SALTON SEA STUDY
INSTITUTIONAL LEGAL ANALYSIS

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I. Introduction

This report is intended to set forth a summary of the institutional and legal structure and requirements which will apply to the primary Salton Sea management options being considered in the Salton Sea study.

The principal management options included in the course of the institutional and legal analysis are summarized in the section which follows. Based upon these very general assumptions as to the nature and location of the management actions, the agencies discussed in Section IV were surveyed.

For each agency, a list of "triggering factors" was reviewed to determine how each of the management options would provoke the agency's involvement in approving, implementing or commenting upon a proposed management action. These factors are summarized in Table 1.

In addition to the agency review, the report includes a summary of other legal constraints that would affect all proposed actions. These are set forth in Section III.

The analysis included in this report is intended as a preliminary survey to establish within available time and resources the legal and institutional setting in which the management options must be considered. Both time and informational constraints necessitated the elimination of certain agencies from this analysis. However, a brief discussion of the rationale for the exclusion of some of these agencies is merited and is included in Section III.F.

Table 1

Triggering Factors for Agency Involvement

1. Management responsibility or ownership of specific geographical areas.
2. Change in a discharge of water or pollutant.
3. Change in pollution levels.
4. Potential for harm or death to fish and wildlife, including migratory birds.
5. Increase or decrease in water flow.
6. Flooding or rescission of water levels.
7. Creation of a solid or hazardous waste requiring disposal.
8. Production and/or transmission of electrical energy.
9. Physical entry into water or onto land for construction of project facilities.
10. Crossing of international borders.
11. Management expertise.

II. Summary of the Principal Alternatives

Four principal management alternatives provided the factual assumptions for the legal and institutional analysis. A brief summary of these alternative scenarios is set forth in this section. The summary of the in-sea impoundment option was based upon the description of this alternative presented in the Draft Environmental Impact Statement, Salton Sea Project (1974), prepared by the Department of interior and the Resources Agency of the State of California. The summaries of the other alternatives analyzed in this report were based upon descriptions of these alternatives that evolved through discussions of the alternatives during the compilation of this report. The various alternative approaches to Salton Sea problems involve different mixes of agency responsibility and action. Each approach, or variant, creates different intersections with existing local state, tribal, federal and international governmental authority. Similarly, each variant may highlight different gaps in existing authority that need filling before implementation could be achieved. What follows is a brief description of the major features of the alternatives which could either implicate existing agency authority or promote a legislative grant of new agency authority.

A. No Action Alternative

The No Action alternative is the maintenance of the status quo approach to regulating the Salton Sea. Some decrease in flooding will likely occur following implementation of management actions required by State Water Resources Control Board Decision 1600 concerning the water conservation practices of the Imperial Irrigation District (IID). The salinity levels in the sea would continue to increase due to the evaporation of water. This increase could be exacerbated by decreased water inflow since less water would be available to dilute the salts in the sea. Pollution levels will also increase relative to the total volume of water in the sea.

Several agencies may become involved in the issues confronting the Salton Sea, either voluntarily or involuntarily, should the "no action" alternative be pursued. The rise in the level of salinity and pollution relative to the amount of water that will continue to flow into the sea will trigger the management responsibility of agencies charged with the duty to protect natural resources and the wildlife that depend on those resources. Agencies with responsibility over the discharge of waters and pollutants have also been examined to determine the relationship between their statutory duties and the increase in the problems associated with the Salton Sea.

Salinity Increase. State and federal salinity standards could be violated, involving the Regional Water Quality Control Board, Colorado River Basin, Region 7 (RWQCB); the State Water Resources Control Board (SWRCB) and the Environmental Protection Agency (EPA). The salt water fishery would gradually or dramatically decline, along with the water fowl that rely upon the fishery for their existence. This decline might violate the State Fish and Game Code and federal wildlife provisions. The California Department of Fish and Game (DF&G) and federal Fish and Wildlife Service (F&WS) would consequently become involved. In addition, recreation-dependent businesses might seek common law remedies for damages.

Pollution Increase. State and federal water quality standards could be violated. If pollution continues to worsen and migratory water fowl are adversely affected, international treaties may also be violated. DF&G and F&WS would again become involved. Closures of part or all of the Sea for body contact recreation or sport fishing could occur, involving the State Department of Health Services and the county health department, the RWQCB, SWRCB, and the State Department of Parks and Recreation. Violations of state and federal water quality standards could occur or be exacerbated, involving the Environmental Protection Agency, SWRCB and RWQCBs. International negotiations involving the International Boundary and Water Commission, U.S. Department of State, EPA, Mexican Government and Mexicale Valley governments could be provoked by the degradation of the New River. Public health and private party impacts could lead to personal injury litigation.

Water Level. The litigation by private landowners against the CVWD and IID, and between those districts, which started in the late 1970's, will continue. The flooded state park may be restored and private resorts revised as waters recede. Shoreline land use regulations by county and tribal authorities may restrict development in the light of the recent flood experience.

The adverse trends, associated triggering mechanisms, and principle agencies likely to become involved under the No Action alternative are summarized in Table 2.

B. In-Sea Impoundment

A 37-mile dike would be constructed in the southeast end of the Sea. The dike would completely enclose an area of approximately 50 square miles, forming an impoundment area. Both the construction and operation of the impoundment would be subject to the review of various state and federal agencies. Two gates would permit the flow of water into and out of the impoundment. The dike would be

Table 2

A Summary of Principal Agency Authorities and Responsibilities, Should Adverse Trends at Salton Sea Continue

Adverse Trends	Triggering Event	Principal Responsible Agencies
1. Salinity continues to increase	1a. Exceeds specified standard(s)	-RWQCB -SWRCB -EPA -USBR*
	1b. Adversely affects fish and wildlife	-CF&G -FWS -RWQCB -SWRCB
2. Pollution at unsatisfactory levels	2a. Exceeds health standards	-CA Dept. of Health Services -RWQCB -SWRCB -EPA -Gov't of Mexico -Int'l Boundary & Water Comm. -USBR*
	2b. Adversely affects fish or wildlife	-CF&G -FWS -RWQCB -EPA -SWRCB
3. Water levels at the Sea increase	3a. Flooding	-SWRCB -IID -CVWD -Imp. County -Riverside Cty. -CA Parks & Rec. -USBR*

*The scope of USBR involvement cannot be definitively stated at this stage. See section IV.B.1.a.

located between one half mile and one mile from the shore of the sea. Saline water from the Sea would be diverted into the impoundment and evaporated. The diversion of water might activate the authority of those agencies with responsibility for the regulation of appropriation and diversion of water.

Impoundment of the water prior to evaporation will permit the isolation of salt residues and will prevent the mixing of salt residues with the remaining water in the sea. The salt residues will be stored in the impoundment for an undetermined period of time. It is not currently known how the residual salts will be managed once the impoundment reaches capacity or the level of salt in the Sea has stabilized. Storage of the salt and other residual components of the water may be regulated as the storage or disposal of a solid waste.

The rate of Sea water evaporation should be unaffected. Therefore, there should be no significant water level fluctuation attributable to the construction and operation of the impoundment.

The area of the impoundment between the shoreward side of the dike and the New and Alamo Rivers will form a freshwater channel. Two causeways will connect the impoundment to the shore of the lake. The causeways are solid structures that form a wall between the channel area and the remaining sea. Each of the causeways will have a bridge allowing the passage of small vessels. The causeway will not connect with state park land or federal wildlife refuges on the shore of the Sea.

The continuing freshwater inflow from the New and Alamo Rivers will dilute the salinity level in the area of the sea outside the impoundment. Diversion of saline water to the impoundment may also have the effect of increasing the concentration of pollutants in the channel area. However, it is unclear whether the physical structures creating the channel will inhibit the flow of the New and Alamo River waters into the main body of the Sea, resulting in an elevated pollution level in the channel due to decreased mixing and dilution.

Two wildlife refuges are located in the vicinity of the dike and the channel. If pollution in the channel should rise as a result of the impoundment, the proximity of the channel to the refuges could also have a negative impact on the wildlife sanctuaries. Agencies concerned with the protection of fish and wildlife, as well as the agencies responsible for the operation and protection of the refuges, would therefore have a role in the formulation of a safe impoundment plan.

The channel area would require constant dredging to remove silt deposited by the New and Alamo Rivers. The dredged material may be used to create an expanded wildlife habitat. The disposal of the dredged material in the Salton Sea will require a permit under section 404 of the Federal Clean Water Act. If this plan cannot be carried out, it will be necessary to dispose of the dredged material in another manner, such as disposal to a landfill or into other portions of the sea.

California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) would require environmental impact analysis, reporting and commenting. The value of the shoreline abutting the pond would be diminished for residential/recreational purposes. The reduction in habitat area for fish and water fowl could be a matter of DF&G and F&WS concern.

C. Pump out/Evaporation/Solar Generation

This alternative would involve the dedication of existing public land or the acquisition of private land for use as an evaporation site and solar power production facility. Possible use of the evaporation site by wildlife would be a matter of department of Fish and Game and Fish and Wildlife services concern.

A pump would be constructed on land adjacent to the sea shore. Identification of the agencies with responsibility over this aspect of the project, and the degree to which the agency would be involved, is dependent in part upon the ultimate location of the pump. Water would be pumped through a pipeline to a vertical evaporation process area. Construction of the pipeline would again require agency approval.

The process area will be located in close proximity to the Salton Sea. A vertical evaporation process would dispose of much of the water diverted from the Sea. The remaining residual materials and briny water would be stored in ponds and used to generate solar energy. The solar energy plant, as presently contemplated, would be initiated with the construction of a module capable of producing an estimated 2.5 megawatts of energy. However, as the amount of water in the ponds increases, the capacity of the plant would be expanded in 2.5 MW increments. The ultimate capacity of the plant is estimated to be 25 MW per year.

It might be necessary to arrange for the disposal of the briny waters at two phases of the project. First, during the early stages of project operation, briny water may be produced at levels in excess of the solar facility's ability to utilize the waters. Second, once the plant

reaches its capacity, residual water from the vertical evaporation process may have to be disposed of elsewhere.

D. Gulf Waterway Option

A navigable waterway system would be built which would cross the border of the United States and Mexico, connecting the sea with the Gulf of California. The system would incorporate a series of locks that would allow the exchange of water between the sea and the Gulf. Various federal, international and Mexican agencies would be involved in planning and approving this alternative.

The diversion of saline water into the Gulf of California would necessarily involve an accord between United States and Mexico. This would take the form of either a "minute" to the existing 1945 treaty or a new treaty, implicating the International Boundary and Water Commission, and domestically would involve the Department of State, the Department of Interior and the EPA. The Colorado River Board, Salinity Forum, Colorado River Basin State, Bureau of Reclamation, CVWD, IID, SWRCB, RWQCB and EPA would be among the principal players.

III. Institutional and Legal Considerations

Some parts of the legal and institutional context arise from generally applicable environmental, natural resource and civil law rather than from responsibilities or authorities granted to a specific agency. This section provides an overview of such laws including those relating to land ownership, Salton Sea waters, CEQA and NEPA, civil litigation concerning flooding, and laws relating to Colorado River apportionment.

A. Land Ownership

Any works constructed on the Salton Sea bed or on adjacent lands would, of course, require either approval of the landowner or exercise of any available condemnation authority. Most of the lands in the Salton Sea area are public federal lands, and fall into one or more of the following four primary reservations. In 1924 and 1928, the President of the United States executed Public Water Reserve Order Nos. 90 and 114 for withdrawal of lands located in and surrounding the Salton Sea. The Public Water Reserve consists of 123,360 acres of public land lying below an elevation of -220 feet. These lands were designated as a repository to receive and store agricultural, surface, and subsurface drainage waters.

The Bureau of Land Management (BLM) has withdrawn or acquired an additional 111,170 acres below elevation -220 feet and most of those areas are included in the Public Water Reserve. BLM also has withdrawn lands above -220 feet which were acquired for potential agricultural development or for specific purposes such as rights-of-way. Public Law 728 of the 81st Congress (1950), authorized the Secretary of the Interior to purchase all Indian lands in the area below -220 feet to be held as part of the drainage reserve (but no acquisition has yet occurred). The Imperial Irrigation District (IID) purchased lands of the Southern Pacific Company below -230 feet.

