily rejected without addressing whether federal law mandated all of the permit provisions. The plain language of section 13389 broadly exempts the Regional Water Board from the requirements of CEQA to prepare environmental documents when adopting "any waste discharge requirement" pursuant to Chapter 5.5 (§§ 13370 et seq., which applies to NPDES permits).[25] BIA cites the decision in *Committee for a Progressive Gilroy v. State Water Resources Control Board* (1987) 192 Cal.App.3d 847. That case upheld the State Water Board's view that section 13389 applies only to NPDES permits, and not to waste discharge requirements that are adopted pursuant only to state law. The case did not concern an NPDES permit, and does not support BIA's argument.

Contention: WSPA contends that the Regional Water Board did not follow this Board's precedent for retail gasoline outlets (RGOs) established in the LA SUSMP order.

Finding: In the LA SUSMP order, this Board concluded that construction of RGOs is already heavily regulated and that owners may be limited in their ability to construct infiltration facilities. We also noted that, in light of the small size of many RGOs and the proximity to underground tanks, it might not always be feasible or safe to employ treatment methodologies. We directed the Los Angeles Regional Water Board to mandate that RGOs

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[24] Water Code section 13389; see, e.g., Board Order WQ 2000-11.

[25] The exemption does have an exception for permits for "new sources" as defined in the Clean Water Act, which is not applicable here.

employ the BMPs listed in a publication of the California Storm Water Quality Task Force. (*Best Management Practice Guide – Retail Gasoline Outlets* (March 1997).) We also concluded that RGOs should not be subject to the BMP design standards at this time. Instead, we recommended that the Regional Water Board undertake further consideration of a threshold relative to size of the RGO, number of fueling nozzles, or some other relevant factor. The LA SUSMP order did not preclude inclusion of RGOs in the SUSMP design standards, with proper justification, when the permit is reissued.

The permit adopted by the Regional Water Board did not comply with the directions we set forth in the LA SUSMP order for the regulation of RGOs. The permit contains no findings specific to the issues discussed in our prior order regarding RGOs, and includes no threshold for inclusion of RGOs in SUSMPs. Instead, the permit requires the dischargers to develop and implement SUSMPs within one year that include requirements for "Priority Development Project Categories," including "retail gasoline outlets." While other priority categories have thresholds for their inclusion in SUSMPs, the permit states: "Retail Gasoline Outlet is defined as any facility engaged in selling gasoline."[26]

The Regional Water Board responded that it did follow the directions in the LA SUSMP order. First, it points to findings that vehicles and pollutants they generate impact receiving water quality. But the only finding that even mentions RGOs is finding 4, which simply lists RGOs among the other priority development project categories as land uses that generate more pollutants. The Regional Water Board staff also did state some justifications for the inclusion of RGOs in two documents. The Draft Fact Sheet explains that RGOs contribute

[26] Permit at F.1.b(2)(a)(x).

pollutants to runoff, and opines that there are appropriate BMPs for RGOs. The staff also prepared another document after the public hearing, which was distributed to Board Members prior to their vote on the permit, and which includes similar justifications and references to studies.[27] The LA SUSMP order called for some type of threshold for inclusion of RGOs in SUSMPs. The permit does not do so. Also, justifications for permit provisions should be stated in the permit findings or the final fact sheet, and should be subject to public review and debate.[28] The discussion in the document submitted after the hearing did not meet these criteria. There was some justification in the "Draft Fact Sheet," but the fact sheet has not been finalized.[29] In light of our concerns over whether SUSMP sizing criteria should apply to RGOs, it was incumbent on the Regional Water Board to justify the inclusion of RGOs in the permit findings or in a final fact sheet, and to consider an appropriate threshold, addressing the concerns we stated. The Regional Water Board also responded that when the dischargers develop the SUSMPs, the dischargers might add specific BMPs and a threshold as directed in the LA SUSMP order. But the order specifically directed that any threshold, and the justification therefore, should be included in the permit. The Regional Water Board did not comply with these directions.

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[27] See "Comparison Between Tentative Order No. 2001-01 SUSMP Requirements and LARWQCB SUSMP Requirements (as Supported by SWRCB Order WQ 2000-11)."

[28] See 40 C.F.R. sections 124.6(e) and 124.8.

[29] U.S. EPA regulations require that there be a fact sheet accompanying the permit. (40 C.F.R. § 124.8.) The record contains only a draft fact sheet, which was never published or distributed in final form. The Regional Water Board should finalize the fact sheet, accounting for any revisions made in the final permit, and publish it on its web site as a final document.

III. CONCLUSIONS

Based on the discussion above, the Board concludes that:

1. The Regional Water Board appropriately required compliance with water quality standards and included requirements to achieve reduction of pollutants to the maximum extent practicable. The permit must be clarified so that the reference to the iterative process for achieving compliance applies not only to the receiving water limitation, but also to the discharge prohibitions that require compliance with water quality standards. The permit should also be revised so that it requires that MEP be achieved for discharges "from" the municipal sewer system, and for discharges "to" waters of the United States, but not for discharges "into" the sewer system.

2. The Regional Water Board was not required to adopt wet-weather specific water quality objectives.

3. The Regional Water Board inappropriately defined urban runoff as "waste."

4. The Regional Water Board did not violate the California Environmental Quality Act.

5. The permit will be revised to delete retail gasoline outlets from the Priority Development Project Categories for Standard Urban Storm Water Mitigation Plans. The Regional Water Board may consider adding retail gasoline outlets, upon inclusion of appropriate findings and a threshold describing which outlets are included in the requirements.

IV. ORDER

IT IS HEREBY ORDERED that the Waste Discharge Requirements for Discharges of Urban Runoff from the Municipal Separate Storm Sewer Systems in San Diego County (Order No. 2001-01) are revised as follows:

1. Part A.3: The words "into and" are deleted.

2. Part C.2: Throughout the first paragraph, the words ", Part A.2, and Part A.5 as it applies to Prohibition 5 in Attachment A" shall be inserted following "Part C.1."

3. Finding 2: Revise the finding to read: **URBAN RUNOFF CONTAINS "WASTE" AND "POLLUTANTS"**: Urban runoff contains waste, as defined in the California Water Code, and pollutants, as defined in the federal Clean Water Act, and adversely affects the quality of the waters of the State.

4. Part F.1.b(2)(a): Delete section "x."

In all other respects the petitions are dismissed.

CERTIFICATION

The undersigned, Clerk to the Board, does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the State Water Resources Control Board held on November 15, 2001.

AYE: Arthur G. Baggett, Jr.
Peter S. Silva
Richard Katz

NO: None

ABSENT: None

ABSTAIN: None

Maureen Marché
Clerk to the Board

ATTACHMENT 3

Winston H. Hickox
Secretary for Environmental Protection

State Water Resources Control Board

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Gray Davis
Governor

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see our website at www.swrcb.ca.gov.

TO: Central Coast RWQCB Members

FROM: Jennifer S. Soloway
Senior Staff Counsel
OFFICE OF CHIEF COUNSEL

DATE: June 11, 2003

SUBJECT: LEGAL ANALYSIS OF CLEAN WATER ACT SECTION 316(b); HEARING ON NPDES PERMIT FOR DIABLO CANYON POWER PLANT, PACIFIC GAS & ELECTRIC COMPANY (PG&E)

I am submitting this memorandum to the Board in my role as the Board's legal advisor. The purpose of this memorandum is to provide guidance to the Board on applicable law. This is not testimony.

SUMMARY OF CONCLUSIONS

- This memo only addresses legal issues pertaining to application of Clean Water Act section 316(b).
- Because of sketchy legal authority interpreting section 316(b), the Board must exercise its best professional judgment to reach a reasonable conclusion based on site-specific conditions.
- There are four basic steps in a Best Technology Available analysis:
    1. whether the facility's cooling water intake structure may result in adverse environmental impact;
    2. if so, what alternative technologies involving location, design, construction, and capacity of the cooling water intake structure can minimize adverse environmental impact;
    3. whether alternate technologies are available to minimize the adverse environmental impacts; and

4. whether the costs of available technologies are wholly disproportionate to the environmental benefits conferred by such measures.

DETAILED ANALYSIS

The following is a detailed analysis of the legal issues that apply to this hearing. Because of the lack of regulations or comprehensive legal authority the appropriate standards must be pieced together from a variety of references.

ISSUES

Issue No. 1. What legal guidance is there to help the Board interpret Clean Water Act section 316(b)?

Issue No. 2. What standards should the Board apply when considering alternative technologies to minimize environmental adverse environmental effects?

Issue No. 3. What issues should the Board consider when considering whether a technology is available?

Issue No. 4. How should the Board apply the "wholly disproportionate cost" analysis when considering Best Technology Available?

CONCLUSIONS TO NUMBERED ISSUES

Conclusion to Issue No. 1

There are no EPA regulations that apply to the Diablo Canyon Power Plant. To ascertain the applicable standards for a BTA determination requires assembling a mosaic of EPA administrative decisions, opinions and guidance and court cases. Also, the Board should refer to recent EPA regulations applying section 316(b) to new facilities and accompanying commentary in the Federal Register to understand EPA's most current thoughts on section 316(b). However, the new regulations do not apply to Diablo Canyon Power Plant and the materials in the federal register are not binding. Finally, these resources do not cover all the issues that must be addressed in making a BTA determination. Ultimately the Board must exercise best professional judgment to reach a reasonable conclusion based on site-specific conditions.

Note that in April 2002, EPA issued draft regulations to implement 316(b) at existing facilities. When adopted, these regulations will apply to Diablo Canyon Power Plant. Review of these draft regulations and commentary in the federal register will assist the BTA determination. EPA is required by a Consent Decree to issue final regulations by February 2004. Renewal of the Plant's NPDES permit, scheduled for 2008, will be governed by those regulations.

Conclusion to Issue No. 2.

- Adverse environmental impacts occur whenever there will be entrainment or impingement damage as a result of the operation of a specific cooling water intake structure.

- Minimize does not mean to completely eliminate adverse impacts. New regulations define minimize to mean to reduce to the smallest amount, extent, or degree reasonably possible. EPA also views increases in fish and shellfish as an acceptable alternative to reduction in entrainment.

- Section 316(b) requires the location, design, construction, and capacity of a cooling water intake structures reflect the best technology available for minimizing adverse environmental impacts.

- Although closed-cycle cooling systems are not cooling water intake structures they can be required indirectly by limiting the capacity of the intake by restricting the volume of water flow.

Conclusion to Issue No. 3.

- The Board may find a technology is not available if implementing it at the site would violate federal, state, or local laws administered by other agencies.

- The Regional Board has a responsibility to avoid or require abatement of conditions of nuisance as defined in Water Code section 13050. (Wat. Code §§.13263, 13304.) The Board could reject a technology that would cause a condition of nuisance.

- The Board could find a technology to be unavailable because it is technologically infeasible.

- The Board could find a technology to be so experimental that it is not available.

- The New Plant Final Regulations find that cooling towers are BTA on a national basis and mandate flow and velocity limits based on performance of cooling towers. However, the regulations provide that a discharger can get an exemption from the cooling-tower-based limitations if based on site-specific evidence, there will be significant adverse impacts on air-quality, water resources, or local energy markets.

- There may be other reasons, not listed here, to find a technology is not available.

Conclusion to Issue No. 4.

For over 25 years EPA has applied the wholly disproportionate cost test to BTA determinations. A technology may not be considered BTA if the cost of a technology is wholly disproportionate to the environmental benefit to be gained. EPA has not applied this test in a consistent manner. The methods for determining benefit and costs vary from case to case.

ANALYSIS

Issue No. 1. What legal guidance is there to help the Board interpret Clean Water Act section 316(b)?

Discussion of Issue No. 1.

Clean Water Act section 316(b). (33 U.S.C. § 1326(b).) Section 316(b) states:

> "Any standard established pursuant to section 1311 of this title or section 1316 of this title and applicable to a point source shall require that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact."

The term best technology available as used in section 316(b) is usually referred to as BTA.

Clean Water Act Section 316(b) became law in 1973. In 1976, EPA adopted regulations interpreting section 316(b) but they were remanded by the Fourth Circuit Court of Appeals on procedural grounds. (*Appalachian Power Co., et al v. Train* (4th Cir. 1977) 566 F. 2d 451.) EPA did not act on the remand for nearly 25 years. In the meantime, EPA, California, and other states issuing NPDES permits have applied section 316(b) on a case-by-case basis.

After environmentalists filed suit to compel EPA to adopt 316(b) regulations, EPA signed a Consent Decree providing a time-schedule to adopt the regulations in three phases. In August 2000, EPA issued draft 316(b) regulations for new facilities. (65 Fed. Reg. 49060, "New Plant Proposed Regulations") and in December 2001, EPA issued final 316(b) regulations for new facilities. (66 Fed. Reg. 65256, "New Plant Final Regulations.")

The New Plant Final Regulations do not apply to Diablo Canyon Power Plant because the Plant does not fall within the definition of "new facility" in the regulations.

EPA issued phase two draft 316(b) regulations for existing power plants in April 2002. (67 Fed. Reg. 17122, "Existing Plant Draft Regulations.") When EPA adopts final regulations, these will govern the cooling water intake system at Diablo Canyon Power Plant. EPA is scheduled to adopt final regulations in February 2004.

Until applicable final regulations are adopted, the preamble to the Existing Plant Draft Regulations provides that permit issuers should not use the proposed regulations as a guidance for BTA determinations but,

> "Until the Agency promulgates final regulations based on today's proposal, Directors should continue to make section 316(b) determinations with respect to existing facilities, which may be more or less stringent than today's proposal on a case-by-case basis applying best professional judgment." (67 Fed. Reg. 17125, col. 1.)

Thus there are no regulations in place to direct the Board's BTA analysis. There are some legal opinions issued in the 1970's by the EPA Administrator and by the EPA General Counsel that interpret the law and provide some precedent and there is one federal court opinion on point. Otherwise, the Board must rely on non-binding guidance from EPA and their consultants. The preamble to the Existing Plant Draft Regulations states permitting authorities should use existing guidance and information to form their best professional judgment. "EPA's draft *Guidance for Evaluating the Adverse Impact of Cooling Water Intake Structures on the Aquatic Environment; Section 316(b)* (May 1, 1977) (1977 Draft Guidance) continues to be applicable for existing facilities pending EPA's issuance of final regulations on 316(b)." (67 Fed. Reg. 17125, col. 1.)

Because the 1977 Draft Guidance and other EPA legal opinions are about 25 years old, the preambles to the New Plant Final Regulations and Existing Plant Draft Regulations, found in the Federal Register, offer valuable insight into recent EPA interpretations of section 316(b). Also, to assist in preparation of the regulations, EPA contracted with Science Applications International Corporation (SAIC) to review the legislative, regulatory, and legal history of 316(b). SAIC's report provides a useful summary and organization of this history and so is one of the documents submitted into the Regional Board record with this memorandum. The report is entitled: *"Preliminary Regulatory Development Section 316(b) of the Clean Water Act, Background Paper Number 1: Legislative, Regulatory, and Legal History of Section 316(b) and Information on Federal and State Implementation of Cooling Water Intake Structure Technology Requirements"* (April 1994).

The bottom line is that ascertaining the applicable standards for a BTA determination at an existing power plant, requires assembling a mosaic of EPA administrative decisions, opinions and guidance, and court cases. Also, some reference should be made to the recent EPA regulations and proposed regulations and accompanying commentary in the Federal Register for guidance on EPA's most current thoughts on section 316(b). Finally, these resources do not cover all the issues that must be addressed in making a BTA determination. Ultimately the Board must exercise best professional judgment to reach a reasonable conclusion based on site-specific conditions.