The Salton Sea National Wildlife Refuge once consisted of 32,407 acres along the Sea shore, but all of this land has since been flooded by rising water levels. The Federal government continues to manage a portion of the remaining shoreline which it leases from IID. The U.S. Navy is another major land holder in the area. The Navy operates the Salton Sea Base and has air and surface rights over a large portion of the Sea. The total area of the military reservation encompasses approximately 80 square miles and includes military withdrawal lands, other federal agency withdrawal lands, Navy-owned lands, other federally owned lands, and leased lands.

The Torres-Martinez Indian Reservation, located in the northwest area of the Sea, encloses about 25,000 acres of Indian Trust lands, more than 18 sections (or portions of sections) of which have been submerged by the Sea.

The State of California, Imperial and Riverside Counties, the Imperial Irrigation District and private owners constitute the other land owners in the area. Some state school land sections may underly the Sea. As noted in other sections of this report, the Imperial Irrigation District has acquired, in fee title or through flooding easements, most of the privately held lands below -220 feet.

B. Salton Sea Waters

At the turn of the century, the Salton Sea was a dry lake bed. Around 1904, farm drainage waters from surrounding areas began to be directed to the Sea. In 1905 and 1906, flooding from the Colorado and Gila Rivers caused the creation of a large lake in the sea bed. The water level in the sea rose to -195 feet above sea level. After the flooding ceased, the water level began to decline until 1925. At that time, the water level again began to increase due to natural and irrigation return flows. The New and Alamo Rivers constitute the primary natural inflow to the Sea.

Regulation of the Salton Sea by the federal and state agencies discussed in this report will often be dependent upon whether the body of water constituting the Sea is within the class of waters over which the particular agency has been granted jurisdiction. The surface of the Salton Sea and adjacent wetlands are subject to state and federal jurisdiction with regard to pollution control. Any pollution issues involving the Sea bed and land surrounding the Sea would be covered primarily by State regulation.

State agencies, such as the State Water Resources Control Board and the Regional Water Quality Control Board, have generally been given authority over the "waters of the state". This term encompasses any water, surface or underground and specifically including saline waters, which is located with the State, within the boundaries of the state or, where applicable, a particular region of the State.

The United States Bureau of Reclamation has jurisdiction generally over the waters involved in projects created under the Bureau's auspices. Other federal agencies, such as the Environmental Protection Agency and the Army Corps of Engineers, have been given authority over the "navigable waters" of the United States. This term has traditionally been broadly defined by the Courts to include

waters that are, were, or could be made to be navigable. In 1972, the Federal Clean Water Act (CWA) expanded this definition to the limits of the commerce clause of the United States Constitution. The CWA states that the term navigable waters means waters of the United States, including territorial seas. Neither the traditional nor expanded federal definition reaches groundwaters.

C. The California Environmental Quality Act and the Permit Review Process

The California Environmental Quality Act (CEQA), mandates the environmental review of all projects that could have a significant impact on the environment. If CEQA applies, it may impose a number of legal constraints which may limit the scope of the project. For example, CEQA requires that public agencies consider the possible environmental effects of the proposed project, any alternatives to the project, and feasible measures to mitigate the potentially adverse environmental effects of the project.

If the proposal under consideration is a project and is not subject to either a statutory or categorical exemption, the lead agency will generally conduct an Initial Study Survey to determine whether the project has the potential to result in significant impacts on the environment. In complying with this requirement, the agency may use a similar analysis that was prepared pursuant to the National Environmental Policy Act (NEPA).

If, after conducting an Initial Study, the agency determines that "there is substantial evidence that any aspect of the project, either individually or cumulatively, may cause a significant effect on the environment, regardless of whether the overall effect of the project is adverse or beneficial, the agency shall" prepare an EIR (CEQA Guidelines Section 15063).

The National Environmental Policy Act (NEPA) applies to projects subject to the discretionary approval of federal agencies or projects that will be conducted by federal public agencies. The alternative selected for implementation in the Salton Sea may require the approval or participation of federal agencies. For instance, if the in-sea impoundment option is chosen, a dredge and fill permit must be obtained from the Army Corps of Engineers, both to conduct the actual dredging and to discharge the dredged material. If the project may affect the human environment, an Environmental Impact Statement must be prepared in compliance with NEPA. Both CEQA and NEPA contain provisions permitting the joint preparation of an environmental impact analysis.

The requirements of NEPA and CEQA are very similar. The principal distinction is that NEPA has been interpreted by the courts to be a procedural statutory requirement. The Act mandates that agencies study and consider the environmental effects of proposed actions, but does not specifically restrict the scope of permissible agency action if the EIS identifies a significant, unmitigated or unmitigable adverse environmental impact.

By contrast, CEQA contains specific directives concerning the appropriate actions to be taken by an agency in the face of a finding of a significant adverse environmental impact. The CEQA Guidelines state that no agency may approve or carry out a project if the EIR identified a significant impact that would result from the project unless the agency makes one of three findings. The agency must find that either the project has been altered so as to mitigate the impact, or the necessary changes are within the jurisdiction of another agency and could or should be adopted by that agency, or specific economic, social, or other considerations make infeasible the mitigation measures of the project alternatives identified in the EIR (Guidelines Section 15091). The latter finding is commonly referred to as a Statement of Overriding Considerations.

CEQA provides Responsible and Trustee Agencies an opportunity to comment on the environmental document prepared by the Lead Agency. Trustee agencies are state agencies having jurisdiction by law over natural resources affected by the project. Both Fish and Game and the State Lands Commission are considered trustee agencies, Guidelines Section 15386. Upon completion of the draft EIR or the Negative Declaration, Responsible Agencies may reach their own conclusions on whether and how to approve the project, but they must consider the environmental effects of the project as shown by the EIR when reaching their decisions (Guidelines Section 15096).

The Lead Agency has the power to impose all measures necessary to mitigate significant environmental effects involved in the project provided the agency is otherwise given discretionary authority over the project, Guidelines Section 15040-15042. Unlike Lead Agencies, Responsible Agencies may disapprove or condition a project only to avoid direct or indirect environmental effects of that part of the project which it is called on to carry out or approve, Guidelines Section 15041(b). Where a project is one of several similar projects, as may be the case with the proposed incremental development of the solar energy facility, the lead agency is required to examine the cumulative effect the entire project will have.

In summary, for an agency to approve a project, CEQA requires the lead agency to find either that there are measures to mitigate the significant environmental effects or that there are overriding economic or social factors making mitigation measures or alternatives impractical. CEQA will at least set the agenda for agency consideration of the project, though it may not dictate the result. And, though courts will defer to the judgment of the lead agency, that agency must make a written finding concerning the disposition of significant environmental effects and have some rational basis for such findings. The effect of these requirements is likely to be to generally constrain the design of the project to reduce environmental impacts though probably not to prohibit the construction of any particular project altogether. Whether or not a Responsible or a Lead Agency is legally required to adhere to mitigation measures and alternatives raised in an EIR, EIR/EIS or Negative Declaration, CEQA and NEPA often raise issues and considerations that would not have been considered absent the CEQA/NEPA process.

D. Litigation

In response to a complaint from a flooded landowner, the Department of Water Resources investigated the use of water by the Imperial Irrigation District, concluding in a December 1981 report that water was being wasted. The Department referred the matter to the State Water Resources Control Board which conducted hearings and in June of 1984 found in Water Rights Decision 1600 that excess irrigation return flow resulted from unreasonable water use in the District. The Board noted that the District contributed about 70 percent of the inflow to the Salton Sea and that the water level would likely stabilize and the salinity would increase from a reduction of inflow (e.g., 100,000 acre-feet of year) associated with water conservation. In reaching its decision, the Board noted that:

> "It is impossible to predict when the salinity will adversely affect the fishery either with or without a planned reduction in IID inflow. However, the rapid rise in salinity between 1980 and 1982 shows that salinity could exceed 40,000 ppm, the danger level for fish reproduction, in less than five years whether or not a planned reduction in inflow takes place. Therefore, it is apparent that a prolonged delay in water conservation measures would not save the fishery for an appreciable length of time." Water Rights Decision 1600 page 61

The Board ordered the District to develop, implement and monitor various elements of a conservation plan, involving controls in tailwater, canal spills, canal seepage

and leaching, as well as the construction of regulatory reservoirs. The District unsuccessfully contested the Board's authority in court. Compliance with the Board's order has not yet been achieved and is currently at issue.

Landowners flooded by the rising waters of the Salton Sea (i.e., in excess of 3 feet since 1974) have previously sued the Imperial Irrigation District in several suits. (Elmore v. Imperial Irrigation District, 159 Cal. App. 3d 185 (1984); Salton Bay Marina, Inc. v. Imperial Irrigation District, 172 Cal. App. 3d 914 (1985), and Anderson v. Imperial Irrigation District and Coachella Valley Water District, Imperial County Superior Court No. 57249). To date, the decisions have gone against the District, finding it negligent and liable for damages for the flooding, notwithstanding written flood easements and agreements.

E. Law of the River

The "law of the river" is a collection of state, federal and international laws and court decisions which have evolved during this century. Together, these authorities define the water rights of the Federal government, basin states, the holders of Colorado River water rights within those states, and the Republic of Mexico. Among the major legal authorities are the 1922 Colorado River Compact, 1928 Boulder Canyon Project Act, several Arizona v. California U.S. Supreme Court decisions, water contracts signed by the Secretary of the Interior, the 1945 U.S.-Mexican Water Treaty and the 1974 Colorado River Basin Salinity Control Act. Facets of the "law of the river" remain uninterpreted and uncertain.

Basically, the useful flow of the Colorado River system has been divided first between the United States and Mexico, secondly between the upper and lower parts of the basin in the U.S., thirdly, among the states of that basin, and finally, primarily among the holders of rights within those states. California users have an entitlement to 4.4 million acre-feet per year (plus possible surplus).

Various features of the Salton Sea management options could intersect with the law of the river. Any diversion and use of Colorado River water (e.g., wet year surges) for direct dilution of salinity in the Salton Sea, for example, could raise questions as to debiting of water right entitlements, definitions of surplus and beneficial use, power proceeds and Mexican treaty obligations. The discharging of Salton Sea water into Mexico could raise questions about the scope and meaning of the U.S. commitment to Mexico concerning water delivery and salinity control.

F. Possible Additional Sources of Regulations

The scope of this study was necessarily limited by both time and informational constraints. Therefore, a decision was made to restrict analysis of the many agencies and entities that could become involved in the solution of the Salton Sea dilemma to certain agencies of central interest and to exclude those from analysis those agencies that appeared likely to play only a peripheral role in the implementation of any of the four alternatives addressed. The specific rationale for excluding several of those agencies from study is discussed below.

As indicated in Section IV.B.1.b., the Torres-Martinez Indian Reservation encompasses 25,000 acres of land which is either adjacent to or submerged by the Salton Sea. Indian land ownership can give rise to more complicated issues than arise in other land ownership situations. The primary distinction arises from the fact that Tribes are sovereign entities and may exercise a considerable amount of control over actions taken on Tribal reservations.

The extent to which the relationship between the governmental authority of the Torres-Martinez tribe and the authority of the State of California will become an issue in the implementation of any of the Salton Sea alternatives cannot be determined at this stage. Resolution of the complex questions that could arise will be dependent upon specific facts concerning the details of the alternative implemented. As currently described, none of the alternatives appear to directly involve the governmental authority of the tribe. For these reasons, an analysis of tribal involvement in the implementation of an alternative has not been conducted. To the extent possible, however, areas in which issues might arise have been identified.

The Pump out/Evaporation/Solar Ponding alternative contemplates the production of electricity. Power production could invoke the jurisdiction of the Federal Energy Regulatory Commission (FERC), Department of Energy (DOE), the State Public Utilities Commission (PUC) and the California Energy Commission (CEC). The primary area of FERC regulation would center upon the certification of the plant as a Small Power Producer. The involvement of the PUC is dependent in part upon whether the solar facility will be constructed by a state or private entity. Since this information is not currently known, the PUC has not been analyzed. DOE involvement is similarly uncertain, but might arise if DOE were to issue a grant for the construction of the project as a demonstration project. The CEC would only become involved if the plant were to be capable of producing in excess of 50 megawatts, which is not currently contemplated.

An emission of pollutants to the air would be likely to invoke the regulatory authority of the State Air Resources Board and the appropriate Air Pollution Control District. There is no currently available information which describes the nature and extent of such emissions.

Implementation of the Gulf Waterway alternative would obviously necessitate the cooperation of the Mexican Government and its agencies. To the extent possible, the international aspects of this alternative have been addressed in this study. However, a discussion of direct Mexican governmental and agency involvement in permitting the project is beyond the scope of this analysis.

IV. Agency Reviews - Salton Sea Alternatives

A. International - International Boundary and Water Commission

This section contains a survey of the principal international, federal, interstate, state and local government institutions as they may affect, or be affected by, the principal Salton Sea management options.

The International Boundary and Water Commission (IBWC) is an international body composed of representatives of the United States and Mexico. The Commission is generally responsible for dealing with issues related to the U.S.-Mexico boundary, particularly those related to water resource problems. The powers and duties of the Commission pertain, for the most part, to overseeing the application of the 1944 Treaty between the United States and Mexico (15 Stat.1219). The Treaty was negotiated to establish Mexico's right to use waters of the Colorado River System, the Tijuana River and the Rio Grande River.

Under the Treaty, Mexico is guaranteed a minimum quantity of 1.5 maf/yr of Colorado River water from any and all sources according to schedules agreed to by the two countries. Provisions were made for construction of diversion and flood control structures on each side of the border. The issue of water quality was not addressed expressly, but was covered in 1973 by Minute 242 to the Treaty. The Commission is authorized to settle all differences that arise as a result of the "interpretation or application of the Treaty", and to ensure the implementation of Minute 242.

The Commission is organized with the U.S. and Mexico each having a Section. Members of each Section, including an Engineer Commissioner, two engineers, a legal adviser, and a secretary, are designated by the respective Government, and are entitled diplomatic status. The Sections are directly responsible to the State Department (in the case of the United States) and the Ministry of Foreign Relations (in the case of Mexico). The physical jurisdictional boundaries of the IBWC extend to the border reaches of the Rio Grande and Colorado Rivers, the land area between the two countries and works located on the common boundary.

Relevant to the proposed alternatives, the Commission has powers and duties to: investigate and plan works to be constructed which deal with the international boundary or international waters; construct such works or supervise their construction; execute and prevent violation of treaties and agreements, utilizing the jurisdiction of

courts or other agencies as necessary; discuss and negotiate settlements to disputes between the two Governments; furnish information to the two Governments; construct, operate and maintain stream gauging stations within the boundary area; submit annual reports to the Governments on matters related to these duties.

Whenever the construction or use of works related to an agreement under the jurisdiction of the IBWC takes place wholly within one country or the other, then federal agencies of that country may be authorized to operate and maintain such works in accordance with all international obligations.

The IBWC has no authority in the area of planning and policy making. The recommendations of IBWC are developed on an issue-specific basis, and reflect the negotiated positions of the United States and Mexican governments.

Under the No Action alternative and the other project alternatives, pollution from the New and Alamo Rivers will continue to flow into the Salton Sea. Resulting closures of parts of the Sea, recreational facilities, and/or measures by State or local agencies to treat or regulate pollution levels would involve both the United States and Mexico. Negotiations under this type of circumstance might would be carried out under the auspices of the IBWC.

The in-sea impoundment and pump out/evaporation/solar generation options would involve construction and operation of facilities completely within the jurisdiction of the United States, and would involve waters controlled by and stored in the United States. The IBWC probably would not be involved under these options as described.

Under the Gulf Waterway alternative, construction and operation of the waterway system would impact water and land resources within the United States and Mexico and along their common border. According to the provisions of the 1944 Treaty between the United States and Mexico, the IBWC has the duties and powers to investigate, plan, construct, operate and maintain works dealing with boundaries and international waters, and each Section has jurisdiction over works constructed within its respective national territory. A new accord, such as a new treaty or a new "minute" to the 1944 Treaty, could be negotiated to provide for the amount of water to be exchanged between the Salton Sea and the Gulf, the financing, construction, operation and monitoring of the project, and other features.

This option could potentially affect U.S.- Mexico Treaty relations in several ways. It is possible that the water diverted from the sea could be utilized in some manner

in Mexico, depending on the quality and quantity of water available. Existing international water delivery facilities, notably the by-pass canal at the Yuma desalination plant, could be utilized under this scenario. Because the operation of this existing facility is governed by Treaty conditions, IBWC would become involved. The international boundary issues that might arise under this option can only be evaluated after the proposed action is described in more detail.

B. National - Federal

1. Department of the Interior

a. Bureau of Reclamation

The mission of the United States Bureau of Reclamation (USBR) to reclaim arid and semi-arid lands in western states was born with the 1902 Reclamation Act. The Bureau plans, designs, constructs, operates and maintains water storage, hydropower and diversion projects. Originally, the goal of the reclamation laws was to rehabilitate farms on the lands targeted for Bureau projects and to provide opportunities for permanent settlement and agricultural development on irrigable desert land (16 U.S.C. sections 590 et seq.). The agricultural development of the Coachella Valley, formerly a desert area, was achieved by irrigation works planned and constructed by the Bureau of Reclamation pursuant to its statutory mandate. The irrigation distribution system in the Imperial Valley, which was also formerly a desert area, was constructed by the Imperial Irrigation District (IID).

Projects constructed by the Bureau include the Boulder Canyon Project (authorized effectively in 1929) under which the Hoover Dam, as well as the Imperial Dam and All-American Canal which serve the Imperial and Coachella Valleys, were constructed. The United States retains title to the project works but the operation and maintenance of the Imperial Dam and the All-American Canal have been assumed by the IID.

The United States owns the 72 million gallon per day desalting plant which is being erected in Yuma, as well as the temporary bypass facilities which presently divert the highly saline drainage waters from the Welton-Mohawk District around the Mexican diversion point below the border. In addition, the Bureau administers the Colorado River water delivery contracts and governs the release of stored water from Lake Mead for the diversions through the All-American Canal to the Imperial Irrigation District and the Coachella Valley County Water District.

Jurisdictional ownership and claims of the Bureau of Reclamation over the waters of the Salton Sea, which might

give rise to a legal duty to act, are unclear. The USBR may be subject to the laws of the state of California relating to the control, appropriation, use or distribution of water within the boundaries of the state for or from the Bureau projects used in irrigation. The Federal Clean Water Act contains a waiver of sovereign immunity as to any federal entity engaged in an activity that could result in a run-off of pollutants. Congress demonstrated its recognition of the potential for harm to the environment caused by irrigation return flows by requiring the Bureau to conduct investigations of soil characteristics that might result in toxic or hazardous return flows when seeking to utilize dams or reservoirs built by the Corps of Engineers.

Thus, the Bureau may have some responsibility for pollution and salinity problems associated with agricultural drainage waters in instances in which the Bureau is a discharger. The recent actions taken in response to the selenium problems at the Kesterson Wildlife Refuge are an example of this type of USBR responsibility. At Kesterson, irrigation drainage systems constructed and maintained by the Bureau had discharged agricultural waste containing high levels of selenium into the Refuge waters. The water discharged had accumulated selenium as it passed through the irrigated soils. A farmer whose land was adjacent to the Refuge complained to the Regional Water Quality Control Board (RWQCB) that the Bureau's practices threatened the farmer's land. The RWQCB failed to act and the farmer appealed to the State Water Resources Control Board. The State Board found that the Bureau had violated state water quality laws by causing a condition of pollution and nuisance. The Bureau was ultimately forced to cease discharge and initiate a closure plan that would include a method by which to clean-up the polluted Refuge.

The situation in the Salton Sea differs from Kesterson in one important aspect. The Bureau itself does not discharge waters to the Salton Sea. Traditionally, the Bureau has disclaimed responsibility "at the headgate" -- at the point where a district takes water from a Bureau canal. Apart from legal responsibility, the Bureau's expertise in the area of water management and its involvement in Colorado River water delivery to IID and the Coachella Water District make it a candidate for the role of organizing a Federal action to address the Salton Sea dilemma, or of acting as a valuable consultant on state sponsored actions. The rising incidence of pollution problems associated with irrigation drainage water in its projects has already increased the interest and level of involvement of the Bureau in return flow management issues. This interest was doubtlessly strengthened in part by the Reclamation Reform Act, which reflected the growing demand for water in the West and established for the Bureau a policy of rehabilitating and

improving existing reclamation projects, such as those around the Salton Sea, for purposes of significant conservation of the environment, water resources, water quality and energy. The Bureau is already undertaking projects to reduce Colorado River salinity under the Colorado River Basin Salinity Control Act of 1977. Thus, both Bureau expertise and policy may prompt its involvement in the selection and implementation of any of the Salton Sea solutions.

b. Bureau of Indian Affairs

The Secretary of the Interior is trustee of the approximately 25,000 acres of Indian trust lands which make up the Torres-Martinez Indian Reservation. The Bureau of Indian Affairs within the Department of the Interior is the agency responsible for administering the trust relationship. As of 1968, some 18 sections of trust land were wholly or partially flooded by the Salton Sea. A 1950 Act authorized the Secretary of the Interior to purchase the Indian lands below the -220 foot contour line (at a maximum price of $5,000); however, no purchases were made under that Act. Litigation brought against the Imperial Irrigation District and the Coachella Valley Irrigation District by the U.S. Department of Justice on behalf of the Torres-Martinez Indian Tribe for flooding damage is currently pending.

Any of the alternatives, and particularly the no action alternative, would find the Bureau of Indian Affairs concerned about the level and quality of the water as those factors would bear on the use and value of the Indian lands, and the recreational importance of the Sea to the Indians. Unless the pump out evaporation pond were located adjacent to the Northwestern part of the Sea where the Indian trust lands are situated, none of the three action alternatives would appear to have a greater impact than another as to the Torres-Martinez Reservation.

c. Fish & Wildlife Service

The responsibilities of the U.S. Fish and Wildlife Service (FWS) include administration of the National Wildlife Refuge System and enforcement of the provisions of the various Migratory Bird Treaties to which the United States is a party. FWS additionally administers any lands acquired by Federal construction agencies for the purposes of wildlife conservation. The Service also has the authority to cooperate with states and their respective Fish and Game Departments in fish restoration and management projects, including the restoration of water or land which is adaptable as fisheries.

The FWS, pursuant to Congressional declarations recognizing the importance of the preservation and development of fisheries, as well as the inherent right of U.S. citizens to engage in fishing, has statutory duties related to these areas. Included among those duties are the development and recommendation of measures appropriate to assure the maximum sustainable production of fish; the development, advancement, management, conservation and protection of fish and wildlife resources by research and development of existing facilities; and the acquisition or exchange of land and water for fish and wildlife conservation purposes. FWS is likely to be involved in all the Salton Sea alternatives, due to the presence of the Salton Sea National Wildlife Refuge it administers along the southern shore of the Sea.

FWS is authorized, pursuant to the Migratory Bird Treaty Act, to enforce certain provisions of the Migratory Bird Treaties, and must administer lands acquired or reserved for the preservation and protection of migratory birds in accordance with obligations arising from United States treaties made with Canada, Mexico, Japan and the USSR. Federal law enacted pursuant to those obligations makes it unlawful to kill by any means whatsoever any migratory bird in any stage of development except in special situations governed by regulations promulgated by the Secretary of the Interior. Penalties for violations include fines and imprisonment.

FWS is also authorized to make investigations at the direction of the Department of Interior (DOI) to determine the effects of polluting substances on wildlife. The investigations must include the determination of standards of water quality for the maintenance of wildlife, and the study of methods of abating and preventing pollution.

The Salton Sea National Wildlife Refuge originally consisted of some 32,407 acres of land bordering the Sea. Since 1930, the original refuge has become inundated by rising Sea waters. However, the FWS continues to manage 2,560 acres leased from the Imperial Irrigation District (IID) and a private landowner as a National Wildlife Refuge and as part of its waterfowl management program. Any disturbance of National Wildlife Refuge land is strictly prohibited. The Secretary of the DOI, however, has the authority to permit the use of any area within a Refuge for any purpose compatible with the use of the area as a refuge. Where such permission is granted, the permittee must render compensation for the land used to the Department, either in fair market purchase or rental value, or by exchange of equally suitable land. The FWS is responsible for the enforcement of these provisions.