Issue No. 2. What standards should the Board apply when considering alternative technologies to minimize adverse environmental effects?

Discussion Of Issue No. 2.

Section 316(b) requires that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impacts. So review of technology focuses on modification of the location design, construction, and capacity of the intake structure. Alternatives presented by staff will focus on these four options.

In the 1970's EPA was asked whether a closed-cycle cooling system (e.g., cooling towers) could be required in an NPDES Permit under section 316(b). EPA's General Counsel concluded that cooling towers were not intake structures and could not be mandated. However, the General Counsel concluded that capacity of a cooling water intake could be affected by limiting the volume of water it could take in because limiting flow volume reduced entrainment and impingement. The plant operator would likely choose to install cooling towers in order to comply with the flow limits. Thus cooling towers and other closed-cycle cooling technologies may be considered by the Board when reviewing alternative technologies. (EPA, Office of General Counsel, Opinion #41 (June 1, 1976) pp. 3-6.)

Section 316(b) requires the technology to "minimize adverse environmental impact." What does "adverse environmental impact" mean? What is the meaning of "minimize?"

The 1977 Draft Guidance states that: "Adverse environmental impacts occur whenever there will be entrainment or impingement damage as a result of the operation of a specific cooling water intake structure." (1977 Draft Guidance, p. 15.) EPA's recent final and proposed regulations do not contain a definition of "adverse environmental impacts." The preamble to the Existing Plant Draft Regulations directs the Board to rely on the 1977 Draft Guidance. (67 Fed. Reg.17125, col.1.) Responses to comments in the preamble to the New Plant Final Regulations indicate that EPA favors a definition similar to that in the 1977 Draft Guidance, which is "recurring and nontrivial impingement and entrainment." (66 Fed. Reg. 65292, cols.1 and 2.)

Minimizing adverse environmental impacts does not necessarily mean eliminating them. The 1977 Draft Guidance states: "Regulatory agencies should clearly recognize that some level of intake damage can be acceptable if that damage represents a minimization of environmental impact." (1977 Draft Guidance, p. 3.) The New Plant Final Regulations define "minimize" to mean "to reduce to the smallest amount, extent, or degree reasonably possible." (Emphasis added. 40 C.F.R. § 125.83.) This definition includes a "reasonableness" component. The preambles to both the New Plant Final Regulations and the Existing Plant Draft Regulations note that minimizing adverse effects does not mean complete elimination of adverse environmental effects (66 Fed. Reg. 65282, col. 3; 67 Fed. Reg. 17168, col. 2.).

EPA's interpretation of "minimize" is further clarified in the New Plant Final Regulations, which authorize use of alternatives to cooling towers. These regulations permit the use of restoration projects as an alternative to cooling towers if the discharger makes "a showing that the impacts to fish and shellfish, including important forage and predator species, within the watershed will be comparable to those which would result if you were to implement (cooling towers). This showing may include impacts other than impingement mortality and entrainment including measures that will result in increases in fish and shellfish, but it must demonstrate comparable performance for species that the Director ". . . identifies as species of concern." (40 C.F.R. § 125.84(d).) While this regulation does not apply to Diablo Canyon Power Plant, it indicates that EPA views increases in fish and shellfish as an acceptable alternative to reduction in entrainment.

As will be discussed below, the duty to minimize environmental effects is subject to some economic considerations. (EPA, Office of General Counsel, Opinion No. 63 (July 29, 1977), p. 8).

Issue No. 3. What issues should the Board consider when considering whether a technology is available?

Discussion of Issue No. 3.

A determination on whether a technology is "available" could be made on any number of grounds. The full universe of considerations cannot be predicted and set forth here. The 1977 Draft Guidance states:

> "It is accepted that closed cycle cooling is not necessarily the best technology available, despite the dramatic reduction in rates of water used. The appropriate technology is best determined after careful evaluation of the specific aspects at each site." (1977 Draft Guidance, p. 12.)

The Board need not find a technology is impossible to implement to find it is not available. There are numerous possible reasons for finding a technology is not available.

Some of the considerations are:

The Board may find a technology is not available if implementing it at the site would violate federal, state or local laws administered by other agencies. Water Code section 13002 specifies that no action by the Board limit the power of another government agency to provide additional regulation on activities that might degrade water quality. Additionally, absent some pre-emptive authority, the Regional Board's Orders do not override other legal authorities.

The Regional Board has a responsibility to avoid or require abatement of conditions of nuisance as defined in Water Code section 13050. (Wat. Code §§ 13263, 13304.) A condition of nuisance, within the meaning of the Water Code occurs "during, or as a result of, the treatment or disposal of wastes." Disposal of wastes refers to discharges of waste to surface water, ground water or land. A condition of nuisance

> "(1) Is injurious to health, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyments of life or property.
>
> (2) Affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal."

The nuisance is not limited to the discharge of waste itself although it must be associated with a discharge of waste. Common examples of nuisance covered by section 13050 are odors associated with waste water treatment plants or vectors associated with land disposal facilities. The crude oil soil plumes at Avila Beach we deemed a condition of nuisance because their presence prevented landowners from financing improvements on their land.

Because all cooling systems involve some discharge of waste, e.g., heated cooling water or blow-down, it is possible that operation of some alternatives might cause a condition of nuisance, in violation of the Water Code.

The Board could find a technology to be unavailable because it is technologically infeasible. In some cases, technical infeasibility may be unquestionable, a certain technology might just not be possible. For example, cooling towers using fresh water at Diablo Canyon are not technically feasible because there is not a sufficient supply of fresh water in the area. In other circumstances the Board may have to consider expert opinions and other evidence, which may conflict each other, when determining technical feasibility.

The Board could find a technology to be so experimental that it is not available. One example might be the aquatic filter barrier. This technology has been used with some success in a river on the east coast. There are no studies showing it would work or last in a marine environment. There might also be other site-specific problems that would have to be solved to make it possible to install an aquatic filter barrier. If a technology is experimental there are a number of reasons for finding it is not available. First, there might not be sufficient evidence to show that it would work and thereby minimize adverse impacts of entrainment. Secondly, as a government agency, the Board may not act arbitrarily and capriciously. It may not mandate an individual or company to spend large amounts of money based on speculation that the expenditure might achieve compliance with 316(b). The Board needs substantial evidence that a technology will minimize

adverse impacts of entrainment before it can find that technology to be BTA or part of a suite of technologies constituting BTA.

EPA in the New Plant Final Regulations articulated several non-water quality considerations that should be taken into account before requiring implementation of a technology. The New Plant Final Regulations find that cooling towers are BTA on a national basis and mandate flow and velocity limits based on performance of cooling towers. However, the regulations provide that a discharger can get an exemption from the cooling-tower-based limitations if based on site-specific evidence, there will be significant adverse impacts on air-quality, water resources or local energy markets. (40 C.F.R. § 125.85.) While these regulations are not binding on the Moss Landing permit proceeding, they indicate reasonable grounds for finding a technology is not the Best Technology Available.

Issue No. 4. How should the Board apply the "wholly disproportionate cost" analysis when considering Best Technology Available?

Discussion of Issue No. 4.

EPA interpretations of section 316(b) have consistently implemented a "wholly disproportionate" cost test as established in a 1977 Decision of the Administrator. (*Public Service Company of New Hampshire, et al. Seabrook Station, Units 1 and 2*, (June 10, 1977 Decision of the Administrator) Case No. 76-7, 1977 WL 22370 (E.P.A.) "*Seabrook I.*") In *Seabrook I*, the EPA Administrator ruled that EPA was not required to perform a cost/benefit analyses when applying section 316(b) on a case-by-case basis. However, the Administrator reasoned that cost must be considered otherwise "the effect would be to require cooling towers at every plant that could afford to install them, regardless of whether or not any significant degree of entrainment or entrapment was anticipated." (*Id.* pp. 6-7.) The Administrator ruled "I do not believe it is reasonable to interpret Section 316(b) as requiring use of technology whose cost is wholly disproportionate to the environmental benefit to be gained." The "wholly disproportionate" test was affirmed by the federal First Circuit Court of Appeals in *Seacoast Anti-Pollution League v. Costle* (1st Cir. 1979) 597 F.2d 306.)[1]

The First Circuit Court clarified the "wholly disproportionate test" was one of incremental cost. The Court stated: "[t]he Administrator decided that moving the intake further offshore might further minimize the entrainment of some plankton, but only slightly, and that the costs would be 'wholly disproportionate to any environmental benefit'." (*Id.* at 311.) The wholly

[1]. *Seabrook I* was appealed and remanded based on some procedural issues. (*Seacoast Anti-Pollution League* v. *Costle*, 572 F.2d 872.) On remand, the Administrator cured the procedural flaws and readopted all the findings in *Seabrook I*. (*Public Service Co. of New Hampshire, et al.* v. *Seabrook Station Units 1 and 2* (August 4, 1978 Decision of Administrator,) The Court of Appeal in *Seacoast Anti-Pollution League* v. *Costle*, 597 F.2d 306, cited in text above, affirmed the Administrator's decision on remand.

disproportionate test has been consistently used by EPA when applying section 316(b) since the *Seabrook I* decision. It does not appear in the 1977 Draft Guidance because that document was issued in May 1977 before the *Seabrook I* ruling.

While EPA has consistently used the wholly disproportionate test, there does not seem to be any consistency in how the test is used. In *Seabrook I*, the Administrator considered various construction/design alternatives and the alternative to locate the intake offshore. Concluding that these alternatives would provide minimal environmental benefit, the Administrator rejected them. The First Circuit Court of Appeals affirmed that the cost of the offshore outfall location was wholly disproportionate to this minor additional minimization of entrainment.

When EPA drafted the New Plant Final Rule, it determined that closed-cycle cooling was best technology available for all new facilities but provided for site-based alternatives justified by use of alternative technologies and restoration projects. (66 Fed. Reg. 65314, cols. 2-3; 65315 cols. 1-2.) Nonetheless, the New Plant Final Rule preserves a form of the wholly disproportionate test. It provides that the discharger demonstrates that facility-specific data shows the cost of compliance would be wholly disproportionate with costs considered by EPA when establishing a compliance requirement, a less costly alternative may be permitted. (40 C.F.R. § 125.85(a).)

To provide further information on a variety of decisions I have attached in Excerpts the Record portions of the SAIC Background paper, commissioned by EPA, to review the legislative, regulatory, and legal history of section 316(b). This Background paper is referenced in this memorandum above. They show a lack of consistency in application of the wholly disapportionate cost test.

Attachments

ATTACHMENT 4

Supreme Court of California.
VOICES OF THE WETLANDS, Petitioner,
v.
CALIFORNIA STATE WATER RESOURCES CONTROL BOARD; California Regional Water Quality Control Board, Central Coast Region; Duke Energy Moss Landing LLC; and Duke Energy North America, LLC, Respondents.
No. S160211.
March 8, 2010.

On Review from the Court of Appeal of the State of California, Sixth Appellate District, Case No. H028021, Appeal from the Superior Court of California, County of Monterey, Case No. M54889, The Honorable Robert A. O'Farrell, Judge

Answering Brief on the Merits of Respondent California Regional Water Quality Control Board, Central Coast

Edmund G. Brown Jr., Attorney General of California, Gordon Burns, Attorney Solicitor General, J. Matthew Rodriquez, Chief Assistant Attorney General, Mary Hackenbracht, Senior Assistant Attorney General, John Davidson, Supervising Deputy Attorney General, Anita E. Ruud, SBN 72483, Michael M. Edson, SBN 177858, Deputy Attorneys General, 455 Golden Gate Avenue, Suite 11000, San Francisco, CA 94102-7004, Telephone: (415) 703-5533, Fax: (415) 703-5480, Email: anita.ruud@doj.ca.gov, Attorneys For Respondent Reg. Water Quality, Control Bd., Central Coast.

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INTRODUCTION

Elkhorn Slough is indeed an ecological gem. (Administrative Record (AR) 300863.) Respondent Regional Water Quality Control Board, Central Coast Region (Regional Water Board), the California Energy Commission (Energy Commission), and Real Parties in Interest Duke Energy, et al. (Duke Energy)[FN1] worked together for two years before the agencies issued their respective permits allowing Duke Energy to modify the Moss Landing Power Plant (Plant), which is adjacent to the Slough, to assure that it remains so.

FN1. The Moss Landing Power Plant is now owned by Dynegy Moss Landing, LLC.

The Elkhorn Slough continues to support a robust population of birds, fish, marine mammals, and all the organisms that feed them, almost sixty years after the Plant began operating the cooling water system at issue in this case. (AR 300859-0920.) The local Elkhorn Slough Foundation studied the Slough and made recommendations on improving its productivity in the Elkhorn Slough Conservation Plan dated July 2, 1999. (AR 300859-0920.) The plan listed the most significant threats to the critical resources within the Slough, and notably absent is the Plant: (1) sedimentation and contamination of marshes, largely due to uncontrolled runoff from steep cultivated fields; (2) destruction and fragmentation of maritime chaparral habitat associated with residential development; (3) severe depletion of groundwater resources and accompanying seawater intrusion due to excessive pumping of wells for irrigation; and (4) loss of marsh habitat by tidal erosion and conversion as a consequences of human manipulation (primarily the opening of the slough at the entrance to Moss Landing Harbor in 1947). (AR 300863-0864; 300878.)

After nearly a decade of litigation, two lower courts have upheld the conclusions of the Regional Water Board and the Energy Commission that an upgrade to the Plant could go forward in compliance with state and federal law - without endangering the Slough. Our positions are that: (1) the courts below had no jurisdiction to review the determinations made by the agencies because Voices failed to comply with the Warren Alquist Act (Pub. Resources Code, § 25531), (2) in any case, the agencies complied with the law, and (3) the trial court did not err when it remanded the case to one of the agencies for further consideration of one factual issue.

ISSUES PRESENTED

1. Does the judicial review provision of the Warren-Alquist Act (Public Resources Code section 25531) deprive the superior court of jurisdiction to hear a petition challenging an NPDES permit when that permit has been approved and incorporated by the California Energy Commission as part of its certification process?

2. May a state agency with a delegated federal regulatory authority utilize a cost-benefit analysis and environmental mitigation measure to determine compliance with section 316(b) of the federal Clean Water Act, 33

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U.S.C. § 1326(b), when controlling federal precedent in *Riverkeeper v. Environmental Protection Agency (Riverkeeper I)*, 358 F.3d 174 (2d Cir. 2004), and *Riverkeeper v. Environmental Protection Agency (Riverkeeper II)*, 475 F.3d 83 (2d Cir. 2007), has expressly prohibited consideration of these factors?[FN2]

FN2. This issue is quoted directly from Voices's Petition for Review. However, as explained below, the issue has now been resolved against Voices in *Entergy Corp. v. Riverkeeper*, Inc. (2009) ___ U.S. ___, 129 S.Ct. 1498, and, in its opening brief, Voices improperly attempts to change the issue.

3. Does section 1094.5 of the California Code of Civil Procedure and this Court's long-standing administrative law precedent in such cases as *Western States Petroleum Assn. v. Superior Court* (1995) 9 Cal.4th 559, preclude a trial court from ordering interlocutory remand *after* a full trial on the merits without setting aside the unlawful agency decision and subsequently admitting new, post-decisional information into evidence to support the original unsupported action?