The "no action" alternative challenges the Fish and Wildlife Service's responsibility to administer the Salton Sea National Wildlife Refuge in accordance with the Migratory Bird Treaty Act and other statutorily imposed duties. Since the refuge is situated along the southeastern shore, it is directly exposed to the inflows from the New and Alamo Rivers. FWS responsibilities concerning the protection and conservation of fish and wildlife resources, and its duty to recommend measures to sustain the Salton Sea's fishery could be affected. Additionally, the Service could be called upon by the Secretary to study methods of preventing or abating the pollution. Should concentrations of pollutants in refuge waters reach levels that prove fatal to migratory waterfowl, FWS responsibility for the enforcement of treaties and laws prohibiting the unlawful killing of migratory birds could be activated. Such a situation arose at the Kesterson Wildlife Reservoir (see discussion in Section IV.B.1.a.). Selenium deposits carried to the reservoir by a United States Bureau of Reclamation drainage system were responsible for the death of migratory birds. The Department of the Interior (DOI) ordered delivery of water to the irrigated areas stopped and drains emptying into the reservoir plugged. In issuing this order, DOI cited violations of the Migratory Bird Treaty Act relating to the protection of migratory birds. DOI later relaxed its position and allowed delivery of water to proceed, but enforced the order that drains of the reservoir be plugged.

Much of the construction of the massive dike proposed by the "in-sea evaporation" alternative will be on, or in close proximity to, submerged and unsubmerged refuge lands administered by the FWS. Impacts of the construction on the refuge must be considered, and consultation with the FWS will, of course, be required. Exchange of lands may also be required to compensate for those submerged refuge lands used for the dike and impoundment.

Each of the three action oriented alternatives will invoke the comment and review authority of the FWS if a federal permit must be acquired. Whenever the waters of any stream or other body of water are proposed or authorized to be impounded, diverted or otherwise modified or controlled for any reason, by any Federal agency or public or private agency under a Federal permit or license, the proponent must consult with FWS with a view to the conservation of wildlife resources. Project proponents must submit the recommendations of the Service to the agency that will approve or authorize the project.

2. Department of Defense, Army Corps of Engineers

The Corps of Engineers (COE) is authorized to construct, operate and maintain Congressionally-approved water resource development projects, and to cooperate with state agencies in the preparation of comprehensive plans for the development, utilization and conservation of water-related state resources. It has the further authority to acquire, in the name of the United States, title to all lands, easements and rights-of-way needed for flood control or dam projects. Federal investigations of rivers and other waterways for the purposes of flood control are also within the supervisory jurisdiction of the COE, although this grant of authority may not interfere with United States Bureau of Reclamation jurisdiction.

The Corps may become involved in the Salton Sea under all of the alternatives under the general statutory authorities discussed above. In addition, the Secretary of the Army has been given the responsibility for the investigation and study of the feasibility of utilizing the capabilities of the Corps of Engineers to conserve fish and wildlife and their habitats. The first report prepared pursuant to this duty is due to be issued no later than May 1989, and biennially thereafter.

If the in-sea evaporation and impoundment alternative is selected, the project would require COE approval. The Corps has approval authority over plans for the construction of any bridge, dam, dike or causeway over or in any navigable waters of the United States. Under Section 10 of the Rivers and Harbors Act of 1899, the project proponent would also be required to obtain a dredging permit from the Corps prior to commencing the considerable dredging activities contemplated by this proposal. A permit would also be required under section 404 of the Clean Water Act for discharge of dredged spoil.

The pump out/evaporation/solar generation alternative would not appear to directly involve the permitting authority of the COE unless work is required to be undertaken on the Salton Sea bed. The Corps will almost certainly be involved in the planning and construction of a navigable waterway from the Sea to the Gulf of California under the Gulf Waterway alternative. The COE can reasonably be expected to participate in the planning and implementation of this alternative not only as a consequence of its jurisdiction over navigable waters, but because of the necessary federal involvement in a project of international scope, and the Corps' expertise in the planning and development of facilities for water navigation.

3. Environmental Protection Agency

The Environmental Protection Agency (EPA) is responsible for water quality standards under the federal Clean Water Act (CWA). In practice, this entails the review and approval of water quality standards (designated uses and water quality criteria) adopted by the State Water Resources Control Board (SWRCB). The SWRCB has designated the following beneficial uses for the Salton Sea: warm water habitat, wildlife habitat, water contact recreation, and non-contact recreation. It is noteworthy that drainwater retention is not a designated beneficial use, although, as discussed earlier in section III. A., Federal Executive Orders have recognised such use as the primary purpose for the sea.

The primary means of meeting the standards adopted pursuant to the Clean Water Act is the issuance of National Pollutant Discharge Elimination System (NPDES) permits. Any person seeking to discharge waste from a point source to navigable waters must obtain an NPDES permit. The definition of a point source is broad and was initially interpreted to include irrigation return flows. However, extensive amendments to the CWA adopted in 1977 specifically excluded agricultural return flows from the definition of a point source. As a result, such discharges are regulated as nonpoint sources and are exempt from NPDES permit requirements.

Nonpoint sources are loosely regulated under the CWA. The Act directed State Water Quality Management Plans to be developed and submitted to the EPA for review and approval. The plans were required to address a broad range of topics, including, where appropriate, the identification of problematic agricultural nonpoint sources and procedures to control such sources. The impact of this and other CWA provisions is to require the use of best management practices by agricultural dischargers.

Recent amendments to the CWA have focused attention on nonpoint source issues by requiring states to compile an assessment report identifying water sources experiencing water quality problems caused by nonpoint sources and setting forth best management practices governing nonpoint source discharges to such waters.

The CWA and EPA regulations implementing the Act direct states to identify water bodies for which effluent limitations and best management practices are insufficiently stringent to ensure that applicable water quality standards are achieved. Such water bodies are termed Water Quality Limited Segments (WQLS). For each WQLS identified, the state is required to determine the total maximum daily load

(TMDL) of pollutants that can be discharged to the water body without preventing the attainment and maintenance of water quality standards. The permissible level of discharge to a WQLS is calculated by determining the loading capacity of the WQLS, which is defined as the amount of material that the water body can accept without violating applicable water quality standards. Load allocations and waste load allocations are then determined. A load allocation is that portion of the receiving water's loading capacity that is attributable to an existing or future nonpoint source discharge or to natural background sources. Waste load allocations are the portion of the receiving water's loading capacity that is allocated to an existing or future point source discharger. The load allocation and the waste load allocation, when added together, comprise the total maximum daily load (TMDL) which may be discharged to the receiving waters. The Salton Sea has been classified as a WQLS. The WQLS findings, the load allocations, the waste load allocations, and the TMDL level must be periodically submitted to EPA for its approval.

EPA has approved TMDLs and waste load allocations submitted to it by California. California has not calculated load allocations or submitted such allocations to EPA for its approval. In Scott vs. EPA, slip opinion, nos. 81-2884 and 81-2885, U.S. App. Ct., 7th Cir. (1984), the court held that EPA must treat an unexcused and lengthy delay in the submittal of TMDLs as a constructive decision by the state that TMDLs were not required, and subject the decision to EPA's review process. Load allocations are regulated in the same manner as TMDLs. Therefore, Scott vs. EPA provides support for the proposition that an unexcused failure to submit load allocations must be reviewed by EPA as a decision not to issue load allocations. If EPA disapproves of the decision, it must promulgate load allocations for the state.

The "no action alternative" would likely see a worsening of the quality of the waters in the Salton Sea that would be attributable in part to continued nonpoint source discharge of irrigation return flows. This would challenge the EPA to consider the revocation of its approval of the Salton Sea TMDLs. EPA may also intercede if neither the state nor regional water boards institute a plan to regulate the load allocation of nonpoint sources (See Section IV.D.2.a. and b.).

EPA has oversight authority over dredge and fill permits issued by the Army Corp of Engineers. EPA may therefore become involved in those aspects of the in-Sea impoundment alternative that entail diking, since dredge and fill permits would be required. The pump out/evaporation/ solar generation option, by withdrawing receiving waters,

could alter the impact of the pollution loading and raise EPA concerns. The transportation of polluted drain waters under either this alternative or the Gulf Waterway option may become subject to EPA approval.

C. Interstate

1. Colorado River Basin Salinity Control Forum

The Colorado River Basin Salinity Control Forum was established by the seven states of the Colorado River Basin to conduct periodic water quality reviews of the river pursuant to the requirements of Section 303 of the Clean Water Act of 1977. Basically, it reviews existing state-adopted and EPA approved numeric standards for salinity control of the Colorado River System, evaluates changes in hydrologic conditions and water use within the Basin, and recommends revisions to implementation plans for salinity control.

The Forum's 1984 report recommended no changes in the EPA salinity standards for the three lower main stem stations on the Colorado, namely Hooker Dam, 723 mg/1; Parker Dam, 747 mg/1; and Imperial Dam, 879 mg/1. Actual counts were reported as below these standards at, respectively, 682, 703, and 732 mg/1.

While the Forum has no direct regulatory or programmatic/management authority with respect to the Salton Sea and the alternative solutions proposed, it does formulate and recommend implementation plans for salinity control in the Basin, some of which may be relevant to the Sea's increasing salinity. In its 1984 report, for example, the Forum recommended implementation by the Department of Agriculture of cost effective salinity control measures for on-farm irrigation and lateral distribution systems; it also recommended implementation of its policy of increased use for use of brackish and/or saline waters for industrial use.

However, many of the control measures described have already been implemented in the Imperial and Coachella Valleys. Moreover, since the Forum's primary concern is control of salinity in the Colorado River, drainage of saline irrigation waters into the Salton Sea and away from the River is viewed as beneficial.

The Forum would become involved, and in an strictly advisory capacity, if one of the alternatives posed a threat of increased salinity in the Colorado River. As none of the alternatives contemplate such an impact, the Forum's only other involvement might be in an advisory capacity arising from its expertise in salinity control in the Basin.

E. State

1. Resources Agency

a. Department of Fish and Game

The Department of Fish and Game's (DFG) general responsibility is to ensure that fish and wildlife are preserved. The Department's programs are directed towards the protection, conservation, enhancement and restoration of fish and wildlife resources and habitats. DFG's future involvement with the Salton Sea is most likely to arise from the exercise of its authority in three areas. First, enforcement of the provisions and regulations of the Fish & Game Code; second, the management and protection of inland fisheries; and finally, the review of Federal, State, local and private projects affecting the water or water quality of the state, in order to minimize any potential adverse impacts on fish and wildlife which might be caused by the project.

DFG and Fish & Game Commission policy regarding the Salton Sea is set forth in miscellaneous Addenda to the Fish and Game code. This policy is to:

> "Recognize that the Salton Sea has been designated as a repository for agriculture drainage water (Federal Public Water Reserve Number 90 and Number 114). The Commission also finds that the Salton Sea has unique and valuable fish and wildlife resources and associated recreational values, and the Commission and the Department shall be guided by the following objectives:
>
> I. Preserve the biological integrity of the Salton Sea and its associated wetland habitats.
>
> II. Protect and perpetuate the diverse fish and wildlife resources of the Salton Sea ecosystem for the use and enjoyment of present and future generations.
>
> III. Prevent or alleviate those aspects of projects, developments and activities which would or do exert adverse impact on the habitats and fish and wildlife resources of the Salton Sea ecosystems.
>
> IV. Urge the formation of a multi-agency task force with instruction to prepare a program designed to permanently stabilize Salton Sea salinity and water elevation at levels which will sustain and perpetuate existing fish and wildlife resources concomitant with energy development and related projects."

If the no action alternative is pursued, the DFG may become involved through enforcement actions against persons who have permitted harmful substances to pass into the waters of the state. The Fish and Game Code makes it "unlawful to deposit in, permit to pass into, or place where it can pass into the waters of the state" an enumerated list of pollutants and any "substance or material deleterious to fish, plant life or bird life." Violation of this section is a public offense subject to criminal prosecution. The DFG may enforce this code section regardless of whether the violator is meeting Waste Discharge Requirements established by the appropriate Regional Water Quality Control Board (RWQCB). When the department finds a violation, it must first report to the appropriate RWQCB. DFG then acts through and in cooperation with the Regional Board to obtain correction or abatement. The department may act independently without the express approval of the Regional Board where the pollution affects fish and wildlife resources. General policies of the state with respect to the preservation and enhancement of wildlife resources and habitat and to the Salton Sea itself statutorily compel DFG to take action where fish and wildlife are clearly threatened.