STATEMENT

I. The Moss Landing Power Plant

The Moss Landing Power Plant has been operating since 1952 at its current site. After purchasing the plant from Pacific Gas & Electric Co. in May 1999, Duke Energy began plans to modernize the plant facilities by replacing older units with high efficiency units and upgrading the remaining two units. The modification plans also included changes to the plant's cooling system, including the water intake system. One purpose of these modifications was to reduce the plant's effects on Elkhorn Slough by reducing the size and number of organisms trapped by the plant's water intake system, used for cooling. (AR 300049, 302882.)

II. Agency Review

Duke Energy filed an application for certification of planned modifications to the plant with the Energy Commission in May 1999. (AR 300002.) Shortly thereafter, the Regional Water Board's Executive Officer sent a letter to Duke Energy outlining the requirements for the issuance of a National Pollutant Discharge Elimination System (NPDES) permit for the planned modernization. (AR 304505-0509.) The letter emphasized that the Regional Water Board would work in parallel with the Energy Commission in developing the permits:

***4** The Regional Water Board's approval process will be carried out in parallel with the California Energy Commission's evaluation of Duke Energy's Application for Certification (AFC), consistent with the Memorandum of Understanding between the two agencies. . . .

Specifically, the Memorandum of Understanding between the staff of the California Energy Commission and the staffs of the State and Regional Water Quality Control Boards lays out an integrated approach concerning the issuance of the draft NPDES permit and the AFC approval process. It is our intent that the Regional Board's assessment of the Duke facility will be completed to allow for such an integrated review process as it relates to the preparation of the draft NPDES permit....

(AR 304505.)

A. The Technical Working Group's Study of Environmental Effects of the Proposed Upgrade

The Regional Water Board and California Energy Commission organized a Technical Working Group of marine scientists, Energy Commission staff members, Duke Energy staff members, and other state agency members to evaluate the environmental effects of the modernization plans, with an emphasis on the effects of the modified

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facility's proposed new cooling system on the aquatic environment. (AR 304506.) The members of the Technical Working Group possessed considerable expertise with the marine environment and the effects of power plants on that environment. (AR 305187, 305782-5795, 305796-5804, 305805-5808.) The potential effects of the proposed once-through cooling system included the capture or "impingement" of organisms at the water intake screens, the "entrainment" of tiny organisms that slip through the screen and are killed, and the release of heated water into Monterey Bay. (AR 303868.)

***5** To accomplish this task, the Technical Working Group worked for over a year conducting studies in the Elkhorn Slough, and collecting data from the Slough and surrounding waters to determine what kind of organisms were in the water and which species were likely to be affected by the proposed new generating units, including the proposed cooling system.

After reviewing the study results, the Technical Working Group concluded that the environmental effects from the outflow of warm water (thermal effects) and the effects of inflow impingement were not significant. (AR 306122.) The group concluded, however, that entrainment impacts could be significant under a worst-case scenario, that is, when the plant operated at maximum capacity. (AR 306122.)

B. The California Energy Commission Proceedings

Duke Energy filed its Application for Certification (AFC) with the Energy Commission in May 1999. (AR 300001-0858.) After reviewing the application, the Energy Commission requested supplemental information from Duke Energy with regard to several environmental issues, including biological resources and water quality. (AR 300291.) Duke Energy submitted these supplemental data to the Energy Commission on July 30, 1999. (AR 300921-1085.)

The Energy Commission held a public informational hearing and site visit on September 7, 1999, provided many opportunities for public written comment, including three days of public evidentiary hearings on June 7, 15 and 20, 2000, a committee conference on the specific issues relating to the cooling system on July 17, 2000, and three more days of hearings on a proposed decision on September 21, October 23, and October 25, 2000. (AR 303191, 301943, 301106-1107, 306808.)

***6** The Energy Commission entered Order 00-1025-24 approving Duke Energy's AFC with Conditions of Certification and authorizing construction. (AR 304096-4098.) Those conditions included compliance with all provisions of the NPDES permit. (AR 304341.) The Energy Commission: (1) determined that the cooling water intake system satisfied the best technology available (BTA) requirements of the Clean Water Act; and (2) through its Conditions of Certification, ordered Duke Energy to comply with the NPDES permit requirements.

The Energy Commission approved the certification during a publicly-noticed hearing on October 25, 2000. (AR 304107.) The certification order was issued on November 3, 2000. (AR 304096-0098.)

C. The Regional Water Board Proceedings

The Regional Water Board received Duke Energy's NPDES permit application in January 2000. (AR 301520-1521.) A draft NPDES permit was circulated on June 26, 2000. (AR 304766-4794.) The draft permit included several modifications to the proposed facility operations. These included elimination of discharge into the Elkhorn Slough, stringent water temperature limitations for the discharge into Monterey Bay, and further modifications to the existing intake structure, such as modifications to the screens at the intake so that larger or-

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ganisms would not be trapped, and moving the intake from the Slough to the harbor area outside the Slough. (AR 304766-4794.)

The Regional Water Board held a hearing on the proposed permit on September 15, 2000. (AR 305044-5072.) The Regional Water Board continued the matter and directed staff to provide more information regarding a proposed habitat enhancement plan and the feasibility of moving the intake structure offshore. (AR 305560.)

Accordingly, a Supplemental Staff Report was prepared for the October 27, 2000, hearing. (AR 305560-5563.) That Report concluded ***7** that moving the intake structure offshore presented its own environmental concerns, and thus was not a reasonable solution to reducing the environmental impacts of the proposed cooling system. The staff also recommended several changes to the habitat enhancement plan to strengthen it. (AR 305663-5665.) The Regional Water Board approved the NPDES permit at the October 27, 2000, after receiving further public input. (AR 305748.) In one of 58 findings, the Board specifically found that the costs of a closed-cycle cooling system - an alternative to the once-through cooling system - were wholly disproportionate to its environmental benefits. (AR 305756.)

D. The Trial Court Proceedings

On July 26, 2001, Voices filed a petition for writ of mandate in the superior court, challenging the NPDES permit issued by the Regional Water Board, but not the Energy Commission certification. The Water Boards[FN3] and Duke Energy demurred to the petition on the ground that the superior court lacked jurisdiction under the Warren-Alquist State Energy Resources Conservation and Development Act (Warren-Alquist), Public Resources Code section 25531, subdivision (c). The Energy Commission supported the demurrers as amicus curiae. The trial court overruled the demurrers.

FN3. The State Water Resources Control Board was dismissed from this action by the trial court.

After a hearing on the merits, the trial court ruled that that the Regional Water Board had not adequately studied the alternatives to the once-through cooling system, contrary to Clean Water Act section 316(b), 33 U.S.C. § 1326(b), and ordered the Board to reconsider one of the 58 findings - Finding 48.

***8** The trial court's order had two basic parts. The first ordered the Regional Water Board to conduct a thorough and comprehensive analysis of the available alternatives to the approved cooling water system applicable to Moss Landing Power Plant. (Remand Administrative Record (RAR)[FN4] 000007.) Because the plant was operational and the modifications were nearly complete at the time of the hearing,[FN5] the second part stated that "[n]othing in this decision compels an interruption in the ongoing plant operation during the Regional Board's review of this matter." *(Id.)* The trial court did not issue a final judgment or writ of mandate at that time, but retained continuing jurisdiction.

FN4. The Remand Administrative Record comprises "Moss Landing Power Plant Administrative Record", Volumes 1 through 13. The Bates stamped pages do not bear the "RAR" identification.

FN5. Voices never sought an injunction to stop the plant modifications.

Upon remand, the Regional Water Board held an evidentiary hearing on the issues specified in the superior court's order, with Voices as a full participant, and including public comment. (RAR 000894-1206.) At the hearing Voices objected to the remand hearing, objected to the introduction of new evidence, and requested the

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Board open up the entire permit for review, not just Finding 48 specified in the trial court's order. (RAR 001167-1168.)

The Board members discussed the various alternatives to once-through cooling, including the closed-cycle cooling alternatives, such as cooling towers with recirculating fresh or salt water, natural draft cooling towers, or air-cooled condensers. The Board found that closed-cycle cooling alternatives were not appropriate at the site, in part because each had significant adverse environmental impacts, including increased air pollution from the huge salt plumes on local farms located downwind of the plant from the salt water alternative, increased demand on an already over-***9** taxed freshwater supply, and reduced energy efficiency of the units. (RAR 001193-1197.) The Board also found that the much more expensive air-cooled condensers (also known as dry cooling) might provide environmental benefits, but the cost was not justified, considering the extensive data showing the robust marine habitat even after fifty years of plant operations. (RAR 001193-1201.) The Board concluded that these considerations supported its initial conclusion that the costs of the once-through cooling alternatives were wholly disproportionate to the benefits. *(Ibid.)* The NPDES permit was upheld by a four to one vote of the Board. (RAR 001203-1206.)

Voices petitioned for review of the Regional Water Board's decision to the State Water Resources Control Board. The State Water Board dismissed the petition on the grounds that it failed to "raise substantial issues that are appropriate for review." (SAR 000001.)[FN6]

FN6. SAR refers to the Supplemental Administrative Record submitted by Voices.

Upon stipulation amongst the parties, the Board's permit decision went back to the trial court in the original proceeding. After a hearing the trial court rejected Voices's arguments regarding the evidence to support the Board's BTA finding, rejected its arguments regarding the remand procedures and rejected its challenge to the habitat enhancement plan, which Voices had raised before the Regional Water Board at the remand hearing. The trial court entered judgment denying the petition on August 17, 2004.

Voices appealed, as did the Regional Water Board and Duke Energy. The Court of Appeal upheld the trial court's decision in its entirety, and Voices's petition for review by this Court followed.

***10 STANDARD OF REVIEW**

The issues presented to this Court require differing standards of review. The threshold jurisdictional question of whether Public Resources Code, section 25331, subdivision (b), deprived the trial court of jurisdiction of this case is a question of law, which is reviewed *de novo. (Yamaha Corp. of America v. State Bd. of Equalization* (1998) 19 Cal.4th 1, 7.)

If the superior court did have jurisdiction, then in its review of the NPDES permit, the trial court properly applied the standard of review in Water Code section 13330, which requires the court to exercise its independent judgment. "In exercising its independent judgment, a trial court must afford a strong presumption of correctness concerning the administrative findings, and the party challenging the administrative decision bears the burden of convincing the court that the administrative findings are contrary to the weight of the evidence." (*Fukuda v. City of Angels* (1999) 20 Cal.4th 805, 817; see also *City of Rancho Cucamonga v. Regional Water Quality Control Bd.* (2006) 135 Cal.App.4th 1377, 1484.) On appeal, the standard of review is the substantial evidence test. (*Fukuda v. City of Angels, supra*, 20 Cal.4th at p. 824.) Each reviewing court must afford the agency's decision a presumption of correctness. (*Id.* at pp. 817-819.) "The trial court's legal determinations receive a de novo review

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with consideration being given to the agency's interpretation of its own statutes and regulations." (*City of Rancho Cucamonga v. Regional Water Quality Control Bd., supra*, 135 Cal.App.4th at p. 1384, citing *Building Industry Assn. of San Diego County v. State Water Resources Control Bd.* (2004) 124 Cal.App.4th 866, 879 and *Nasha v. City of Los Angeles* (2004) 125 Cal.App.4th 470, 482.)

Finally, with regard to Voices's challenge to the authority of the trial court to order a remand hearing on a single factual finding that it found to have lacked sufficient evidence rather than issuing a writ declaring the ***11** permit void and remanding for recommencement of the entire proceedings before the Regional Water Board, this issue is a question of law which is reviewed *de novo*.

ARGUMENT

I. The Superior Court Lacked Jurisdiction over this Action

The Court need not reach the substantive issues, because Voices cannot overcome the predicate issue that the superior court lacked jurisdiction to consider Voices's writ petition.

Jurisdiction here depends on the interplay between the judicial review provisions of the Porter-Cologne Water Quality Control Act (Porter-Cologne) (Wat. Code, § 13300 et seq.) and the Warren-Alquist Act (Pub. Resources Code, § 25000 et seq.). Generally, under the Porter-Cologne Act, the superior court reviews decisions by the Water Boards:

Any party aggrieved by a final decision or order of a regional board for which the state board denies review may obtain review of the decision or order of the regional board in the Superior Court by filing in the court a petition for writ of mandate not later than 30 days from the date on which the state board denies review.

(Wat. Code, § 13330, subd. (b).) However, the Energy Commission's exclusive jurisdiction over the certification of all sites and facilities relating to power plants extends to judicial review. (See Pub. Resources Code, §§ 25500 , 25531.)

A. The Purpose Behind the Warren-Alquist Act's "One-Stop" Licensing for Power Plants and the Attendant Expedited Judicial Review Remove Jurisdiction from the Superior Court

Enacted in 1974, the Warren-Alquist Act created the Energy Commission, in part "to establish and consolidate the state's responsibility for energy resources . . . and for regulating electrical generating and related ***12** transmission facilities." (Pub. Resources Code, § 25006; see generally *id.* § 25500.) Through the Warren-Alquist Act, the Legislature sought to avoid "regulatory fragmentation and uncertainty" in the field of electricity generation in California. (*Public Util. Com. v. Energy Res. Conserv. & Devel. Com.* (1984) 150 Cal.App.3d 437, 453.)

The Warren-Alquist Act gives the Energy Commission exclusive jurisdiction over the certification of new power plants that generate at least 50 megawatts, and modifications of existing power plants that add at least 50 megawatts of generating capacity. (See Pub. Resources Code, §§ 25110, 25119, 25123, 25500.) Three key provisions in the Warren-Alquist Act establish a comprehensive, "one-stop" "certification" (licensing, permitting) process for power plants.

First, the Legislature consolidated most permits at the Energy Commission:

The issuance of a certificate by the commission shall be in lieu of any permit, certificate, or similar document required by any state, local or regional agency, or federal agency to the extent permitted by federal law, for such

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use of the site and related facilities, and shall supersede any applicable statute, ordinance, or regulation of any state, local, or regional agency, or federal agency to the extent permitted by federal law.

(Pub. Resources Code, § 25500.) Second, the Legislature also gave the Energy Commission the authority to override otherwise applicable laws in specified circumstances. (*Id.*, § 25525.) Thus the Legislature clearly indicated its intent to centralize the permit process.

The Legislature also understood, of course, that federal law could prevent full implementation of the "one stop" concept, but it nevertheless stated that the one stop concept should be fully applied "to the extent ***13** permitted by federal law." For example, as in the instant case, the federal NPDES program implemented by the State and Regional Water Boards applies to power plants that discharge pollutants into navigable waters. (See generally *Environmental Protection Agency v. California ex rel. State Water Resources Control Board* (1916) 426 U.S. 200, 206-208; see also Wat. Code, §§ 13370-13389.)

The third way in which the Warren-Alquist Act consolidates power plant licensing is through its extraordinary judicial review provision, which, as this Court has noted, is designed to "expedite the state's ultimate authorization of electric generating plants" in order "to ensure a reliable supply of energy" (*County of Sonoma v. State Energy Resources Conservation and Development Commission* (1985) 40 Cal.3d 361, 370-371.) That Act provides for judicial review only by this Court:
(a) The decisions of the commission on any application for certification of a site and related facility are subject to judicial review by the Supreme Court of California.
[¶]
(c) Subject to the right of judicial review of decisions of the commission, no court in this state has jurisdiction to hear or determine any case or controversy concerning any matter which was, or could have been, determined in a proceeding before the commission, or to stop or delay the construction or operation of any thermal powerplant except to enforce compliance with the provisions of a decision of the commission.[FN7]

> FN7. The quoted version of subdivision (a) became effective on May 22, 2001. Previously, subdivision (a) provided for judicial review "in the same manner as the decisions of the Public Utilities Commission on the application for a Certificate of Public Convenience and Necessity for the same site and related facility." From 1996 until May 2001, such review was available by writ in either the Court of Appeal or the Supreme Court. (*See Santa Teresa Citizen Action Group v. Energy Res. Conserv. & Dev. Com.* (2003)105 Cal. App. 4th 1441, 1451 [citing former Pub. Util, Code, § 1756].) Thus, when the Energy Commission certified the Plant modernization project in November 2000, Voices could have sought review of that decision in the Court of Appeal or the Supreme Court. It did neither.

***14** (Pub. Resources Code, § 25531, subds. (a) & (c).)

As explained below, because the issues raised by Voices, are a "matter which was, or could have been, determined in a proceeding before the commission," *(id.)*, there is a conflict between the Porter-Cologne Act and the Warren-Alquist Act regarding judicial review. The two acts must be harmonized if possible. (See *Collection Bureau of San Jose v. Rumsey* (2000) 24 Cal.4th 301, 310.) If they cannot be harmonized, then "later enactments supersede earlier ones," and "more specific provisions take precedence over more general ones." *(Ibid.)*

B. Conformity of the NPDES Permit with Applicable State and Federal Law Was a Matter that Was, or Could Have Been, Decided by the Energy Commission

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1. The Energy Commission not only Could Have Determined the NPDES Permit's Conformity with the Applicable State and Federal Law, It Was Required to Do So

The coordinated scheme of administrative and judicial review established by the Warren-Alquist Act encompasses compliance with environmental laws such as the BTA requirement of section 316(b) of the Clean Water Act, and both enables and requires the Energy Commission to make determinations as to the matters raised by Voices's writ petition to the superior court. The Warren-Alquist Act requires, for example, that the Energy Commission's certification decision include specific provisions ***15** relating to the manner in which a proposed facility is to be designed, sited, and operated "in order to protect environmental quality and assure public health and safety." (Pub. Resources Code, § 25523, subd. (a).) In so doing, the Energy Commission must determine that the proposed facility conforms "with public safety standards and the applicable air and water quality standards, and with other applicable local, regional, state, and federal standards, ordinances, or laws." (Pub. Resources Code, § 25523, subd. (d)(1).) Nothing in the Act or applicable case law suggests that the "water quality standards" and "federal standards... or laws" specified in this subdivision do not include section 316(b) of the Clean Water Act, or that the specification of "state ... standards ... or laws" does not include relevant provisions of the Porter-Cologne Act, including its NPDES permitting provisions (Wat. Code, §§ 13370-13389).

Furthermore, the Energy Commission must ensure that its record contains evidence sufficient to support all these statutorily-required determinations. For example, the Energy Commission's staff must present the results of its "environmental assessments" in a report. (Cal. Code Regs., tit. 14, § 1742.5, subd. (c).) Moreover:
The staff shall monitor the assessment of environmental factors by interested agencies and shall assist and supplement the agencies' assessment *to ensure a complete consideration of significant environmental issues in the proceeding*.

(*Id.*, subd. (d), emphasis added.) Whether the cooling system for a power plant uses the best technology available to protect water quality, in compliance with section 316(b) of the Clean Water Act, undoubtedly is a "significant environmental issue."

The provisions discussed above all give the Energy Commission authority to make determinations on the matters raised in Voices's original writ petition to the superior court. Any more restrictive reading of the Warren-Alquist Act would undermine its primary purpose, and thus is not ***16** permissible. (*See Munson v. Del Taco, Inc*. (2009) 46 Cal.4th 661, 666 ["in interpreting statutes, our goal is to ascertain the Legislature's intent so as to give effect to the law's purpose" (citation and quotation omitted)]; *Torres v. Parkhouse Tire Service, Inc*. (2001) 26 Cal.4th 995, 1003 [court "must select the construction that comports most closely with the apparent intent of the Legislature, with a view to promoting rather than defeating the general purpose of the statute, and avoid an interpretation that would lead to absurd consequences" (citation and internal quotation omitted)].) That primary purpose, as explained above, is to expedite consideration of the siting and certification of thermal power plants by, among other things, consolidating that consideration and review in one administrative body.

2. The Permit's Conformity to Applicable State and Federal Law Was, in Fact, Determined by the Energy Commission

That the Energy Commission could have made determinations regarding the conformity of the NPDES permit to applicable state and federal law (as established in the first instance by the Regional Water Board), and whether it satisfied the Clean Water Act's BTA requirement, is sufficient to bring those issues within the purview of Public Resources Code section 25531, subdivision (c), and thus preclude the superior court's consideration of the mat-

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ters. A review of the record, however, also reveals that the Energy Commission in fact did make a determination on the very matter that Voices challenged in the superior court.

For example, the Energy Commission's Presiding Member's Proposed Decision included an independent analysis of the BTA requirement for the cooling water intake structure, referencing the draft NPDES permit (cited as Exhibit 77 to the decision) as ensuring that the modernization project would meet water quality standards, including the BTA requirements of section ***17** 316(b) of the Clean Water Act. (AR 304246-4247, 304264-4266, 304330, 304338.)

Similarly, the Energy Commission entered Order 00-1025-24 approving Duke Energy's AFC and authorizing construction. (AR 304096-4098.) That Order adopted a decision that summarized the proceedings, the evidence presented, and the rationale for the findings and Conditions of Certification, including a determination that the Conditions of Certification would "ensure that the project will be designed, sited, and operated *in conformity with applicable local, regional, state, and federal laws*, ordinances, regulations, and standards, *including* applicable public health and safety standards, and air and *water quality standards"* (AR 304096, emphasis added.) Those Conditions included compliance with all provisions of the NPDES permit. (AR 304341.) The Energy Commission's "staff concurred that the proposed design represents the best technology available." (AR 304329-4330.)

In sum, the Energy Commission: (1) determined that the cooling water intake system satisfied the BTA requirements of the Clean Water Act; and (2) through its Conditions of Certification, ordered Duke Energy to comply with the NPDES permit requirements. These are the same matters that Voices later raised in its challenge in the superior court, which therefore are matters that section 25531 expressly precluded the superior court from deciding.

C. The Review Provision of the Warren-Alquist Act Controls in this Case

On their face, the conflicting judicial review provisions of the Porter-Cologne Act and the Warren-Alquist Act both apply to the Board's NPDES decision and the Commission's certification. The Porter-Cologne Act provides for review of decisions of the Water Board in the superior court. Such review includes challenges to the Water Board's determination of the ***18** validity of NPDES permits it issues, including, specifically, their compliance with the Clean Water Act's best available technology requirement. Under the Warren-Alquist Act, however, such determinations may, and must, also be made by the Energy Commission, in cases where the NPDES permit is necessary for the operation of a power plant within the Energy Commission's certification authority.[FN8] And, under the Warren-Alquist Act, the superior court lacks jurisdiction to "determine any case or controversy concerning any matter which was, or could have been, determined in a proceeding before the commission." (Pub. Resources Code, § 25531, subd.(c).)

> FN8. Under current California law, as approved by U.S. EPA, while the Energy Commission is not authorized to issue a NPDES permit, it is authorized to make determinations that a power plant within its jurisdiction will comply with applicable state and federal law, including Clean Water Act section 316(b) and conditions of certification that require continued compliance with that NPDES permit.

The acts may be harmonized, however, by viewing the Warren-Alquist Act as an exception to the more general judicial review provisions of the Porter-Cologne Act. The Porter-Cologne Act speaks to judicial review, generally, of Water Board decisions. The Warren-Alquist Act speaks, specifically, to matters that were or could have been determined in the course of Energy Commission proceedings pertaining to power plants within the Com-

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mission's jurisdiction. In such a circumstance, it is the Warren-Alquist Act that controls. " 'It is well settled ... that a general provision is controlled by one that is special, the latter being treated as an exception to the former....' (*Rose v. State of California* (1942) 19 Cal.2d 713, 723-724, 123 P.2d 505.)." (*San Francisco Taxpayers Assn. v. Board of Supervisors* (1992) 2 Cal.4th 571, 577; see also ***19***Rumsey, supra*, 24 Cal.4th at p. 310; *Medical Bd. of California v. Superior Court* (2001) 88 Cal.App.4th 1001, 1004-1006.)

To the extent the two statutes are deemed irreconcilable, however, it is the more recently enacted statute, Public Resources Code section 25531 (enacted in 1974, Stats. 1974, ch. 276; § 2, p. 532), that controls over the earlier enacted one, Water Code section 13330 (enacted in 1969, Stats. 1969, ch. 482, § 18, p. 1069). (*See, e.g., California Correctional Peace Officers Assn. v. Department of Corrections* (1999) 72 Cal. App. 4th 1331, 1340 & fn. 9 .) Nothing in the Warren-Alquist Act or its legislative history suggests that the Legislature intended that there be any exceptions to the clear commands of section 25531 on the exclusivity of judicial review. Therefore, there is no reason not to apply the rule that where statutes are in conflict, the later-enacted prevails.

These conclusions comport with the overall objective of statutory interpretation, discerning the intent of the Legislature, so that in construing a statute, the court should consider "the ostensible objects to be achieved, the evils to be remedied, the legislative history, public policy, contemporaneous administrative construction, and the statutory scheme of which the statute is a part." (*People v. Woodhead* (1987) 43 Cal. 3d 1002, 1008; see also *People v. Coronado* (1995) 12 Cal.4th 145, 151.) As detailed in section I. A. above, the objective of Warren-Alquist is to prevent delays in the provision of electrical power, while the evil to be remedied was regulatory fragmentation and uncertainty in the field of electrical generation. Allowing for judicial review under the Porter-Cologne Act provisions would impermissibly trump these clear legislative purposes.

In this regard, it is important to recognize the converse: Nothing in the purposes underlying the Porter-Cologne Act is thwarted by interpretation of the two acts advanced here. The purpose of the Porter-Cologne Act is to protect water quality. (See Wat. Code, § 13000.) The ***20** purpose of that Act's provisions creating the State's in-lieu-of program for NPDES permits (Wat. Code, §§ 13370-13389), is exactly that: "to authorize the state to implement the provisions of the Federal Water Pollution Control Act [Clean Water Act]." (Wat. Code, § 13370, subd. (d).) The path of judicial review mandated by the Warren-Alquist Act is consistent with the Porter Cologne Act's environmental purposes, and Voices never has argued to the contrary. Similarly, as detailed below, that path of judicial review satisfies all the requirements of the Clean Water Act and thus also is consistent with the specific purposes of Chapter 5.5 of the Water Code.

D. Neither the Court of Appeal's Reasoning, nor the Arguments Advanced Below by Voices Undermines the Conclusion that the Superior Court Lacked Jurisdiction

The Court of Appeal actually agreed with the basic argument outlined above: that if this were an issue exclusively of state law, and merely a determination of how to reconcile the Warren-Alquist Act with the Porter-Cologne Act, the correct conclusion would be that review of the substantive issues raised by Voices would be pursuant to the Warren-Alquist Act, via a challenge in the Court of Appeal or the Supreme Court to the Energy Commission's determinations, and that the Superior Court lacked jurisdiction. (*Voices of the Wetlands v. Cal. State Water Resources Control Bd. (Voices)* (2007) 157 Cal.App.4th 1298, 1301.)

The Court of Appeal decided, however, that this is not entirely an issue of state law, and that federal law requires that the Porter-Cologne Act's judicial review provision trump the conflicting provisions in the Warren-Alquist Act. (See *Voices, supra*, at p. 1303.) This conclusion was erroneous. Although federal law provides the

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context of this dispute insofar as the Clean Water Act authorizes the state to adopt and implement its own NDPES permitting system in lieu of a federal system of permits ***21** issued by the Environmental Protection Agency (see 33 U.S.C, § 1342(b)), it does not dictate or even inform the resolution of the apparent conflict between Porter-Cologne and Warren-Alquist.

The Court of Appeal reasoned that because NPDES permits are issued by the Regional Water Board pursuant to authority granted to it under the Clean Water Act (33 U.S.C. § 1342(b)), federal law controls the outcome of the conflict between the Warren-Alquist Act and the Porter Cologne Act, concluding that the permit at issue here was a "federal approval," and this made all the difference. (*Voices, supra* at pp. 1303-1304.) In doing so, the Court of Appeal offered only two reasons for its decision: (a) that the NPDES is a federal permit, and (b) that the Energy Commission must follow all applicable local, regional, state, and federal (such as the Clean Water Act) laws. *(Ibid.)* This reasoning cannot withstand scrutiny.

1. A Water Board-Issued NPDES Permit is a State Permit, not a Federal Approval

The Court of Appeal's main premise, that the permit is a "federal approval," does not settle anything. First, that conclusion was erroneous as a matter of law. NPDES permits issued by the Regional Water Boards are not federal permits that the Boards have been delegated authority to issue. They are state permits, issued pursuant to state law., (*Shell Oil Company v. Train* (9th Cir. 1978) 585 F.2d 408, 410-412.)[FN9] The Clean Water Act does not delegate administration of the federal NPDES program to states, but instead "suspends" the issuance of the federal permits altogether, allowing states to adopt their own, state-law programs in lieu of the federal ***22** system, (See 33 U.S.C. § 1342(c)(1).) State permit programs are "establish[ed] and administer[ed] under State law." (33 U.S.C. § 1342(b).) Congress emphasized this distinction:

> FN9. In contrast, certain air permits applicable to power plants are federal, even though issued by the states. (See, e.g., *City of Morgan Hill v. Bay Area Air Quality Management District* (2004) 118 Cal.App.4th 861, 871-873.)

> The conferees wish to emphasize that such a State program is one which is established under State law and which functions in lieu of the Federal program. It is not a delegation of Federal authority. This is a point which has been widely misunderstood with regard to the permit program under section 402 of the Act. That section . . . provides for State programs which function in lieu of the Federal program and does not involve a delegation of Federal authority.

(H.R. Conf. Rep. No. 95-830, 95th Cong., 1st Sess., p. 104, reprinted in 1977 U.S. Code Cong. & Admin. News at p. 4479; see also *State of Cal v. U.S. Dept. of Navy* (9th Cir. 1988) 845 F.2d 222, 225-226 ["state permit programs are not a delegation of Federal authority, but instead are state programs which function in lieu of the Federal program" [citation and quotation omitted].) As the District of Columbia Circuit Court of Appeals has explained: "States, under State law, . . . issue State discharge permits. These [are] State, not Federal actions . . . ." *(District of Columbia v. Schramm* (D.C. Cir. 1980) 631 F.2d 854, 861 [quoting 118 Cong. Rec. 33761 (1972), reprinted in 1 Cong. Research Serv., A Legislative History of the Water Pollution Control Act Amendments of 1972, at 262 (remarks of Rep. Wright)]; see also, e.g., *Chesapeake Bay Foundation, Inc. v. United States* (E.D. Va. 1978) 445 F.Supp. 1349, 1353; *Chesapeake Bay Foundation, Inc. v. Virginia State Water Control Bd.* (E.D. Va. 1978) 453 F.Supp. 122, 126; *American Paper Institute, Inc. v. U.S. E.P.A.* (7th Cir. 1989) 890 F.2d 869, 874 .)