Dischargers of substances deleterious to fish and wildlife are also civilly liable to DFG for actual damage and costs of cleanup, and for the unlawful or negligent destruction of fish and game. The State Water Resources Control Board (SWRCB) must be notified of, and has the right to join in, any such action if the activities causing the destruction involve the unlawful discharge of pollutants or other violation of the Water Code.

The Department will also be involved in the Salton Sea under all of the three "action" alternatives. The extent of DFG involvement will be dependent upon the degree to which the particular project will impact on fish and wildlife. If, as would seem likely, the projects would have a beneficial impact on fish and wildlife, the Department would probably support implementation of the selected alternative. If the alternative also poses the risk of a negative impact, DFG would work with the project proponent to alter the project to alleviate the risk completely, or at least mitigate the risk to an acceptable level. The plans for each of the projects would have to be submitted to DFG for its review. The construction of the project may not commence until the department has found that the project will not substantially adversely affect an existing fish or wildlife resource. DFG has similar authority over projects that alter the beds of lakes and streams. This aspect of DFG jurisdiction could also be triggered by any of the three action alternatives.

The in-sea impoundment option, requiring the construction of an extensive dike enclosing a portion of the sea, would trigger DFG's review and approval authority, since the project proposes changing the bed of a lake. This option will require both maintenance dredging at the mouths of the New and Alamo rivers and possible dredging of the Sea floor to construct the dike. Use of vacuum or suction dredge equipment for any of the work triggers the DFG's permitting authority. Finally, construction of the dike probably triggers the department's power to order that the free passage of fish out of the impoundment be provided for in the plan.

DFG has the power to order the owner of any conduit with a maximum flow capacity over 250 cubic feet per second to install screens on the conduit to prevent fish from passing into it, and to order persons constructing dams to provide for the free passage of fish over or around the dams. Conduits diverting less than 250 cfs are also governed by the Fish and Game Code. The DFG's authority to order installation of fish screen could be triggered under the "pump out evaporation" alternative in the event the rate of pump out were to exceed 250 cfs through a given conduit. The Department's authority to order the construction of fishways may be implicated by the Gulf Waterway option, as could its approval authority over projects that use vacuum or suction dredge equipment.

b. Department of Parks and Recreation

The role of the Department of Parks and Recreation (DPR) in Salton Sea management revolves around its responsibility to develop, manage and preserve the natural and environmental resources of the Salton Sea State Recreation Area that stretches along the eastern shore of the Sea.

Continuing flooding of the littoral lands within the state recreation area boundaries under the "no action" alternative may inhibit DPR's ability to preserve and maintain park lands. Increasing salinity and pollution, by imperiling fish and wildlife and deterring recreational use of the waters, similarly conflicts with the DPR's duty to preserve and protect natural resources on park lands for recreational and environmental purposes.

The DPR has authority to grant permits for rights-of-way across state parks for roads, water pipelines and power lines. If the proposed pumping station under the "pump out evaporation" alternative were situated such that park lands separated it from the site of the solar powerplant, application to the DPR for a permit or easement for the water pipeline, and perhaps for transmission lines to supply

the pumps with power, would be necessary. The DPR's permission would also be needed to obtain a right-of-way for an access road to the pumping station across state park land, if no reasonable alternative route is available.

c. Department of Water Resources

The Department of Water Resources (DWR) is is responsible for the protection, conservation, development, and management of California's water resources. Its major management responsibilities involve investigating, planning and recommending to the Legislature methods of supplying water for domestic, agricultural, industrial and recreational use, as well as for power generation and fish and wildlife. DWR also has responsibilities in the areas of flood control and the approval and regulation of the construction and maintenance of dams.

DWR has direct jurisdiction over all dams and reservoirs in the State. No dam or reservoir may be constructed, maintained or operated without the approval of the department.

DWR's dam approval authority is activated by the proposed construction of a barrier for impounding water which is: (1) 25 feet or more in height from the base of the outer limit of the barrier or (2) which impounds more than 50 acre-feet of water, but is not (3) a levee on the bed of a natural lake built for the purpose of flood control or (4) across a natural drainage area with the primary purpose of impounding water for agriculture use or sewage sludge drying. Once a state water or dam project has been authorized or funded, the department has the power to condemn real property for state water or dam purposes, with California Water Commission concurrence, as required by necessity and the public interest. Property already dedicated to public use is not to be condemned under this provision except for a "more necessary" use than that which is ongoing; nonetheless, the department may acquire by eminent domain or otherwise property dedicated to park purposes when such property is necessary for state water and dam purposes.

DWR has broad investigative powers, as well as planning and reporting duties regarding all matters pertaining to the water resources of the state, including a duty to investigate and report on water quality. The department may undertake investigative activities on its own initiative or at the request of a city, county, state agency or public district. If no action is taken to correct the problems currently being experienced in the Salton Sea, or if further research is required prior to the selection of a solution, DWR may become involved in the study of Salton Sea problems

and solutions. DWR's expertise may also contribute to the planning and implementation of any of the three action alternatives.

Increasing salinity and pollution in the Sea under the "no action" alternative would come within the scope of DWR's investigative and reporting duties regarding water quality. DWR's jurisdiction has already been triggered by the waste of water by the Imperial Irrigation District (IID). Continued flooding will involve the Department's responsibilities to determine flood damage and prepare plans and recommendations for flood control development projects. DWR's flood control responsibilities include making recommendations, preparing plans, and estimating the costs and benefits of all proposed water conservation and flood control projects, with due consideration given to fish and wildlife values. The director has the power to declare an emergency in the event of floods, and to direct the Department to perform any work required to avert or repair damage.

DWR's expertise in the areas of flood control and water projects is likely to result in DWR involvement in the impoundment and Gulf Waterway options. If the situation in the Sea is not found to be an emergency, the Department has no authority to undertake the construction of flood control or other water projects without the formal request of a city, county, state agency or public district that would be obligated for the costs of construction thereby. Plans and recommendations formulated by DWR must be submitted to the Legislature, and are advisory in nature. DWR also has the duty to plan recreational development associated with state constructed water projects.

d. California Water Commission

The California Water Commission (CWC) is a consulting commission within the Department of Water Resources (DWR). CWC confers with, advises, and makes recommendations to the director of the DWR, and has the duty to report annually to the department and the legislature on the progress of construction and operation of the State Water Resources Development System.

The State Water Resources Development System is comprised of state water facilities and such additional facilities as have been or may be authorized by the Legislature as part of the Central Valley Project or the California Water Plan. Among those state public works specifically identified as elements of the State Water Resources Development System are the Oroville Dam (on the Feather River); the California, North Bay and South Bay aqueducts and their appurtenant facilities; levees, control

structures, and their appurtenant facilities in the Sacramento-San Joaquin delta for water conservation, flood and salinity control; and facilities for the removal of drainage water from the San Joaquin Valley. The remedial alternatives proposed for the Salton Sea, as major public water development works, could be funded pursuant to the Water Resources Development Bond Act, and become a component of the State Water Resources Development System, subject to annual review by the CWC.

The Commission also has the duty to represent the state before the appropriations committees of various federal agencies, and to consult with interested local, state and federal agencies prior to engaging in such representation. Further, the CWC has the duty to advise DWR and the governor as to matters concerning the coordination of planning, construction and operation of federal water development and flood control projects in the state.

The CWC will be involved in all of the remedial alternatives, to the extent that these alternatives also involve the DWR and the federal government.

e. Colorado River Board of California

The Colorado River Board of California is comprised of both public members and members representing agencies with Colorado River water and power rights, including the Palo Verde Irrigation District, the Imperial Irrigation District, Coachella Valley Water District, Metropolitan Water District of Southern California, and the Department of Water and Power of Los Angeles. The Colorado River Board of California is a state agency created by the Legislature in 1937 following the passage of the Boulder Canyon Project Act of 1928 and the California Seven Party Agreement of 1931, which allocated California's allotment of Colorado River water among the major water agencies of Southern California. (See Section III. C of this report on the Law of the River.)

The primary function of the Board is to protect the rights and interests of the state, its agencies, and its citizens in the water resources of the Colorado River System. The Boulder Canyon Project Act (45 Stat. 1057) authorizes state commissions to serve in an advisory capacity to the Secretary of the Interior and the board fulfills that function for the State of California. While the Board does not have direct authority over the management of the Salton Sea, its staff and members are actively involved in review and consultation on a range of issues related to Colorado River water management.

The statutory duties of the Board generally are to: safeguard and protect the rights and interests of the state,

its agencies and citizens in matters regarding Colorado River System water; investigate past, present and potential uses of Colorado River water within and without the state; investigate claims of all state, public, and private agencies regarding use of the water; negotiate with representatives of other states, the United States government and others regarding the development of the Colorado River Basin, the use of water, protection of interests, and to make recommendations to the Governor and legislature.

The state agencies represented on the California Colorado River Board depend almost entirely on the River for their water supplies. Through the Board these agencies maintain an active involvement in issues related to Colorado River operations, water supply and conservation, storage and flood control operations, power contracts, and water quality. The Board has been particularly active as a member of the Colorado River Basin Salinity Control Forum, a basin-wide organization which plans and monitors salinity control programs in the basin.

The inflows to the Salton Sea are comprised primarily of irrigation drainage water return flows from Colorado River water used in the Mexicali, Coachella and Imperial Valleys. Therefore, any substantial changes in the use, availability and distribution or quality of water due to management of the Salton Sea can trigger the Board's participation.

In recent years, the Board has actively taken part in water conservation and salinity control issues affecting the Imperial and Coachella Valleys. The Board's staff has worked on studies to identify water conservation opportunities, such as lining the All-American Canal, directed toward maximizing California's beneficial use of water. The recent negotiations between the Imperial Irrigation District (IID) and Metropolitan Water District (MWD) over entitlement to water conserved through irrigation system improvements within IID demonstrate the potential for involvement of, and conflict within, the Board over issues related to management of the Salton Sea.

Under the "no action alternative", anticipated gradual changes in water and salinity levels will probably trigger the Board's involvement in an advisory capacity. Several of the agencies represented on the Board have substantial authority related to the project alternatives.

Following the recent mandates by the State Department of Water Resources (DWR) and State Water Resources Control Board (SWRCB), IID is developing measures to conserve Colorado River water used for irrigation purposes. Members

of the Board are in disagreement over the transfer and use of the conserved water. Inflows to the Sea can be expected to decrease significantly once conservation measures are approved and implemented.

It is difficult to determine the Board's specific position on the in-sea evaporation and pump out/ desalination/solar generation project alternatives until the proposed actions have been closely defined, and the lead agency is identified. Evaporation and/or removal of water from the Sea might be construed as a change in use of the water, but only if storage of the drainage waters is itself recognized as a beneficial use of Colorado River water. It seems unlikely that evaporation or removal of water from the Sea would fall under the areas in which the Board has statutory authority.

If the proposed pump out/desalination/solar generation option involves the direct diversion of agricultural return flows prior to discharge into the Sea, the issue of water rights might be raised by agency representatives on the Board. Specifically, while the potential remains for conservation of agricultural water, agencies might object to the "dedication" of return flows to the evaporation operation, preferring instead that additional measures for water savings be undertaken before disposing of the water through evaporation.

Under the Gulf Waterway option, the Board might become involved in studies or negotiations regarding implications for the use, distribution, allocation and quality of waters of the Colorado River system. Existing institutional arrangements for the allocation and management of Colorado River water, known collectively as the "Law of the River", might be affected by the implementation of this option.

The construction of the waterway would necessarily involve an accord between the United States and Mexico. The Board, under its statutory authority to protect the water rights and interests of the State and its citizens, would be a participant in any discussions and arrangements related to the accord.

2. Environmental Secretary

a. State Water Resources Control Board

The primary responsibility of the State Water Resources Control Board (SWRCB) is to develop plans to preserve and enhance the quality of the state's water, and to oversee the proper allocation and effective utilization of California's water resources. The State Board has broad investigative powers necessary for the implementation of its duties. The

SWRCB may conduct investigations of all streams, lakes, stream systems and all other bodies of water; hold hearings and take testimony regarding water rights or water use; and determine the legality of proposed appropriation of water. The Board has exclusive authority over the appropriation of water, reviews all applications for permits, and may grant or revoke permits and licenses for appropriation of water.