Because the permit at issue here is a state permit, the Court of Appeal's decision, which is based on the contrary

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conclusion, is in error.

***23 2. No Federal Law Prohibits the Path of Approval Dictated by State Law**

In any event, the entire issue of whether the permit here is a "state permit" or a "federal permit" is a red herring. As explained above, to the extent that state law is controlling, it dictates that the issues Voices raises could not properly be heard by the superior court, as even the Court of Appeal agreed. The only question relating to federal law is not whether the permit is a state permit or a federal permit, but whether federal law allows the Energy Commission to determine whether a Regional Water Board-issued NPDES permit complies with applicable law and water quality standards, with subsequent judicial review as prescribed by the Warren-Alquist Act, Public Resources Code section 25531.

Neither the Court of Appeal nor Voices has identified any such federal constraint.

a. Federal law does not preclude the Energy Commission from making a determination that the Moss Landing Power Plant's intake structure reflects the best technology available

It is correct, as the Court of Appeal noted, that the Regional Water Board, not the Energy Commission, issued the NPDES permit underlying this action. It also is correct that only the Regional Water Board, and not the Energy Commission, has authority to issue such permits. (Wat. Code, § 13377.) And, further, there is no dispute that the Regional Water Board itself determined that the NPDES permit was valid, pursuant to its authority under state and federal law. (See Wat. Code, §§ 13370-13389; 33 U.S.C. §§ 1342(b) & (c).)

But these truths do not alter or even call in to question the conclusion that the Energy Commission had authority to make the determination it did. The Energy Commission made an independent determination that the ***24** permit complied with applicable law. Nothing in the Clean Water Act precludes the Energy Commission from doing so; nor does anything in the Porter-Cologne Act. In fact, as explained above, the Warren-Alquist Act required the Energy Commission to make that determination.

Voices argued below that this reading somehow implies that Warren-Alquist "preempts" the Porter-Cologne Act, and gives the Energy Commission "legal authority actually to implement or enforce the Clean Water Act." (Voices Court of Appeal Reply Brief at p. 10, Regional Water Board Appendix at p. 021.) Voices contended: "given EPA's delegation of the NPDES permit program exclusively to the Water Boards, the usurpation of that role by the Energy Commission would be directly contrary to federal law." (*Id*. at p. 12; Reg. Wat. Bd. Appen at p. 023.) This argument is wrong for several reasons. As noted above, the characterization of the state-federal relationship as one of delegation is incorrect.

Further, the Regional Water Board, not the Energy Commission, actually issued the NPDES permit for the Moss Landing Power Plant. Regardless of the Energy Commission's determination, the Regional Water Board will have authority to enforce the NPDES permit it issued under provisions of state law. (See, e.g., Wat. Code, § 13385.) But, this case and this question are not about enforcement or implementation. They are about the appropriate pathway for judicial review. Regardless of which path is chosen, the Regional Water Boards' jurisdiction to enforce and implement the permit program remains intact.

b. Federal law does not require Water Code section 13330, subdivision (b), to be given priority over Public Resources Code section 25531, subdivision (c)

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As to that pathway for review, the EPA regulations allowing approval of NPDES permitting authority for a state do not require that state judicial review occur in any particular court (e.g., trial court versus appellate court), ***25** that any particular standard of review apply, or that any particular procedure be followed. The regulations require only that the state provide some form of judicial review and allow for "public participation in the permitting process."

State NPDES programs must adhere to the requirements of federal law, which includes requirements on the type of judicial review that a state NPDES program must provide:
All States. . . shall provide an opportunity for judicial review in State Court... that is sufficient to provide for, encourage, and assist public participation in the permitting process. A State will meet this standard if State law allows an opportunity for judicial review that is the same as that available to obtain judicial review in federal court of a federally-issued NPDES permit (see Sec. 509 of the Clean Water Act). A State will not meet this standard if it narrowly restricts the class of persons who may challenge the approval or denial of permits (for example, if only the permittee can obtain judicial review, if persons must demonstrate injury to a pecuniary interest in order to obtain judicial review, or if persons must have a property interest in close proximity to a discharge or surface waters in order to obtain judicial review.)

(40 C.F.R. § 123.30 (2008).)

Only if Public Resources Code section 25531's judicial review path is not "sufficient" under the foregoing federal regulation does federal law prevent its application here. In fact, section 25531 is sufficient. It does not "narrowly restrict the class of persons" who may seek judicial review, neither in any of the ways expressly set forth in the federal provision nor in any other way.

At the time the permit for the power plant relating to this action was issued, section 25531, subdivision (a), provided for review "in the same manner" in which decisions of the Public Utilities Commission were reviewed under Public Utilities Code section 1756 (which at the time was in the Court of Appeal but is now exclusively this Court). (See *Santa ***26** Teresa Citizen Action Group v. Energy Res. Conserv. & Devel. Com.* (2003) 105 Cal.App.4th 1441, 1451 fn. 6.) Section 1756, in turn, provided that judicial review could be sought by "any aggrieved party." (Stats. 1998, ch. 886, § 10; Stats. 2000, ch. 953, § 1.) Moreover, section 25531 "allows an opportunity for judicial review that is the same as [federal judicial review]." Section 509 of the federal Clean Water Act provides that judicial review of EPA NPDES permits is in the federal Courts of Appeals. (33 U.S.C. § 1369(b)(1).) Such review is available to "any interested person ... directly affected" *(id.)*, which is essentially the same as the Warren-Alquist Act's "aggrieved person." This is also the same standing requirement that appears in Water Code section 13330, subdivision (b), which provides for a writ petition by "[a]ny party aggrieved by a final decision or order" of a Regional Water Board. Thus, there is no room to argue that Water Code section 13330 satisfies the federal standard but that section 25531 does not.

Voices also has suggested below that if review is of the Energy Commission's determinations, not direct review of the Water Board's determinations, then Warren-Alquist "does not provide any substantive standards against which the Supreme Court or any other court can evaluate the adequacy of the Clean Water Act permit." (Voices Court of Appeal Answering Brief, p. 16, Reg. Wat. Bd. Appen. at p. 027.) This is irrelevant. As noted above, Warren-Alquist requires the Energy Commission to make determinations about the consistency of a proposed power plant with all applicable state, local, and federal laws, including the Clean Water Act and the Porter-Cologne Act. (Pub. Resources Code, § 25523, subd. (d)(1).) There is no reason why an appellate court could not apply those state and federal standards in a proceeding under section 25531, just as this Court is being asked to

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apply them in the present proceeding.

***27** For these reasons the trial court did not have jurisdiction to hear Voices's challenge to the NPDES permit.

II. **The Water Board Properly Considered the Costs and Benefits of Alternative Cooling Technologies in Making its Section 316(b) Determination**

Section 316(b) of the Clean Water Act requires that the "location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impacts. (33 U.S.C § 1326(b).) The issues here are: (1) whether costs can be considered in determining what counts as the "best" technology available, and (2) whether habitat enhancement, replacement, or restoration can be considered as part of the "technology" that section 316(b) requires.

The first question has been resolved by the United States Supreme Court. On April 1, 2009, the United States Supreme Court held that cost-benefit analysis can be used to determine compliance with section 316(b), and the Court approved the "wholly disproportionate" standard that the Regional Water Board applied. (*Entergy Corp. v. Riverkeeper, Inc. (Entergy)* (2009) ___ U.S. ___, 129 S.Ct. 1498, 1508-1510, AR 305756.) Voices does not even address the issue in its opening brief.

Instead, Voices now argues that: (a) the Regional Water Board's "wholly disproportionate test" impermissibly gives the Board "unfettered" discretion; and (b) the Board's cost-benefit analysis is not supported by the administrative record. (Voices Opening Brief (Voices Op. Brf.) at pp. 55-61.) This is improper. Voices failed to present these issues in its Petition for Review, and they are outside the scope of briefing ordered by this Court. (Compare Voices's Petition for Review at pp. 1, 12-19 [dated Jan. 3, 2008], with Order [filed Sept. 9, 2009] ["The parties are directed to brief all issues raised in the petition for review and the answer to the petition."].) These issues are not "fairly included in the petition or answer." (***28**Cal. Rules of Court, rule 8.516(a)(1) and (b)(1).) If the Court decides to reach these issues anyway, we address each one below.

A. The Water Board Properly Applied the Wholly Disproportionate Test and Exercised its Discretion in Performing its Section 316(b) Analysis

In *Entergy*, the U.S. Supreme Court approved the precise "wholly disproportionate" standard that the Regional Water Board applied. (See *Entergy*, 129 S.Ct. at pp. 1509-1510; AR 305756.) Voices contends that the Water Board's determination that the costs of alternative technologies were wholly disproportionate to their benefits was "open-ended," and "led to exactly the unfettered (and unreviewable) discretion that courts reject." (Voices Op. Brf. at p. 57.) In effect they contend that the Board should have adopted specific criteria for the wholly disproportionate test. This argument, rejected by both the trial court and the Court of Appeal (*Voices*, *supra* at pp. 1354-1355) misconstrues the applicable law.

In the absence of uniform regulations or other national standards, NPDES permits are issued on a case-by-case basis, with the agency using its best professional judgment. (*Natural Resources Defense Council v. U.S. E.P.A.* (1988) 863 F.2d 1420, 1425 *(NRDC v. EPA);* 66 Federal Register. 65256 (Dec. 18, 2000), [Phase I final regulations]; 67 Fed. Reg. 17122-17123 (Apr. 9, 2003), [Phase II draft regulations]; 69 Fed. Reg. 41578 (July 9, 2004), [Phase II final regulations].) At the time of the Regional Water Board's decision in this action, there were no regulations applicable to section 316(b) determination. (*Entergy*, *supra*, 129 S.Ct. at p. 1503-1504; see also *Voices*, *supra*, at pp. 1341-42.)[FN10]

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FN10. Other than the cases existing at the time, legal guidance for the Regional Water Board was found in a 1977 EPA draft guidance document, U.S. Environmental Protection Agency, Office of Water Enforcement, Permit Division, Industrial Permits Branch, Washington, D.C., Draft Guidance for Evaluating the Adverse Impact of Cooling Water Intake Structure of the Aquatic Environment Section 316(b), P.L. 92-500 (May 1, 1977) (1977 Draft Guidance). (RAR 002407-2522.)

***29** It is true that the Clean Water Act does not permit an agency to. exercise "unfettered" discretion, even when acting on a case by case basis, and using its best professional judgment. Thus, for example, in *NRDC v. EPA, supra*, 863 F.2d at p. 1432, the Ninth Circuit held invalid a permitting scheme that allowed applicants to request a variance from existing regulations simply by providing some information to the agency, but specified no standard at all for determining when such applications should be granted. (*Ibid.)* The key to the Ninth Circuit's holding in *NRDC v. EPA* was its finding that the rule at issue there specified "no discernable standard . . . and [failed to define] when requests... should be granted or denied." *(Ibid.)* Applicants could request a variance by providing certain specified information, but nothing in the permitting scheme told the EPA when or when not to grant the application. *(Ibid.)*

In this case, in stark contrast, there was a discemable standard that defined when the Regional Water Board need not require implementation of alternative technologies: the Board could do so only if the cost of those technologies was wholly disproportionate to their benefits. Here, the Regional Water Board considered alternative cooling technologies and the unique environmental and other factors of the Moss Landing facility, and applied EPA's longstanding "wholly disproportionate" standard.

Courts have held that this standard imposes real constraints on an agency, and on that basis have expressly distinguished cases in which an agency is constrained by the "wholly disproportionate" standard from the standardless rule rejected in *NRDC v. EPA.* (See *Riverkeeper I, supra*, 358 F.3d 174, 193-194, at p. 193 ["Unlike the variance provision remanded in ***30** *Natural Res. Def. Council, Inc. v. U.S. EPA*, 863 F.2d 1420 (9th Cir.1988), § 125.85 [variance for costs "wholly out of proportion" with the EPA cost estimates, or where compliance with the standard would result in "significant adverse impacts" on energy or the environment] does not leave alternative requirements to the Agency's 'unfettered' discretion. [Citation.]"].)

To the extent that Voices is arguing that the Regional Water Board was required to more precisely define this standard, this claim finds no support in applicable case law or the 1977 Draft Guidance (RAR 002407-2522) available at the time the board issued the permit.

Courts have held, in analogous circumstances where a "wholly disproportionate" standard applies, that, for example, " '[t]he selection of the point of diminishing returns is a matter for agency determination.' " (*Chemical Mfrs. Assn. v. U.S. E.P.A.* (5th Cir. 1989) 870 F.2d 177, 207 [quoting *American Petroleum Inst. v. E.P.A.* (10th Cir. 1976) 540 F.2d 1023, 1037-1038].) And, accordingly, courts repeatedly uphold agency determinations based on such standards without demanding more specificity. (See, e.g., *ibid.; Rybachek v. U.S. E.P.A* (9th Cir. 1990) 904 F.2d 1276, 1289; *BP Exploration & Oil, Inc. (93-3310) v. E.P.A.* (6th Cir. 1995) 66 F.3d 784, 796.)

Natural Resources Defense Council v. Muszynski (2d Cir. 2001) 268 F.3d 91, 102-103, is instructive. In that case, the EPA had determined that a 10% "margin of safety" was adequate for the purposes of regulating phosphorus in drinking water. The plaintiffs argued that "margin of safety" was ill-defined, and "that no scientific or mathematical basis prescribed this percentage as opposed to any other." (*Id.* at p. 102.) The Second Circuit rejected this argument, however, holding that a "best professional judgment" standard, requires courts to allow

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agencies to exercise their judgment, and does not require agencies to define a "rigorously precise ***31** methodology." (*Id*. at pp. 102-103; see also *City of Arcadia v. State Water Resources Control Bd*, (2006) 135 Cal.App.4th 1392, 1412 [citing *Muszynski]; (Citizens Coal Council v. U.S. E.P.A.* (6th Cir. 2006) 447 F.3d 879, 890 [scientific determinations by a permitting agency are entitled to the highest degree of deference]; see also *So. Cal. Jockey Club v. Cal. etc. Racing Bd*. (1950) 36 Cal.2d 167, 177.)

Here, the Regional Water Board weighed a variety of factors, as detailed below, and ultimately determined that the costs of alternative technologies ranged from $50-114 million, whereas the benefits were on the order of only $7 million. The Board weighed these cost estimates, along with other factors. (RAR 001193-1201, *Voices, supra*, at 1321.) The Board ultimately concluded, on these bases, that the costs were wholly disproportionate to the benefits. (AR 305756.) This is exactly the sort of exercise of professional judgment that the cases cited above approve. Nothing in the Clean Water Act, or any other law, required the Water Board to first define "wholly disproportionate" as meaning that costs are at least ten times [or four times; or eighteen times] greater than the benefits before making a decision.

In an aside, Voices asserts that in two proceedings, the EPA "determined that expenditures of over $ 100 million for cooling towers or deep sea were not wholly disproportionate to the environmental benefit of these technologies." (Voices Op. Brf. at pp. 56-57.) On the contrary, a close reading of those two decisions, *In re Pub. Service Co. of New Hampshire, (Seabrook Station)*, 10 Environment Rptr. Cases (BNA) 1257, 1262 (EPA June 17, 1977) (RAR 005337-5630) and *In re Brunswick Steam Electric Plant*, 1976 WL 25235 (EPA Office of General Counsel Opinion No. 41, June 1, 1976) (Reg. Wat. Bd. Appen. at pp. 112-118) reveals that neither one made any determination that any specific cost - much less "over $100 million" - was wholly disproportionate to the estimated benefit ***32** in that case. The *Brunswick Steam* decision does not even apply the "wholly disproportionate" standard.