The State Board has the duty to formulate and adopt state policy for water quality control and is responsible for the control of pollution and nuisance; it is also the state water control agency responsible for administering the provisions of the Federal Clean Water Act. The Board has the power to require local and state agencies to investigate and report on water quality control techniques, and may review the actions of the Regional Water Quality Control Boards (RWQCB). If a RWQCB fails to take required action, the State Board may exercise the Regional Board's powers.

The State Board also has a duty to administer the water policies declared in Article 10, section 2 of the State Constitution. This section requires that the water resources of the state be put to beneficial use to the fullest extent possible, and that the waste and unreasonable use of water be prevented.

The Environmental Protection Agency (EPA) section of this report explained and discussed the State's duty to submit Total Maximum Daily Loads (TMDLs) and load allocations for Water Quality Limited Segments (TMDLs) such as the Salton Sea. Although TMDL and waste load allocation have been submitted to and approved by EPA, load allocations have not been determined or submitted for any of California's WQLSs, including the Salton Sea. If no steps are taken by the Water Board to calculate and submit load allocations, EPA could treat California's failure to act as a constructive determination that no load allocations will be set. In such a case, EPA would have to either approve or disapprove California's constructive decision. If EPA disapproves the decision, it must promulgate such load allocations as it deems necessary (see Section IV.B.1.3.)

The California state legislature has recognised that the primary use of the Sea is for the collection of agricultural drainage waters (see section IV.D.2.b., infra). However, continued use of the Sea as an irrigation return flow repository, and the associated adverse water quality impacts, could preclude use of the Sea for the recreational beneficial uses designated in the Regional Water Quality Control Plan (see section II.3.b.). Under the State Constitution, the State Board has a duty to administer water policies that require the water resources of the state to be put to beneficial use to the fullest extent possible, and

prohibit the waste and unreasonable use of water. The fact that use of the Sea as a repository is recognised by state statutes does not relieve the State Board of the duty to insure that such use is conducted in a manner that will permit the coexistence of other beneficial uses of the Sea. Each of the alternatives discussed must account for the State Board's responsibility to protect a balance of uses in the Sea to the fullest extent possible.

Applicable statutes and regulations are unclear on the question of whether the impounding of Salton Sea waters entirely within the Sea's existing shores under the "in-sea evaporation" alternative would constitute an appropriation of water such that the State Board's regulatory authority over appropriations would be triggered. Since the dike impounding the waters is to be constructed entirely on the bed of the Sea and within its present shores, there may be no "taking" of water from the Sea. However, the act of drawing water into the impoundment may constitute a diversion and could therefore be regulated as an appropriation. Analysis of the Board's authority, if an appropriation were established, would be the same under this alternative as for the pump out/evaporation alternative, discussed below.

The SWRCB's regulatory authority over appropriation of water could be triggered by the Salton Sea alternatives that propose conveying water out of the Salton Sea. An appropriation is any taking of water for other than riparian or overlying uses. The primary permit requirement is that the water appropriated be applied to a beneficial use. Recreation, power production, and preservation and enhancement of fish and wildlife resources are all deemed beneficial uses. The applicant for an appropriation must also establish that the requested water is unappropriated.

Much of the water that originally formed the Sea and that currently flows into the Sea is water that was previously appropriated by the Imperial and Coachella Irrigation Districts for agricultural use. These waters may revert to unappropriated status once the appropriators have permitted the waters to drain into the basin and have ceased to apply the drainage waters to any beneficial use. Notice to the prior permittee and a hearing before the Board upon request are now required by the Water Code before previously appropriated water can be declared unappropriated.

Pumping out of the Sea's waters for evaporation would constitute a taking of "surface waters" of the state for other than riparian or overlying use, and thereby would trigger the State Board's regulatory authority over appropriations. Similarly, waters pumped or drained out of the Sea and into a canal or locks for discharge into the

Gulf under the Gulf Waterway option would probably constitute an appropriation and invoke the State Board's regulatory authority.

b. Regional Water Quality Control Boards

The Salton Sea is located within the jurisdiction of the Colorado River Basin Regional Water Quality Control Board. The Regional Water Quality Control Boards (RWQCB) have the power to adopt water quality control plans for their respective regions. State offices, departments and boards, when carrying out activities which may affect water quality, must comply with the Water Quality Control Plans (WQCP) adopted by the RWQCB.

The WQCP must establish water quality objectives which will ensure the reasonable protection of beneficial uses and prevent nuisance. In order to determine the appropriate objectives, therefore, the Regional Boards must also designate the beneficial uses of particular water bodies. Beneficial uses to be considered in setting objectives include past, present and probable future uses. Beneficial uses are defined under the California Porter-Cologne Water Quality Control Act to include uses of the water itself. For example, a beneficial use of water would be to supply irrigation water or to provide an aquatic habitat. A water repository is not a beneficial use since it is the use of an area of land rather than the use of the water that collects on the land.

The beneficial uses for the Salton Sea identified by the Water Quality Control Plan adopted by the Colorado Regional Board in 1984 include the recreational use of the Sea for boating, fishing, swimming, warm water marine habitat, a saline habitat and a wildlife habitat. The Plan also establishes the following water quality objectives for the Sea:

> "The total dissolved solids concentration of the Salton Sea as of May 1983 is approx 38,900 mg/1.
>
> In order to protect all beneficial uses of the Sea, the water quality objective is to limit the rate of increase of total dissolved solids of the Salton Sea to the lowest possible value, consistent with its primary purpose as a reservoir to receive agricultural drainage and seepage and storm waters. It is recognized, however, that this objective could become increasingly difficult as various water conservation measures are implemented." Water Quality Control Plan, Colorado River Basin Regional Water Quality Board, Chapter 4, section I.B.

Identification of the "primary purpose" of the Sea as a drainage reservoir is made in reliance on the Federal Government's withdrawal of all public lands in the Salton Sea area for the creation of a Public Water Reserve in 1924. A California state statute, addressing the uses of the Sea, also supports this approach. The statute declares that "the primary use of the Salton Sea is for the collection of agricultural drainage, seepage, leaching, and control waters", Stats. 1968, Ch. 392, Sec. 2.

One of the central mechanisms by which the regional boards may seek to achieve water quality objectives is through the issuance of Waste Discharge Requirements (WDR). The board is also responsible for the issuance of dredged and fill material permits.

Any entity seeking to discharge waste in a manner that could affect the waters of the state must obtain WDRs from the regional board. WDRs contain conditions designed to achieve water quality objectives and protect beneficial uses. The requirement that WDRs be obtained may be waived by the board if to do so would not be contrary to the public interest. WDRs are routinely waived for agricultural non-point source discharges.

As discussed in the Environmental Protection Agency (EPA) section of this report, the Salton Sea has been identified as a Water Quality Limited Segment (WQLS) and a total maximum daily load (TMDL) has been calculated, as required by the Federal Clean Water Act and EPA regulations implementing the Act (see Section IV.B.3.). EPA also requires identification of load allocations and wasteload allocations for WQLSs. Load allocations are defined as that portion of a water body's loading capacity (the maximum amount of matter that the water body can receive without violating water quality standards) that is attributed to an existing, future, or natural nonpoint source discharger. Wasteload allocations are that portion of the water body's loading capacity that is attributed to an existing or future point source of pollution. EPA requires TMDLs, wasteload allocations, and load allocations to be set at levels necessary to attain and maintain applicable water quality standards.

The Colorado River Basin Regional Board has not identified a load allocation for nonpoint source discharges to the Salton Sea. Under the no action alternative, continued failure to comply with the EPA requirement that such allocations be made could result in either federal or state action to compel compliance or set load allocations, or a citizen suit demanding compliance with the CWA and EPA regulations. As discussed in the section on EPA, the EPA must approve or disapprove load allocations within 30 days

of the submission of allocations by the state. In Scott vs. EPA, slip opinion Nos. 81-2884 and 81-2885, U.S. App. Ct., 7th Circuit (1984), the court held that the failure to submit TMDLs could constitute a constructive submission of no TMDLs, requiring EPA approval or disapproval of the state decision that no such levels are necessary. Characterization as a constructive submission is dependent upon whether the state can justify the failure to act (see Section IV.B.3).

The Regional Board would be directly involved in permitting the in-sea impoundment alternative by virtue of the Board's authority to issue dredged material discharge permits. This alternative proposes discharge of the dredged material in such a manner as to create island and wetlands for an expanded wildlife habitat. Discharge may not be permitted, however, if the dredged material is so contaminated by exposure to the Sea waters that such discharge would be harmful to fish and wildlife. Disposal of the excess briny waters created under the pump out/solar power plant option may likewise require issuance of Waste Discharge Requirements by the Board.

The State and Regional Boards also have an established policy of cooperating with other agencies towards the resolution of water quality problems that require actions outside the basic jurisdiction provided by the Water Code. This policy would encompass actions taken to protect the recreational and environmental beneficial uses of the Sea. Therefore, the State and Regional Boards could be participants in the planning of each of the alternatives.

3. Department of Health Services

The Department of Health Services' (DHS) responsibilities with respect to Salton Sea management are limited to its general duty to promote an environment that will contribute to human health and well being through its toxic substances control and environmental health programs. The Department has the duty to establish by regulation minimum standards for the sanitation of public beaches, a term encompassing "any beach used by the public for recreational purposes, owned, operated or controlled by the state, any state agency, any local agency, or any private person in this state". Violations of sanitation regulations applying to public beaches include the presence, at any time, of visible "sewage, sludge, grease or physical evidence of sewage discharge" on the beach or in water-contact sports areas. In the event of a violation, the DHS may, at its discretion, post warning signs, restrict the use of, or even close, the beach or water contact sports area until such time as the standards are met.

DHS is empowered to order any detected contamination of water abated and to bring suit to enjoin further contamination. Contamination in this context is defined as impairment of water quality by waste to a degree which creates a hazard to public health through poisoning or the spread of disease; "waste" is sewage and all other waste substances "associated with human habitation, or of human or animal origin, or from any producing, manufacturing or processing operation of whatever nature". Upon discovery of a pollution or nuisance, the Department has the duty to report the condition to the appropriate Regional Water Quality Control Board (RWQCB), and to investigate such conditions when so requested by the board.

DHS has no specific management duties with respect to the Salton Sea, other than those relative to its regulatory authority over contamination and public beaches. However, the Department does have a general statutory directive to protect the public health, and to prevent the discharge of sewage and "other waste" in any manner resulting in contamination, pollution or nuisance.

Warnings have already been posted in some shore areas of the Salton Sea. An indication of the seriousness of the problems facing the Salton Sea is also evidenced by the fact that DHS has issued an advisory on the human consumption of Salton Sea fish due to elevated levels of selenium found in samples of fish taken from the Sea.

Under the "no action" alternative, continuing inflows of untreated sewage from the New and Alamo Rivers into the Sea could well result in further and more extensive violations of sanitation standards for public beaches and water contact sports, resulting in additional DHS action such as the posting of warnings of closure of beach areas to the public. If DHS were to detect a contamination of the Salton Sea waters and was also able to determine the source of the contamination, the Department could issue an abatement order. If pollution or nuisance is shown to exist, the Department's role would be restricted to reporting the condition to the RWQCB and performing investigative measures requested by the Board. DHS would have no direct involvement in any of the other alternatives.

4. Solid Waste Management Board

The Solid Waste Management Board (SWMB) has the primary responsibility for formulating and adopting the state's policy for solid waste management. The Solid Waste Policy must take into consideration the recommendations of the State Water Resources Control Board (SWRCB) regarding the prevention of water pollution and the minimum public health standards established by relevant provisions of the Health

and Safety Code. The Board has the duty to conduct studies and investigations regarding new or improved methods of solid waste management, and to act as a clearinghouse for solid waste management information. It has the power to promulgate regulations to carry out the policies it formulates, and to organize, operate and conduct solid waste enforcement activity at the request of local governing bodies.

The Board has approval authority over solid waste management plans prepared by the counties pursuant to Government Code provisions. Once such plans are approved by the Board, all state offices, departments and boards must comply with them in carrying out any activities involving solid waste disposal, and the Board has the power to require such compliance.

The Solid Waste Management Act is enforced on a local level by Local Enforcement Agencies (LEA's). Any person or entity seeking to construct a Solid Waste Facility must first obtain a permit issued by the LEA and concurred in by the State Board. The term Solid Waste Facility encompasses facilities whose function is to store waste, facilitate the transfer of waste, or accept waste for disposal. The definition of waste includes solid, semi-solid and liquid wastes. In reviewing a permit application, the LEA's primary concerns are ensuring that the proposed facility is capable of meeting the State Solid Waste Standards and is consistent with both the County Solid Waste Management Plan (CoSWMP) and the applicable General Plan for the area in which the site will be located. (The General Plan is a land use planning document adopted by local government agencies, which specifies the permissible uses of property.) A facility may be found to be consistent with the CoSWMP only if it is consistent with the applicable General Plan. To be consistent with the General Plan, the facility must be located in an area designated or authorized for use as a Solid Waste Facility site. Amendment of a CoSWMP requires the approval of a majority of the cities located within the county.

It is unclear whether the impoundment structure to be constructed under the impoundment option should be classified as a solid waste facility subject to the jurisdiction of the Board. The definition of solid waste is very broad and could be interpreted to encompass the residual salts to be housed in the impoundment. The plan to leave the salts in the impoundment for up to one hundred (100) years may constitute "disposal". If the impoundment is not within the definition of a disposal facility, it could still be viewed as a storage facility. The ramification of inclusion within the class of facilities governed by the Solid Waste Management Act is that the site

upon which the structure will be constructed must be consistent with the applicable General Plan and County Solid Waste Management Plan. Since it is unlikely that the Sea has been designated for the siting of a solid waste facility, an amendment to the CoSWMP, concurred in by a majority of the cities in the county, must be obtained before construction of the impoundment may commence.

The SWMB, and the Imperial County solid waste enforcement agency, may become involved in the in-sea evaporation alternative, due to that option's proposed use of the impoundment area as a repository for the salts removed from the Sea. A permit from the county, approved by the Board, could be required before the process of concentrating salts in the impoundment began.

5. California State Legislature

The California State Legislature stands in a unique position with respect to the problems facing the Salton Sea, and to the proposed alternatives for addressing those problems. It may, by enacting legislation, expand the statutory powers and duties of the various state agencies involved and thereby empower them to act where no action is presently permitted by the existing scope of the agency's authority. A number of state Constitutional provisions, such as Article 10, section 2 (declaring that the general welfare requires that the water resources of the state be put to beneficial uses to the fullest extent possible), amount to directives guiding, and to some extent, compelling legislative action aimed at resolving the Sea's long-standing problems.

Recently proposed or enacted legislation specifically targeting the Salton Sea provides clear examples of the foregoing. Section 1013 of the Water Code, added in 1987, relieves the IID of civil liability for any damages in and around the Sea arising from implementation of water conservation measures.

Proposed, but not enacted in 1987, was Assembly Bill 930, an act to add a new chapter to the Water Code relating to financing a program of wastewater and toxic cleanup of the international border region of California. The bill specifically refers to the problem of the flow of polluted New River waters into the Salton Sea, and proposes researching, planning and constructing facilities necessary to mitigate, reduce or reverse the effects of pollution and contamination in the international border area.

Senate Bill 34 amended, repealed and added certain sections to the Water Code providing authority and funding for the building of levees in the Sacramento River delta,

and for the creation of a special fund for the mitigation of adverse effects to water quality, fisheries and wildlife in the Delta and in the Salton Sea and its tributaries.

The texts of each of these legislative acts, whether simply proposed or actually enacted into law, clearly illustrate the State Legislature's awareness of the Salton Sea's salinity, pollution and flooding problems, as well as its unique ability to take measures intended to resolve those problems.

6. Office of the Attorney General

The Attorney General (AG) is the chief law officer of the state, and has the duty to see that the laws of the state are uniformly and adequately enforced. The AG has supervisory authority over all District Attorneys and sheriffs in the state, and may bring any action that may be brought by a District Attorney (DA). Generally, the AG is in charge of all legal matters in which the state has an interest.

The Attorney General's office represents a number of State agencies concerning their affairs, including the California Energy Commission (CEC). The AG represents the interests of the State in water rights actions; represents the State Solid Waste Management Board in litigation concerning its affairs; and enforces solid waste management plans formulated by county solid waste management boards. In addition, the AG's office may bring an action on its own motion, or at the request of the Director of the Department of Health Services, to enjoin violations of hazardous waste control laws and seek civil and criminal penalties for their violation.

The Attorney General's office has specific duties and responsibilities relevant to the problems of salinity and pollution facing the Salton Sea. It has the statutorily-imposed duty to enforce the State's policy of preventing the destruction, pollution or irreparable impairment of the environment and natural resources of the state. The AG can intervene in any judicial or administrative proceeding in which facts are alleged concerning pollution or adverse environmental effects which could affect the public generally, or in any proceeding for judicial review upon a showing the matter under review involves issues which may have an adverse effect upon the environment. Furthermore, the AG may bring actions for equitable relief, such as injunctions, against any person for the protection of the State's natural resources from pollution, impairment or destruction.

From the foregoing, it is clear that the AG may become involved in some manner in each of the alternatives considered. Because the "no action" alternative contemplates progressively deteriorating environmental conditions in the Salton Sea and its tributaries, the Attorney General's duty to enforce the State's policy of preventing the destruction, pollution of or irreparable harm to the environment is seriously challenged. Should concentrations of pollutants in the waters flowing into the Sea reach levels violative of hazardous waste control laws, the AG may be compelled to act as well. The AG may also have the duty to exercise its power to intervene in administrative and judicial proceedings that raise environmental issues concerning the Salton Sea.

With respect to the remedial alternatives, the AG's involvement would be limited to its representation of the various agencies concerned in the development of each option. However, it may be required to intervene on behalf of a state agency involved in administrative or judicial proceedings initiated in order to implement one of the options, as an adjunct to its general duty to protect the environment.

E. Local Government/Special District

1. Imperial County

Most of the Salton Sea lies in the northwest corner of Imperial County, and within the service area of the Imperial Irrigation District (IID). The County of Imperial has a broad range of responsibilities over all types of land use and development activities within its boundaries. It has local government authority over all unincorporated areas in the county and cooperates with other planning agencies in planning for incorporated cities, and State and Federal lands. Most of the lands surrounding the Sea in Imperial County are within the Public Water Reserve. Federal, State and local agencies are involved in the management of public lands within their domain. The County cooperates with these agencies in planning and management on unincorporated lands. The County's objectives and policies for growth and resource development are set forth in the Imperial County General Plan (1973).

The Plan serves as a guide in the provision and administration of public services, in determining land use, and in evaluating development proposals. All cities and counties are required to prepare and adopt a comprehensive, long-term general plan containing the following elements: land use, circulation, housing, conservation, open space, seismic safety, noise, scenic highways, safety. Each element includes a statement of County objectives, policies,

standards and programs for that area. In meeting its planning objectives, the County relies primarily on police powers such as zoning ordinances, use designations and restrictions, and permitting authority.

The elements of the General Plan that pertain to the proposed project address land use, open space and conservation elements. The County adopted an Ultimate Land Use Plan as a basis for the preparation and adoption of land use plans for individual planning units or areas. The County's overall land use policy focuses on the preservation and development of agricultural land as the economic mainstay for the County. The County relies on zoning designations as the primary means of guiding development of the unincorporated areas of the county.

The Open Space Element of the County's General Plan pertains to the preservation of natural resources, the managed production of resources, outdoor recreation, and the protection of health and safety. Lands designated for agriculture, low density residential, recreation, preservation and special public may be managed as open space. Most of the land surrounding the Salton Sea falls within these designated uses. (Salton Sea Beach and Bombay Beach are recognized as urban areas which are expected to grow.) The Plan specifies open space areas to be protected including critical habitat and wildlife areas under Federal, state and local jurisdiction. Among these, the Salton Sea National Wildlife Refuge (Federal), the Imperial Wildlife Management Areas (State) are located near or adjacent to the Sea. Adverse impacts to these waterfowl habitat areas would trigger County involvement pursuant to the open space management objectives.

The Open Space Element also recognizes the importance of managing agricultural, mineral and geothermal resources for production. Prime agricultural land is to be preserved wherever possible and geothermal and other resource development are encouraged in open space areas. Outdoor recreation provides an important source of economic growth for the County. Open Space policies and programs are designed to protect natural values and recreational opportunities on Federal, State and County recreational lands by restricting land uses that generally detract from these values (e.g., utility corridors, irrigation systems). Finally, the public health and safety policies for Open Space lands restrict uses in areas prone to natural hazards or that are unsuitable for development. For example, floodplain and waterway zoning restricts development near the New and Alamo Rivers or in floodplain areas near the Sea.

The Conservation Element of the General Plan applies to all unincorporated land within the County, regardless of designation. This Element sets forth County policies and programs for managing all natural resources. The Water Resource and Biological Resource sections of the Conservation Element are the most relevant to plans for Salton Sea management. The Water Resources section identifies primary water-related issues in the County, including: the decreasing quality of Colorado River water used in irrigation; impacts of wastewaters from Mexicali; increasing salinity in the New and Alamo Rivers and the Salton Sea; flooding potential; federal and interstate water allocation agreements; impacts of flood control on wildlife and vegetation. The section on Biological Resources identifies those areas of significant statewide concern and their corresponding habitat values. The Salton Sea, the Colorado River, the New and Alamo Rivers and wetland areas are among those specified in the Plan. In general, the County's authority with regard to these resources consists of assisting in the review of all development plans and proposals.

Under the no action alternative, County involvement could be triggered through changes in the water surface levels, due to declining inflows, and/or changes in water quality as they affect resource use and development in the County. The County seeks to protect and preserve wildlife and recreational resources, and would support efforts by State and regional regulatory agencies (e.g., Water Quality Control Boards, Department of Fish and Game, County Health Department) to minimize water quality impacts.

Changes in water levels also could trigger the land management authority of the County. The County operates two marinas and manages waterfowl refuges on the southern shore of the Salton Sea. The gradual reduction in "freshwater" inflows to the Sea is expected to decrease the water surface level. The County could implement zoning measures in shoreline areas to restrict development of any drained lands. The County also might become involved in planning and restoring flooded wildlife areas and recreational areas as the Sea level drops.

County involvement under the "in-sea evaporation" option primarily would consist of reviewing project plans and environmental assessments, and requiring mitigation measures deemed necessary to ensure compliance with County policies for land use and resource conservation. The County has police power over land use, and would require a land use permit for construction activities (i.e., staging areas, etc.) or project facilities on County-managed lands. The County could restrict such uses so as to limit impacts to wildlife and recreational resources. A Special Public lands

designation might be applied given the specific use of the diked area. Under this proposed alternative, water and salinity levels are expected to decrease in the "preserved" area of the Sea. The County might restrict development of shoreline lands in light of recent flood damage claims. The expected decrease in salinity levels might be offset by reduced "freshwater" inflows to the Sea. In this case, County involvement would mitigate impacts to recreation and wildlife resources in the area.

The concentration of salts in the impoundment area might lead to impacts in the area of solid waste disposal. The County would require measures necessary to minimize these effects in compliance with solid waste management standards. Over the long-term, improvements in the conditions of the Salton Sea could enhance recreation and tourism development in the County, resulting in increased demands for services in these areas, and increased revenues to the County.

The development of an evaporation site on undeveloped land under the pump out/desalination/solar generation option would require a land use permit and perhaps a Special Public Lands designation by the County. Project development would be restricted to limit the impacts on sensitive and protected resources, and public safety. A comprehensive environmental assessment in compliance with the California Environmental Quality Act regulations would be required for the pumping/evaporation project and any subsequent project phases (i.e., 25 MW solar power plant). The County would review and provide comments on these assessments in light of policies for land use, air quality, health and safety, waste disposal, utility access.

Salinity levels in the Sea would decrease under this option. However, pollution levels and diffusion might worsen depending on the rate and location of pumping, and the overall change in the surface area of the Sea. In the area of water, the County would require compliance with State standards. As discussed above, a decline in the Sea surface level could trigger County land use authority.