Voices's assertion is also irrelevant. Even if EPA did conclude that $100 million in costs was not wholly disproportionate to the benefits in specific circumstances presented in each of those proceedings, EPA did not purport to establish a numeric formula for applying the wholly disproportionate standard nationwide. Extrapolating such a rule from these two decisions would be antithetical to the whole notion of case-by-case determinations - even if the decisions included a detailed analysis of how to apply the wholly disproportionate standard.

B. The Water Board's Determination that the Costs of Alternative Technologies were Wholly Disproportionate to Their Benefits was Supported by Substantial Evidence

Voices offers another argument that was rejected by both the trial court and the Court of Appeal: That the Water Board's conclusion that the costs of alternative technologies are wholly disproportionate to their benefits is "unsupported by the administrative record." (Voices Op. Brf. at p. 55; see also *id*, at pp. 58-61.) "The oft-repeated standard for evaluating such challenges is clear: 'In reviewing the evidence on . . . appeal all conflicts must be resolved in favor of the [prevailing party], and all legitimate and reasonable inferences indulged in to uphold the [finding] if possible.' [Citation.]" *(Western States Petroleum Assn. v. Superior Court* (1995) 9 Cal.4th 559, 571.) The Board's conclusions easily satisfy this standard.

Methodology. Although the details are complex, the basics of the method the Board used to estimate the benefits are fairly straightforward. To quantify the potential benefits that might be achieved with alternative technologies, the Board used a "habitat equivalency" analysis. (RAR 000046, one of three potential methods to determine the value of the larval ***33** losses.) This approach requires an agency to (1) estimate the loss of species to the

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power plant operations from entrainment), (2) express that loss as a percentage of estimated total populations of the species in the affected water body (here, 13% from Elkhorn Slough), (3) assume that loss of this percentage of the species is equivalent to the loss of that percentage of their productive habitat, and (4) finally estimate what it would cost to replace that habitat. (RAR 000927-0930.) The theory behind this process is that the proportion of organisms lost through the cooling water intake structure is equivalent to the proportion of land necessary to support those organisms, and the environmental value (benefit) from saving those organisms is equivalent to the cost of buying enough land to support them. It is one environmental valuation methodology.[FN11]

> FN11. The agency's habitat equivalency approach took the assumed percentage of larvae lost to entrainment (13%), and multiplied it by the surface area of the slough (3,000 acres), to arrive at an acreage equivalency (390 acres). The figure of 390 acres thus represents lost productivity due to entrainment. Calculations were then made to value those 390 acres based upon local land values. The staff report concluded: "Based on actual, local values, the cost of purchasing and/or restoring this habitat was calculated as $1.2 million to $9.7 million." (*Voices, supra* at p. 1355; RAR 000048.)

Voices describes this method as something the Board "concocted." (Voices Op. Brf. at p. 59.) The method, however, is based on an approach recommended by the EPA itself at the time of the Board's decision. (See RAR 002407-2470.) Voices primarily complains about the details of how Board implemented it, arguing that the Board underestimated species loss and underestimated land acquisition costs, specifically that (a) the 13% species loss number on which the analysis is based is too low, and (b) the Board's estimate of what it might cost to purchase the equivalent amount of land is too low because the Board underestimated land acquisition costs. (Voices Op. Brf. at pp. 58-61.) Neither complaint has merit.

***34 Species Loss Estimate.** As to the first asserted error,[FN12] Voices contends that the 13% larval loss estimate underestimated the total environmental effect of the entrainment, because that estimate is based on data about the loss of only a "handful" of all the species that inhabit Elkhorn Slough. (Voices Op. Brf. at p. 59.) To support this contention, Voices cites to a statement in an EPA document that opines that environmental assessments of the effects of power plant cooling systems that are limited to only a "subset" of all the potentially affected species are "potentially" likely to underestimate the effects. (*Id*. at p. 60.)

> FN12. We note that Voices did not raise this issue in the superior court or in its opening brief in the Court of Appeal, raising it for the first time in its appellate reply brief. (Reg. Water Bd. Appen. at pp. 103-104.) The issue is not addressed in the Court of Appeal's decision.

This extra-record evidence[FN13] does not help Voices's argument, because substantial evidence supports the agency's approach. It is true that the Board's studies were based on data from a subset of the species inhabiting Elkhorn Slough. (See, e.g., AR 306330; RAR 000990-1002; Voices Op. Brf. at p. 92.) However, the record reveals that surveying the effects on all species was impossible. One of the Board's experts testified that it "just be to[o] difficult" obtain data on all species in the Slough, and so any estimate that included more than the sample species would be a "scientific wild ass guess." (AR 306331.) A different expert testified "there is absolutely no way of figuring out the quantity of those [other species] that are being taken." (AR 306332.) A wild guess of any sort is not substantial evidence. (*Casella v. South West Dealer Services, Inc*. (2007) 157 Cal.App.4th 1127, 1144; *Lockheed Martin Corp. v. Superior Court* (2003) 29 Cal.4th 1096.)

> FN13. This proposed rule was not in effect at the time of the Board's decision at issue here.

***35** The record, moreover, includes significant expert testimony explaining why using the subset selected was

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reasonable and representative. (See, e.g., AR 306333-306336; 306335; see also RAR 000102:2-7 [explaining specifically why surveying entrainment of crab species was too difficult]; RAR 000106:7-15 [explaining why surveying entrainment of clams was too difficult]; RAR 000105:7-25 [explaining why using only a subset of species was reasonable in light of the impossibility of obtaining data on all species].)

Land Cost Estimate. Voices's second evidentiary complaint is that the Board's estimate of the cost of acquiring habitat to replace the 13% loss was too low because the Board relied on per-acre cost estimates that were too low. (Voices Op. Brf. at pp. 60-61.) Specifically, Voices argues that all the evidence in the record pointed to per-acre costs of between $60,000 and $260,000, and there was, according to Voices, no substantial evidence to support the approximately $18,000 per acre estimate the Board relied on. *(Ibid.)*

Again, substantial evidence supports the agency. The evidence in the record includes testimony before the Energy Commission, on June 20, 2000, at which the valuation for the acquisition of wetland ranged from $12,000 to $260,000 per acre. (AR 306125.) The upper end of this range was discarded as "luxury wetlands in Southern California," (AR 306124-1125), and there was testimony that a more moderate range of $12,000 to $25,000 per acre was more appropriate to the Elkhorn Slough area. *(Ibid.)* Dr. Raimondi testified at the remand hearing that some larger parcels could be acquired in the $2000 to $4000 range. (RAR 001028, 001174-1175.) And the Elkhorn Slough Foundation report lists per acre estimates for Elkhorn Slough acquisition projects as between $3000 to $5000 per acre. (AR 300891-0892; see also AR 306376 [testimony of Elkhorn Slough ***36** Foundation Executive Director Mark Silberstein regarding land acquisition costs in area].)

The Coastal Conservancy - a state agency whose functions include the purchase of environmentally valuable land in areas like Elkhorn Slough (see generally Pub. Resources Code §§ 31000-31410; see also *ibid.* §§ 31105 [authorizing Conservancy to purchase land]; 31054 [legislative statement of purpose]) - advised the Water Board to rely on information provided by the Elkhorn Slough Foundation: "We encourage you to avail yourself of [the Elkhorn Slough Foundation] as you consider appropriate compensation for the environmental effects of the power plant expansion." (AR 305600; see also AR 305599 [recommending the "technical abilities and local knowledge of the Elkhorn Slough Foundation].)

Given substantial evidence in the record supporting the agency, any conflicting evidence that Voices identifies is insufficient to meet its burden. (See *Western States, supra*, 9 Cal.4th at p. 571 [existence of conflicting evidence does not render agency decision invalid].)

III. The Evidence in the Record Supports the Findings That the Environmental Enhancement Plan was not an Integral or Unpermitted Substitute for Best Technology Available

The Second Circuit has held that mitigation does not qualify as a "technology" for purposes of section 316(b). (*Riverkeeper II, supra*, 475 F.3d at p. 110,) Voices argues that the Regional Water Board impermissibly included the proposed habitat restoration plan in its assessment of the best available technology for the power plant modification at issue here. Contrary to Voices's assertions, however, the Regional Water Board relied on the habitat restoration project as a method to estimate the value of eliminating entrainment for purposes of the wholly disproportionate analysis, not as a technological component of its BTA analysis.

***37** The trial court made a factual finding, upheld by the Court of Appeal, that "the present record of the Regional Water Board's proceedings, viewed in its entirety, does not show that habitat restoration was offered as a substitute for selecting the best technology available. Although the mitigation plan was at times discussed in conjunction with other best technology available considerations, the Board's determination does not rest on that

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plan as the basis for its best technology finding." (Pet. App. at p. 80.)

The record, both from the original hearing standing alone, and the remand hearing, includes substantial evidence supporting these determinations, as the Court of Appeal found. (*Voices, supra*, at p. 1352.) At the remand hearing before the Regional Water Board, the Board was advised by counsel that best technology available "is defined as any kind of changes to the cooling water intake structure, including location, design, construction and capacity. And so it's about the cooling water structure." (RAR 000904.) Counsel also noted that the habitat enhancement program was "outside the scope of the language of [section] 316(b)." *(Ibid.)* The chair of the Regional Water Board was careful to limit the purposes for which admission of evidence on the mitigation plan could be used. (RAR 000912, 000931, 000932, 000934, 000940.) Board counsel Ms. Soloway and the Board chair Daniels specifically stated that the habitat enhancement was not part of the BTA discussion before the Regional Water Board. (RAR 000948.)[FN14] Substantial evidence supports the trial court and Court of Appeal's determinations that the BTA determination was legally sufficient. Nothing in section 316(b) constrained the board from requiring additional mitigation measures after making their BTA determination.

FN14. Ms. Soloway stated, the mitigation program can be considered "icing on the cake," (RAR 000948) rather than an integral part of the BTA finding.

***38 IV. The Remand to the Regional Water Board Was Consistent with Law**

Voices contends that the trial court lacked authority to remand to the Regional Water Board under section 1094.5 of the Code of Civil Procedure without first entering a judgment and vacating the Board's decision, and that even if remand was proper, the Board lacked authority to consider new evidence at the remand hearing.

A. The Limited Remand Prior to Entry of Judgment and Without Issuing a Writ Fit the Circumstances of the Action and was not Contrary to Law

At the conclusion of the proceedings described above, the trial court found a problem with one of 58 separate findings made by the Regional Water Board: It found the NPDES permit lacking in its discussion of BTA alternatives. (RAR 000003, 000006 [pp. 2 & 5 of Intended Decision, dated October 1, 2002].) In view of the limited nature of the defect it found in the Regional Water Board's initial decision, and in view of the fact that the Plant already was operational, the court used its equitable powers to issue an order of remand, rather than issuing a judgment and vacating the Board's decision. (See RAR 000001-000007.) In doing so, it noted: "Nothing in this decision compels an interruption in the ongoing plant operation during the Regional Water Board's review of this matter." (RAR 000007.)

Voices contends that the limited remand conflicts with Code of Civil Procedure section 1094.5, arguing that subdivision (f) requires a court to issue a judgment granting the writ petition (and therefore vacating the entire administrative decision) before remand. Subdivision (f), however, does not compel the conclusion Voices urges. The section provides, in relevant part: "The court shall enter judgment either commanding respondent to set aside the order or decision, or denying the writ." As the ***39** Court of Appeal's well-reasoned discussion of the issue demonstrates, the provision does not limit the superior court's authority over the conduct of its proceedings, including its authority to order a limited remand. (See *Voices, supra*, at pp. 1311-1316.)

More specifically, although this provision arguably limits the superior court's alternatives at the end of its proceedings to enter a final judgment either (a) ordering the respondent to set aside the challenged decision, or (b) denying the writ, nothing in section 1094.5, subdivision (f) precludes the court from issuing other orders, including remand orders, prior to entry of a final judgment. (See generally, *id.* at pp. 1311-1312 [reviewing cases in-

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volving interlocutory orders in mandamus proceedings].) "To hold otherwise would exalt form over substance." (*Voices, supra*, at p. 1313, citing, *Giannini Controls Corp. v. Superior Court* (1966) 240 Cal.App.2d 142, 151; see also, e.g., *Ng v. State Personnel Bd.* (1977) 68 Cal.App.3d 600, 604 [court's remand was an interlocutory order, not a final, appealable judgment]; *County of Inyo v. City of Los Angeles* (1978) 78 Cal.App.3d 82, 85 [appellate court's earlier decision in mandamus proceeding "was an interim one which did not terminate the lawsuit"].)

Thus, for example, remand has been used, consistent with section 1094.5, to correct procedural defects at the administrative level, such as where there has been no fair hearing. (*Steen v. City of Los Angeles* (1948) 31 Cal.2d 542, 546; see also, e.g., *English v. City of Long Beach* (1950) 35 Cal.2d 155, 159-160; *Clark v. City of Hermosa Beach* (1996) 48 Cal.App.4th 1152, 1174.) Remand also has been used to correct a procedural defect when the evidentiary record of the administrative hearing is inadequate. (*See Aluisi v. County of Fresno* (1958) 159 Cal.App.2d 823, 828; but see *id.* at p. 826 [writ issued].) "Moreover, courts have held that the trial court has the power to remand a matter to an administrative agency for clarification of ambiguous findings." (***40***Rapid Transit Advocates, Inc. v. Southern Cal. Rapid Transit Dist.* (1986) 185 Cal.App.3d 996, 1003, citing *No Oil, Inc. v. City of Los Angeles* (1974) 13 Cal.3d 68, 81, and *Keeler v. Superior Court* (1956) 46 Cal.2d 596, 600.) [FN15]

> FN15. Such an approach is consistent with federal regulations governing the NPDES program, which provide that when a state reopens or modifies a permit, "only the conditions subject to modification are reopened." (See 40 C.F.R. § 122.62.)

Voices also urges that the section 1094.5, subdivision (f)'s mandate that the court either "set aside the order or decision" or deny the writ required the superior court set aside the *entire* decision of the Regional Water Board before remanding to that agency, and argues that the only permissible judicial remedy was "a writ of mandate ordering respondents to set aside the NPDES permit." Once more, nothing in section 1094.5 requires this "all or nothing approach," precluding a limited remand for limited purposes prior to entry of a final judgment either setting aside the order or decision, or denying the writ. It is permissible for a court to direct "issuance of a limited writ of mandate" in an administrative mandamus proceeding. (*Helene Curtis, Inc. v. Los Angeles County Assessment Appeals Bds.* (2004) 121 Cal.App.4th 29, 33; *id.* at p. 42 [respondent tax agency was ordered only to hold a hearing on petitioner's application to reduce its assessed valuation]; of, *Evans v. Department of Motor Vehicles* (1994) 21 Cal.App.4th 958, 976 [in proceedings under the Administrative Procedures Act, the agency itself may order an administrative reconsideration of only "part of the case" pursuant to Gov. Code, § 11521]; see also (*Stoumen v. Reilly* (1951) 37 Cal.2d 713, 717 [where disciplinary proceedings against a liquor licensee were based on two counts, only one of which was supported by the evidence, "the matter should be remanded to the board" to reconsider the penalty alone"]; *Cooper v. State Bd. of Medical Examiners* (1950) 35 Cal.2d 242, 252; ***41***Nelson v. Department of Corrections* (1952) 110 Cal.App.2d 331, 334 [where only two of six disciplinary charges against a civil service employee were supported by the evidence, limited remand was proper to reconsider just the penalty, rejecting the petitioner's contention "that respondent Personnel Board should be required to hold an entirely new hearing"].)

Here, the trial court ordered the agency to set aside one finding, and it ordered the Regional Water Board "to conduct a thorough and comprehensive analysis" with respect to that finding alone. (RAR 000007.) The effect of that order was "to remand the case to the board for proper proceedings" as to that single issue. (*Voices, supra*, at p. 1315.) Limited remand was appropriate in this case in that the administrative order as a whole was broad ranging and complex, covering far more than the BTA issue, the permit was the product of years of scientific study

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and interagency collaboration; and the trial court found fault with only one of the agency's 58 findings.

Because section 1094.5, subdivision (f), does not bar a remand, a trial court has inherent authority to return a discrete matter to an administrative agency for further proceedings. "Courts have inherent power, as well as power under section 187 of the Code of Civil Procedure, to adopt any suitable method of practice, both in ordinary actions and special proceedings, if the procedure is not specified by statute or by rules adopted by the Judicial Council." (*Tide Water Assoc. Oil Co. v. Superior Court* (1955) 43 Cal.2d 815, 825.)

The cases on which Voices relies are not to the contrary. Voices cites *Resource Defense Fund v. Local Agency Formation Commission* (1987) 191 Cal.App.3d 886, and *Sierra Club v. Contra Costa County* (1992) 10 Cal.App.4th 1212, for the proposition that the trial court does not have the authority to order a remand to the agency before judgment. Those decisions, however, are based on the court's view that in the specific ***42** circumstances that obtained in each case, the remand proceedings and subsequent return to the superior court failed to provide all parties and the public with an adequate hearing concerning the remand issues, thus raising due process concerns. (See *Resource Defense Fund, supra* at p. 900; *Sierra Club, supra,* at p. 1221.)

Here, in contrast, Voices fully participated in the remand hearing as a party, subsequently argued its position at the hearing before the trial court, and further filed this appeal bringing forward the same challenges. There was no lack of opportunity for Voices to review and challenge the agency action during the remand and subsequent judicial proceedings in this case.

"The essential requirements of due process are met when the administrative body is required to determine the existence or nonexistence of the necessary facts before any decision is made [citations] and the party is afforded an opportunity for review by the courts [citation]." (*De Cordoba v. Governing Board* (1977) 71 Cal.App.3d 155, 159.) In this case Voices fully participated in the administrative hearing and was afforded an opportunity for judicial review. Thus its constitutional right to due process was not violated. *(Ibid.)*

Under the circumstances presented here, and for the reasons stated above, the trial court acted properly in remanding the matter to the Regional Water Board for additional hearings on Finding 48 only.

B. The Regional Water Board and the Trial Court Acted Properly In Allowing Additional Evidence in the Remand

Voices contends that the trial court's acceptance and consideration of the evidence produced at the remand hearing was erroneous. Specifically, Voices argues that admission of this additional evidence: (1) was barred by Code of Civil Procedure section 1094.5; and (2) undermines the "integrity ***43** of the judicial process." (Voices Op. Brf. at pp. 37-40.) Neither contention has merit.

As to section 1094.5, the overriding purpose of its rule "restricting review ... to the administrative record" is to ensure that the courts do not "engage in independent factfinding rather than engaging in a review of the agency's discretionary decision." (*Friends of the Old Trees v. Department of Forestry & Fire Protection* (1997) 52 Cal.App.4th 1383, 1391.) Here, additional evidence was introduced at the Regional Water Board's further proceedings, considered by the Board, which issued a supplemental decision, and only thereafter considered by the superior court in its review of that supplemental agency decision. In other words, the trial court simply reviewed additional evidence in the form of supplemental administrative record, not as evidence outside the administrative record, and correctly considered this additional evidence at the post-remand judicial hearing. It did not consider any additional evidence in the first instance, or engage in "independent factfinding;" it did exactly what the stat-

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utes and cases allow: it reviewed the "agency's discretionary decision" which was based, in part, on that additional evidence. *(Ibid,)*.

As to undermining the integrity of the judicial process, Voices's arguments are equally off-mark. Voices argues, for example, that the admission of additional evidence amounted to impermissible post hoc rationalization. As the cases Voices cites make clear, an agency cannot simply offer a new reason or new findings to support what already is a settled and foregone conclusion. (See *Resources Defense Fund v. Local Agency Formation Com., supra*, 191 Cal.App.3d at p. 900, ["the trial court entered an 'interlocutory judgment' remanding the matter to the city council for promulgation of appropriate findings and ordering judgment to be entered after action by the city council or the expiration of 60 days"]; *Bam, Inc. v. Bd. of Police Comrs.*, (1992) 7 Cal.App.4th. 1343, 1346 .)

***44** In this case, additional evidence was offered not simply to rubber-stamp the agency's previous decision, but offered in the course of the agency's full reconsideration of its conclusions on the issue that was remanded. And in this case, the trial court did not pre-ordain the outcome, but made an independent judgment of the agency's decision after remand.

Indeed, review of additional evidence was proper and necessary given the court's prior determination that the agency's initial analysis was inadequate. As reflected in the trial court's post-remand statement of decision: "It was certainly this Court's expectation that the Board would more fully consider additional relevant evidence on the issue of the best technology available ('BTA'). To meaningfully comply with the remand, a more complete inquiry into BTA necessitated the receipt of further information." (Petitioner's Appendix at p. 78.) Based upon the new evidence, the court determined "that the Board engaged in the kind of scrutiny and analysis that the issue required." (Pet. Appen. at p. 76.) The new evidence assisted the trial court in its review of the agency's discretionary decision. (*Friends of the Old Trees v. Department of Forestry & Fire Protection, supra*, 52 Cal.App.4th at p. 1391.)

In its Notice of Hearing for the remand, the Regional Water Board set out the formal hearing procedure before the Board. This included advance submittal of testimony, an opportunity for rebuttal written testimony, and an opportunity to present and cross-examine witnesses. (RAR 000013-0022.) In addition, any Regional Water Board hearing must include public comment on any item on its agenda. (Gov. Code, §11125.7; Cal. Code Regs., tit. 23, §647.3.) Even if the Regional Water Board had not permitted new evidence by the parties, it was required by law to allow public input. Therefore, by definition, there would have been new evidence in the record.

***45** In this case, the Court's order of remand specifically provided that the Regional Water Board "conduct a thorough and comprehensive analysis with respect to Finding No. 48 of said Order No. 00-041." (RAR 000011.) The Regional Water Board made the determination that a full hearing would be the best way to comply with the trial court's order, especially in light of the fact that new evidence in the form of public comment would be part of a new remand record. (RAR 000015.) In addition, Duke Energy had completed work on the upgrade of the Plant, and it was fully operational. It would have been perverse for the agency to ignore the actual data from the plant improvements to assess the questions before it on remand.

This course of proceedings is consistent with applicable law. The procedures allowed on remand are flexible. As stated in 2 Administrative Mandamus (Cont.Ed.Bar 3d ed. 2010) Trial and Judgment, § 14.35 Agency's Further Proceedings, p. 541, a remand's " 'further proceedings' can consist of simply reconvening the administrative hearing in order to give proper notice to interested parties, to hear testimony from a single witness, to consider a

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document, or to adopt proper and adequate findings."

The law allows the court to fashion appropriate remedies to the situation, including the introduction of additional evidence where an agency has been ordered to review its determinations. In *Carlton v. Department of Motor Vehicles* (1988) 203 Cal.App.3d 1428, 1435, the court stated: "Where an administrative decision is set aside for insufficiency of the evidence it is customary to remand the matter to the agency for a new hearing...." *(Ibid.)* With a new hearing, the court agreed, it was "conceivable the DMV could produce competent evidence sufficient to establish" the petitioner's responsibility for the underlying accident, (*Id*. at pp. 1434-1435.) Other cases recognize the agency's discretion to consider ***46** new evidence on remand. (See, e.g., *Zink v. City of Sausalito* (1977) 70 Cal.App.3d 662, 666 [where "the trial court's independent review of the evidence determines that some of the substantive findings ... are unsupported by the evidence, remand to the administrative body is the only means of permitting it to exercise its discretion"]; *Garcia v. California Emp. Stab. Com*. (1945) 71 Cal.App.2d 107, 110 [due to "the insufficiency of the evidence in the record filed herein to support the findings of the board, it is necessary that this application be remanded for further evidence"].)

The Regional Water Board's actions in reviewing additional evidence and the trial court's support of that decision was well warranted by the unique facts of this case and is supported by law.

CONCLUSION

For the reasons stated above, Regional Water Board urges this Court to find that the trial court had no jurisdiction to consider Voices Petition for Writ of Mandate. The Regional Water Board also asks this Court to uphold the trial court's order and judgment.

VOICES OF THE WETLANDS, Petitioner, v. CALIFORNIA STATE WATER RESOURCES CONTROL BOARD; California Regional Water Quality Control Board, Central Coast Region; Duke Energy Moss Landing LLC; and Duke Energy North America, LLC, Respondents.
2010 WL 1229127 (Cal.) (Appellate Brief)

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ATTACHMENT 5

BERKELEY ECONOMIC CONSULTING, INC.
2531 NINTH STREET
BERKELEY, CA 94710

April 13, 2010

Mr. David Asti
Corporate Environmental Policy
Southern California Edison

RE: Comment Letter – OTC Policy

Dear Mr. Asti:

I. Introduction

Thank you for the opportunity to comment on the State Water Resources Control Board's draft policy, "Statewide Water Quality Control Policy on the Use of Coastal and Estuarine Waters for Power Plant Cooling."

I have extensive experience in the economics of natural resources and the environment. I hold the Thomas J. Graff chair in environmental and resource economics at UC Berkeley, where I am also co-director of the Berkeley Water Center. I have served on panels of the U.S. Environmental Protection Agency's Science Advisory Board and the U.S. National Academy of Sciences. Prior to my current position, I was a senior economist at President Clinton's Council of Economic Advisers. For reference, my *curriculum vitae* is attached as Exhibit A.

II. The Use of Economic Analysis to Evaluate and Quantify the Benefits of Environmental Policy and Regulation Is Generally Accepted in the Economic and Regulatory Community.

The theory and practice of benefits estimation is taught to every graduate student in environmental economics, and the subject is one of the major areas of inquiry in environmental and resource economics.[1] Regulatory agencies routinely use economic methods to evaluate environmental benefits when making important decisions.

Environmental economists characterize the natural environment as providing flows of goods and services that are of value to people. Changes in the environment that disrupt these resource flows may result in changes in economic welfare. For example, water in rivers and streams may be diverted for human consumption. Changes in climate or other factors that reduce these flows may result in water scarcity and cause a loss of economic welfare. Reductions in air quality may cause asthma or other respiratory problems that

[1] Freeman, M. A. III., *The Measurement of Environmental and Resource Values: Theory and Methods*, Resources for the Future, 1993. Hanley, N., J. Shogren, and B. White, *Introduction to Environmental Economics*, Oxford University Press, 2001.

people may wish to avoid. Similarly, changes in water quality that reduce fish stocks may also reduce economic welfare.

Environmental benefits fall into two major categories: use benefits and non-use benefits. Use benefits are those associated with actual use of the resource—such as fishing or various water-related activities. Use benefits can be further subdivided into direct and indirect benefits. Indirect benefits and direct benefits may be classified as market or non-market. Non-use benefits, in contrast, accrue to individuals who do not use the resource either directly or indirectly, but nonetheless place a value on preventing its impairment.

Economists have developed a number of generally accepted and reliable approaches to the evaluation and quantification of both use and nonuse benefits. Illustrative approaches include the following:

A. Travel Cost Method.

The concept of environmental benefits relating to noncommercial, recreational use of a resource is well established in microeconomic theory, and is consistent with classical notions of consumer surplus. For example, most recreational fishing and boating provides a benefit to its participants. It is a benefit for which they would, if they had to, pay more than the current nominal fishing license fee or launch fee. The fact that they do not have to pay what the market will bear results in the visitor retaining a consumer surplus as extra income in their wallet or purse. In the case of recreation, economists rely on visitor travel behavior to trace out a demand curve for water-based recreation at a particular site. From the demand curve, it is possible to estimate the additional amount a visitor would pay for continued access to the water-based recreation resource. By observing travel behavior across sites with high water quality versus low water quality, the analyst can estimate the incremental value that improved water quality provides to fishing.

Valuation of increases in recreational catches must recognize that there are no directly observable market prices for recreational catch. It is clear that recreational fishermen value the fishing experience and, indeed, often spend far more on fishing equipment and supplies than it would cost to buy the fish in the market. Economists have developed various methods for estimating the value that fishermen receive from additional catch and how the value changes at different overall catch rates. Methods based on travel costs are generally considered the most reliable. Such studies gather data on the characteristics (including catch rate) of different fishing destinations and how often fishermen from different areas visit each of those destinations. Fishermen implicitly reveal how much they value different attributes by their willingness to incur higher travel costs to reach destinations with those attributes. Using statistical techniques, the dollar values of these attributes (including catch rates) can be estimated.

B. Contingent Valuation Method.

To measure the nonuse values resulting from water quality regulations, the best current practice in environmental economics calls for the researcher to design and implement a hypothetical referendum, where households are asked if they would vote in favor of a

particular resource protection action, if it cost their household $X. The amount of $X varies across households, so that a demand curve can be traced out. From this demand curve, willingness to pay is calculated. This technique is commonly referred to as the contingent valuation method (CVM).

C. Habitat Equivalency Analysis.

More recently, environmental economists and resource agencies have embraced the use of Habitat Equivalency Analysis (HEA) as a technique for valuing environmental benefits. In particular, HEA has gained traction as a methodology used to determine compensation for natural resource injuries. The principal concept underlying HEA is that the public can be compensated for past losses of habitat resources through habitat replacement projects providing additional resources of the same type. Natural resource trustees have employed HEA for groundings, spills and hazardous waste sites. Habitats involved in these analyses include seagrasses, coral reefs, tidal wetlands, salmon streams, and estuarine soft-bottom sediments.

HEA is not as well grounded in economic theory as CVM as it provides an estimate of the cost of restoration but not the public's willingness to pay for it. Yet, the method is usually easier to implement than CVM and is often a practical way to resolve a regulatory dilemma.[2] The implicit assumption of HEA is that the public is willing to accept a one-to-one trade-off between a unit of lost habitat services and a unit of restoration project services (i.e. the public equally values a unit of services at the injury site and the restoration site). HEA does not necessarily assume a one-to-one trade-off in resources, but instead in the services they provide. Consider a marsh as the resource and primary productivity a resource service. Suppose the replacement project provides only 50 percent of the productivity per acre of marsh as the injured site would have provided, but-for the injury. In order to restore the equivalent of lost productivity per year, then, the replacement project requires twice as many acres of marsh. Habitat equivalency analysis is applicable so long as the services provided are comparable.

III. Various Federal and State Agencies Use the Economic Analysis of Environmental Benefit In Official Decisionmaking.

The travel cost and contingent valuation methods have been used successfully by federal agencies for decades. Beginning as early as the 1970s, agencies such as the Army Corps of Engineers and the Bureau of Reclamation were required to use the travel cost method and contingent valuation method to value recreation benefits at certain facilities.[3] When Congress passed the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), the U.S. Department of Interior adopted TCM and

[2] Unsworth, R. "Economic Costs of Once-Through Cooling Impacts," in Issues and Environmental Impacts Associated with Once-Through Cooling at California's Coastal Power Plants: Appendix E, California Energy Commission, June 2005

[3] U.S. Water Resources Council, "Procedures for Evaluation of National Economic Development (NED) Benefits and Costs and Other Social Effects (OSE) in Water Resources Planning (Level C), Final Rule," Federal Register, 1980, vol. 45, no. 190, pp. 64448-66.

CVM as two methods for valuing the loss in both recreation and existence values from toxic waste sites and hazardous materials spills.[4] When industry challenged the use of CVM, the Court of Appeals upheld CVM and ordered the Department of Interior to broaden its use to measure existence values (what the court called passive use values) even when there was direct, on-site recreation use of the resource.[5]

Perhaps one of the most prominent uses of CVM has been the U.S. Bureau of Reclamation's evaluation of the economic effects of re-regulating the flow releases from Glen Canyon Dam. Because the dam is upstream from Glen Canyon National Recreation Area (GCNRA) and Grand Canyon National Park (GCNP), peaking power operations at the dam were causing negative impacts to downstream fishing and rafting. The first studies carried under the auspices of the Corps used CVM to quantify how the value of fishing in GCNRA and rafting in GCNP would change with more base flows as compared to peaking power. A survey of visitors to the parks indicated that the economic effects could be substantial.[6] Rather than recreation versus hydropower, the focus of the policy debate then turned to finding a release pattern that could increase the economic value of all the multiple benefits of the resource. For a variety of reasons, more even flows were put in place while the final environmental impact studies took place. Congress formalized these flows when it passed the Grand Canyon Protection Act of 1992.

Contingent valuation and travel cost studies are commonly used in FERC proceedings.[7] For instance, Pacific Gas and Electric has repeatedly relied upon non-market valuation studies to estimate the recreation benefits associated with alternative instream flow requirements when making their FERC license renewal applications. One such study was carried out on the North Fork of the Feather River in California.[8] Idaho Power Company commissioned a CVM study of the economic benefits of alternative flow releases over Shoshone Falls on the Snake River. Their intention is to evaluate whether the gain in recreation benefits from more water passing over the falls is worth the power foregone from not running that water through the turbines. The analysis suggested that during the summer months, triple the current minimum rate of 50 cfs would be economically efficient,[9] but larger flows would not be economically justified. This example illustrates the usefulness of non-market valuation. While it demonstrates that huge increases in minimum instream flow requests are not efficiency improving, it also suggests more than trivial increases in flows would be justified.

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[4] U.S. Department of Interior, "Natural Resource Damage Assessments; Final Rule," Federal Register, 1986, vol. 51, no. 4, pp. 27674-27753.

[5] *State of Ohio vs. U.S. Dept. of Interior*, 880 F.2d 432 (D.C. Cir. 1989).

[6] Bishop, R. , C. Brown, M. Welsh and K. Boyle, "Grand Canyon and Glen Canyon Dam Operations: An Economic Evaluation," in K. Boyle and T. Heekin, Eds., W-133, Benefits and Costs in Natural Resources Planning, Interim Report #2, Department of Agricultural and Resource Economics, University of Maine, Orono, 1989.

[7] Shabman, L. and K. Stephenson, "Environmental Valuation and Decision Making for Water Project Investment and Operations: Lessons from the FERC Experience," U.S. Army Corps of Engineers, March 2007.

[8] Loomis, J. and J. Cooper, "Economic Benefits of Instream Flow to Fisheries: A Case Study of California's Feather River," Rivers vol. 1, no. 1, January 1990, pp. 23-30.

[9] Loomis, J. and M. Feldman, "An Economic Approach to Giving 'Equal Consideration' to Environmental Values in FERC Hydropower Relicensing," Rivers vol. 5, April 1995, pp. 96-108.

Environmental benefit estimation studies have played a significant role in California water resource debates, and the State Water Resources Control Board has demonstrated a willingness to rely on the results of these studies. Perhaps the best historic example of this phenomenon is in the public trust case involving water flows into Mono Lake. Surveys of the California citizenry showed that in general people cared about the Mono Lake ecosystem. Using the hypothetical referendum method, the dollar sacrifice these people would make to provide water for fish and birds could be quantified and compared to the replacement cost of water from other sources including agricultural and municipal water conservation.

The SWRCB was sufficiently impressed with the initial household survey that they required the contractor preparing the state Environmental Impact Report to perform a far more thorough contingent valuation analysis. The economic values from that survey were published in the EIR. These dollars of willingness to pay to protect the Mono Lake ecosystem were counted dollar for dollar as equivalent to hydropower and water supply benefits and costs in the economic analysis of the different water allocation alternatives.[10] In the end, the SWRCB ordered that the flows into Mono Lake be increased and Los Angeles' water right be reduced by nearly half.

IV. Cost-Benefit Analysis Is a Well-Established Methodology for Providing Information to Decision-Makers Faced With the Task of Determining Whether a Project Should Be Undertaken and, If So, At What Scale.

The cost-benefit approach to regulatory analysis involves a systematic measurement of the effects of the project, both positive and negative, that would accrue to members of society if a particular action were undertaken. The basic rationale for relying on an economic analysis of a particular decision—such as whether to require additional fish-protection technologies at a power plant—is to help put society's resources to their most valuable uses.[11]

Many agencies use cost/benefit analysis to decide whether to approve or disapprove a proposed regulatory action. Cost-benefit analysis of regulation enjoys bipartisan support, and every president since Jimmy Carter has required that agencies estimate the costs and benefits of major rules for review by the Office of Management and Budget (OMB). As part of that review process, OMB has developed guidelines for conducting cost-benefit analysis.[12] EPA also has issued its own guidance for such analyses, most recently in 2000

[10] Jones and Stokes Associates, "Draft Environmental Impact Report for the Review of the Mono Basin Water Rights of the City of Los Angeles," Prepared for California State Water Resources Control Board, Division of Water Rights, Sacramento, CA, 1993.
[11] Breyer, Stephen G., *Breaking the Vicious Circle: Toward Effective Risk Regulation*, President and Fellows of Harvard College, 1993.
[12] OMB Circular A-94, "Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs," October 29, 1992.

in its Guidelines for Preparing Economic Analyses.[13] In developing the Phase II regulations under Section 316(b), EPA issued various case studies evaluating the costs and benefits of alternative technologies to protect fish.[14]

In California, the California Attorney General (AG) has recently defended the Regional Water Quality Control Board's use of cost-benefit analysis in a rulemaking concerning the use of cooling towers at coastal power plants. On March 8, 2010, the AG argued to the California Supreme Court that it had properly considered the costs and benefits of alternative cooling technologies in making its Section 316(b) determination in regard to the Moss Landing Power Plant.[15] To estimate the benefits that can be achieved with alternative technologies, the Regional Board used the Habitat Equivalency Analysis method described above. According to the Regional Board, this approach is one of several environmental valuation methodologies and was recommended by the EPA at the time of the Regional Board's decision. To implement this approach, the Regional Board:

1) Estimated the loss of species to the power plant from entrainment;

2) Expressed the loss as a percentage of estimated total populations of the species in the Elkhorn Slough (i.e. the affected water body);

3) Assumed the loss of the percentage of the species was equivalent to the loss of a percentage of the species' productive habitat; and

4) Estimated the cost of replacing that habitat.[16]

The AG went on to elaborate all of the substantial evidence that supported its approach to valuing environmental benefits.[17]

The AG defended its use of cost-benefit analysis by noting that the US Supreme Court, "held that cost-benefit analysis can be used to determine compliance with section 316(b), and the Court approved the 'wholly disproportionate' standard" that the Regional Board implemented. The AG refuted plaintiffs' claim that the Regional Board's cost-benefit analysis was not supported by the administrative record.[18] The Regional Board used the HEA methodology described above to conclude that the costs were wholly disproportionate to the benefits. The Regional Board argued that it weighed a number of

[13] U.S. Environmental Protection Agency, "Guidelines for Preparing Economic Analyses," September 2000.
[14] U.S. EPA, "National Pollutant Discharge Elimination System--Final Regulations to Establish Requirements for Cooling Water Intake Structures at Phase II Existing Facilities," Federal Register, July 9, 2004, vol. 69, no. 131.
[15] Voices of Wetlands, Petitioner, v. California State Water Resources Control Board; California Regional Water Quality Control Board, Central Coast Region; Duke Energy Moss Landing, LLC; and Duke Energy North America, LLC, Respondents, No. S160211, March 8, 2010, "Answering Brief on the Merits of Respondent California Regional Water Quality Control Board, Central Coast," p. 21.
[16] Ibid. pp 23-24.
[17] Ibid. pp 24-25.
[18] Ibid. p. 21.

factors and determined that the cost of alternative technologies ranged from $50-$114 million while the benefits were approximately $7 million.[19]

V. While the Risk of Underestimation of Environmental Benefits Has Been Raised and Debated, the Issue Principally Relates to Nonuse Value.

Some criticize cost-benefit assessment for environmental values by arguing that non-use benefits are systematically underestimated. Recall that non-use benefits accrue to individuals who do not use the resource either directly or indirectly, but nonetheless place a value on preventing its impairment.

In reality, early nonuse approaches such as CVM resulted in significant overestimation of nonuse value. Many economists question the use of stated preference to determine willingness to pay for a good, preferring to rely on people's revealed preference in binding market transactions.[20] Early contingent valuation surveys were often open-ended questions of the form "how much compensation would you demand for the destruction of X area" or "how much would you pay to preserve X". Such surveys potentially suffer from a number of shortcomings; strategic behavior, protest answers, response bias and respondents ignoring income constraints. Early surveys used in environmental valuation seemed to indicate people were expressing a general preference for environmental spending in their answers, described as the embedding effect.[21]

In response to criticisms of contingent valuation surveys, a panel of high profile economists (chaired by Nobel laureates Kenneth Arrow and Robert Solow) was convened under the auspices of the National Oceanic and Atmospheric Administration (NOAA) in 1993. The panel heard evidence from 22 expert economists and published its results in 1995. The recommendations of the NOAA panel were that contingent valuation surveys should be carefully designed and controlled due to the inherent difficulties in eliciting accurate economic values through survey methods.[22]

The most important recommendations of the NOAA panel were the following:

- Personal interviews should be used to conduct the survey, as opposed to telephone or intercept methods.

- Surveys should be designed in a yes or no referendum format put to the respondent as a vote on a specific tax to protect a specified resource.

- Respondents should be given detailed information on the resource in question and on the protection measure they were voting on. This information should include

[19] Ibid. p. 23.
[20] Diamond, P.A. and Jerry A. Hausman, "Contingent Valuation: Is Some Number better than No Number?" The Journal of Economic Perspectives, Autumn, 1994, vol. 8, no. 4., pp. 45-64.
[21] Kahneman, D. and J. L. Knetsch, "Valuing Public Goods: The Purchase of Moral Satisfaction," Journal of Environmental Economics and Management, January 1992, vol. 22, issue 1, pp. 57-70.
[22] Arrow, K., R. Solow, P. R. Portney, E. E. Leamer, R. Radner, and H. Schuman, "Report of the NOAA Panel on Contingent Valuation," Federal Register, January 15, 1993, vol. 58, no. 10, pp. 4601-4614.

threats to the resource (best and worst-case scenarios), scientific evaluation of its ecological importance and possible outcomes of protection measures.

- Income effects should be carefully explained to ensure respondents understood that they were to express their willingness to pay to protect the particular resource in question, not the environment generally.

- Subsidiary questions should be asked to ensure respondents understood the question posed.

The guiding principle behind these recommendations was that the survey operator has a high burden of proof to satisfy before the results can be seen as meaningful. Surveys meeting these criteria can be expensive to operate and to ameliorate the expense of conducting surveys the panel recommended a set of reference surveys which future surveys could be compared to and calibrated against. The NOAA panel also felt, in general, that conservative estimates of value were to be preferred and one important consequence of this decision is that they recommended contingent valuation surveys measure willingness to pay to protect the good rather than willingness to accept compensation for the loss of the resource.

As a result of these safeguards, current contingent valuation methodology corrects for these shortcomings, and current empirical testing indicates that such bias and inconsistency has been successfully addressed. Particularly in situations where surveys provide impingement and entrainment information, there is no barrier to calculating the environmental benefits of cooling water regulation.

Further, the fact that environmental benefits are somewhat uncertain even in biological terms should not be a deterrent to economic analysis of the benefits of regulation. Use and nonuse values are routinely calculated in situations where the environmental effects of regulation are not completely known (indeed, this is almost always the case), and environmental benefits can be considered in a cost-benefit test with a proportionality factor attached to account for this uncertainty. Monte Carlo and other methods may also be used to give a more systematic treatment of uncertainty.

VI. The Costs of the "Best Technology Available" (BTA) Proposed Under Track I (Wet Cooling Towers) Are Amenable to Reliable Calculation.

The costs of the BTA proposed under Track I (wet cooling towers) are amenable to reliable calculation. So too, are alternative technological approaches that might be employed under Track II.

There are four general categories of costs that are typically relevant to each regulatory alternative for power plant cooling. The costs include up-front capital costs for construction and purchase of equipment plus ongoing operation and maintenance costs. These two types of costs generally are estimated in the first instance by engineering firms based on their assessment of the physical requirements for a particular alternative. In

addition to capital and operating and maintenance costs, some regulatory alternatives reduce electricity generated by the plant, and that lost output is valued based on the costs of replacing the generation and capacity. Finally, in some cases, control options also entail some environmental costs, particularly those associated with changes in air emissions.

With a reliable estimate of benefits and costs, such as can be made with respect to impingement and entrainment effects of power plants, the cost-benefit test can be readily completed.

As with environmental benefits, uncertainty about future costs of reducing impingement and entrainment should not be a barrier to making regulations based on cost benefit calculations. Power plants are governed by NPDES permits with 5-year durations, and which also contain various reopeners that would allow for adjustments in the future.

VII. The SWRCB Will Depart From Generally-Accepted Environmental Decision-Making If It Adopts A Policy Without A Cost-Benefit Test.

Regulatory agencies routinely use economic methods to evaluate environmental benefits when making important decisions. I see no rational basis for the SWRCB to depart from that practice here. Environmental benefit estimation and cost benefit analysis are used in numerous regulatory processes, even in cases where there are nonuse benefits of regulation and the potential for uncertainty about benefit levels.

The USEPA has adopted cost benefit analysis in its regulation of impingement and entrainment effects, and has developed a guidance document outlining its preferred methods for measuring the environmental benefits of the policy.[23] These methods provide for consideration of use and nonuse values of affected resources. In the *Entergy* decision, the U.S. Supreme Court affirmed USEPA's ability to use cost benefit analysis in regulating the use of marine and estuarine waters for power plant cooling.

In the past, the SWRCB has itself relied on monetary estimates of environmental benefits, and has argued that available economic methods are reliable enough to be used as a basis for regulation. In the public trust case involving Mono Lake, the SWRCB considered survey evidence on the economic value of the Mono Lake ecosystem. Just last month, the AG argued to the California Supreme Court that the environmental benefits of regulating coastal power plant cooling can be reliably estimated using the Habitat Equivalency Analysis method, as had been determined by the RWQCB.

Sincerely,

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[23] U.S. EPA, "Economic and Benefits Analysis for the Proposed Section 316(b) Phase II Existing Facilities Rule," February 28, 2002.

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