The construction and operation of a 25 MW power plant generally would be consistent with County policies for managed production of resources (in the Open Space Element). Reclaimed water and/or electric power produced by the project might be used to support local development. The County would exercise review authority over project plans in cooperation with the California Energy Commission and other responsible agencies.

The Gulf Waterway option primarily would fall under the jurisdiction of Federal and State level agencies. The

County would participate in project assessments and reviews, but would have direct authority only over activities affecting unincorporated lands within its jurisdiction. As in the options discussed above, the County would exercise government and police powers over land use, and would require compliance with all applicable standards for health and safety, environmental protection, public services and utilities.

The exchange of water between the Salton Sea and the Gulf, with possible resultant changes in the Sea water level and in salinity levels could also trigger County involvement in areas of floodplain management, water quality, recreation and wildlife. Briefly, a change in water levels could result in floodplain zoning or land use restrictions for affected areas along the shore to protect against flood damage and/or to conserve open space consistent with existing land use designations. Changes in water levels and water quality could have an effect on recreation and tourism in the area, or on wildlife habitat in and around the Sea. The County is likely to participate in the protection of these resources, either directly through imposition of land use controls or indirectly through the proposal review and comment process. The County could benefit from the expenditures, and tourism and development associated with an international canal.

2. Riverside County

The County of Riverside, like Imperial County, has a broad range of responsibilities over all types of land use and development activities within its boundaries. (See discussion of Imperial County, above)

Riverside County encompasses 7,310 square miles. The northwest portion of the Salton Sea, approximately one quarter of the total area of the Sea, is located within the boundaries of Riverside County. Most of the lands surrounding this portion of the Sea are unincorporated and thus fall under the general management authority of the County. The County's objectives and policies for growth and resource development are set forth in the Riverside County Comprehensive General Plan (1984; amended through December 1985). The General Plan is the primary policy directive for long-term development in the County.

The Riverside County Comprehensive General Plan provides a countywide framework for guiding local government plans and activities. It outlines the County's policies and programs in the provision and administration of public services, in determining land use, and in evaluating development proposals. The proposed Salton Sea alternatives could trigger County involvement under the following

elements of the General Plan: land use, environmental hazards and resources, and public facilities and services.

The lands in Riverside County surrounding the Salton Sea are located within the Lower Coachella Valley Planning Area. The predominant land use in the area is irrigated and dry-land agriculture, while a significant portion of the area is desert. The land use policy for the area emphasizes open space and conservation uses (Land Use Category III-Rural, and IV-Outlying Areas) outside the limits of incorporated cities of Coachella and Indio. These designations generally allow low density uses such as agriculture, parks and recreation, low density residential development, and light industry and commercial uses. In addition to Comprehensive General Plan guidelines, the area also falls within the Eastern Coachella Valley sub-area. The Eastern Coachella Valley Plan identifies land use goals and policies to address concerns specific to this 201,000 acre sub-area, which includes lands surrounding the Salton Sea. This plan recognizes agriculture as the significant and continuing land use in the area, while also providing for other compatible low density uses. A special land use category was created in the Eastern Coachella Valley Plan to provide for residential and commercial development within cove areas of the Salton Sea. Industrial uses such as power plants, utilities, small dams are considered essential land uses and are generally compatible with open space and conservation designation.

Under the Environmental Hazards and Resources Element, the County has adopted policies to limit development in area prone to natural hazards (e.g., flooding, seismic activity, erosion), and has identified those areas in its Comprehensive Plan. For example, development in flood ways is restricted through floodplain management ordinances, building, land division and land use ordinances. These standards are applied by the County Planning Department in cooperation with local Flood Control Districts. In the area of Water Quality (also in this Element), the County would consider adopting (but has not adopted) ordinances requiring water conservation plans and Best Management Practices for agricultural areas that contribute to water quality problems. Policies and programs in areas of solid waste management and energy resources also might be applicable to the proposed project.

County policies and programs in the area of parks and recreation and utilities (under the Public Facilities and Services Element) also contain provisions which apply to the proposed project. No Riverside County Regional Parks are located in the vicinity of the Salton Sea, but the County Park Advisory Commission has compiled a list of sites for acquisition as County Regional Parks. Some of these areas

are located on the eastern shore of the Sea. County policy for utility planning is to encourage the use of existing corridors for the construction of transmission lines. The County has no permitting authority over utility development, but it does comment on and make recommendations to the California Public Utilities Commission (CPUC) regarding issues of environmental hazards, public health and safety, environmental and recreational impacts, etc. The County requires a comprehensive environmental assessment of alternative facility sites and corridors.

In addition to land use compatibility under the Open Space and Conservation Element, the County has mapped areas containing important wildlife habitat, and requires mitigation of project-related impacts in accordance with the provisions of the California Environmental Quality Act (CEQA). Habitat areas for the State Endangered Desert Pupfish and the State Rare/Federal Endangered Yuma Clapper Rail have been identified in the vicinity of the Salton Sea.

Under the "no action" alternative, drainage inflows to the Sea will decrease over time as regulatory and market pressures for water conservation increase. Rising salinity levels could adversely impact wildlife (fishery) and recreational resources in the area. In its General Plan, the County recognizes the potential impact of water quality on future economic growth (including tourism development), and has adopted a policy to encourage tourism in the County. Given the importance of the Salton Sea for recreational development, the County is likely to support any State or regional programs to control water quality impacts.

The project facilities planned under the "in-sea evaporation" option would be constructed in the southwest area of the Salton Sea, outside the jurisdictional boundaries of Riverside County. The County would be involved in reviewing and making recommendations on the project plans. In addition, County involvement could be triggered through a change in water and salinity levels. Sea water pumping into the diked area will decrease water levels and reduce salinity in the "preserved" portion of the Sea. (This reduction in salinity might be offset by reduced inflows from agricultural drainage.) As discussed under the No Action Alternative, water quality degradation could adversely impact fishery and recreational resources that provide economic benefits to the County.

The evaporation site proposed under the "pump out evaporation" alternative would be located on undeveloped lands near or adjacent to the Sea. Most lands surrounding the Sea in Riverside County are designated for agricultural and open space uses. Essential uses, such as power plants and small dams, are considered to be compatible with these

designations though some restrictions may apply. The County would review project plans for siting, development and operation of the evaporation site to determine consistency with development objectives for the area. Policies and programs in the following areas also could apply: utilities (i.e., siting of transmission lines, public health and safety and environmental factors, design and access); solid waste disposal; wind erosion and blowsand (i.e., blowsand control plan and mitigation measures); noise (i.e., construction and operation noise measurements, and mitigation); wildlife (i.e., plan evaluation and mitigation, restricted use areas).

If a 25 MW solar energy power plant is planned under a later project phase, the County would have review and approval authority in these same areas. The energy resources policy includes a comprehensive energy plan program to "actively seek available funding and solicit participation in experimental development proposals involving solar energy...", and a corresponding land use standard to encourage use of solar energy in projects in all land use categories.

The proposed waterway under the pump out/desalination/ evaporation alternative probably would extend from an outlet on the southern shore of the Salton Sea (in Imperial County) to the Gulf of California. It is expected that the proposed routing of the canal would be within the jurisdictional boundaries of Imperial County, and that all project-related facilities and construction activities would occur within that county. Riverside County would benefit from increased recreational use of the Salton Sea associated with the waterway.

The exchange of water between the Salton Sea and the Gulf might result in changes in the Sea water level (increase or decrease), and in salinity levels. These impacts could trigger County involvement in areas of floodplain management, water quality, recreation and wildlife. Briefly, a change in water levels could result in floodplain zoning or land use restrictions for affected areas along the shore to protect against flood damage and/or to conserve open space consistent with existing land use designations. Changes in water levels and water quality could have an effect on recreation and tourism in the area, or on wildlife habitat in and around the Sea. Riverside County is likely to participate in the protection of these resources, either directly through imposition of land use controls or indirectly through the proposal review and comment process.

F. Water Districts

1. Imperial Irrigation District (IID)

The general functions of the Imperial Irrigation District (IID) are to develop, preserve and conserve water for agricultural and domestic purposes within the District, and to generate, transmit and distribute electrical energy within its power service area. While the District has no direct regulatory or management authority over the Salton Sea itself, the District's responsibilities and activities related to the supply and distribution of irrigation water, and the conveyance of drainage and seepage waters, have significant impacts on water and salinity conditions in the Salton Sea.

The Imperial Irrigation District was organized pursuant to the Irrigation District Act of 1911. The District is governed by a 5-member Board of Directors, and is represented on the Colorado River Board of California. Provisions governing water supply for and diversions by the District are set forth in a number of documents, including the Colorado River Compact, the Boulder Canyon Project Act, the California Limitation Act, and the California Seven-Party Agreement. In performing its responsibilities, the District has adopted and enforces its "Water Department Rules and Regulations" (updated 1987). The District encompasses over one million acres surrounding the Sea in Imperial and Riverside Counties. The IID's operations currently contribute over 50 percent of the inflow to the Salton Sea.

The District operates and maintains 1,760 miles of conveyance and distribution facilities, including the Imperial Dam headworks, an 80-mile stretch of the All-American Canal, and 1,450 miles of collection drains for conveyance of agricultural return flows. Irrigation water is provided to over 600,000 acres in Imperial and Coachella Valleys, and to municipal and industrial users in Imperial Valley. In addition, the District generates and distributes electric power for a 6,500 square mile service area in the Imperial and Coachella Valleys.

In the area of water supply and distribution, the District has the discretionary power to control, distribute, store, spread, sink, treat, purify, recapture and salvage any water for the beneficial use or uses of the district, its inhabitants, or the owners of water rights. It may construct works for the collection of water, acquire rights to store or carry water in facilities not owned by the District, and contract for the exchange, transfer or delivery of water. The District may fix rates to apportion and distribute waters among landowners, and may restrict

water application in times of shortage. The District may acquire and dispose of property necessary for carrying out its purposes, and may exercise powers of eminent domain.

With regard to drainage, the recent ruling in John Elmore v. Imperial Irrigation District (205 Cal. Rptr. 433) held that the District has "a clear, mandatory duty to avoid wasting water, to prevent flooding, and to provide drainage made necessary by the operation of its irrigation system." The District has no duty to purify or treat drainage waters, although the California Department of Health Services (DHS) may give written notice to the District in special cases where water (primarily that used for domestic purposes) may be injurious to public health.

The District may but is not required to provide flood control (unless the flooding is the result of its irrigation practices), and may acquire the right to flood or otherwise interfere with property whether the property is publicly or privately owned. It may cooperate and enter into any contract with public agencies, state or federal governments, or private individuals as necessary to carry out its purposes.

The district has adopted a 15-point Conservation Program to improve irrigation efficiency and water conservation. The program includes rules and regulations to enhance water conservation practices by individual farmers in the District. In a 1984 ruling, Decision 1600, the State Water Resources Control Board (SWRCB) ordered IID to develop a water conservation plan, including scheduling and financing arrangements, to use more efficiently its Colorado River water.[1] Studies by the Department of Water Resources (DWR) and the U.S. Bureau of Reclamation have estimated potential water savings by IID on the order of 350,000-450,000 acre-feet annually through implementation of various measures including lining of the All-American Canal.[2]

IID is statutorily excluded from liability for any effects to the Salton Sea caused by reductions of the flow

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1. After the completion of this report, the SWRCB adopted Order 88-20, which addresses issues relating to the actions that must be taken by IID to comply with Decision 1600. Order 88-20 requires IID to submit: a schedule for implementation of new conservation measures, a funding mechanism, and regular progress reports to the SWRCB.

2. Order 88-20 contains mandates directing IID to save additional water.

of water thereto resulting from conservation measures (Water Code section 1013), presumably including those imposed by the SWRCB in its Decision 1600. IID is not excluded from any requirements established under California Environmental Quality Act (CEQA), however.

Under California Law, most of the District's powers are discretionary, with the notable exception of the District's mandatory duty to conserve water, prevent flooding due to its irrigation practices and provide drainage made necessary by its activities. The District may form Improvement Districts within the existing District boundaries in order to construct new or change existing water service facilities or flood and drainage control facilities.

Under the "no action" and other alternatives, IID will continue to operate and maintain its water supply and drainage facilities according to the statutory and management objectives outlined above. The District is currently involved in studies and negotiations regarding conservation improvements. The anticipated savings represent a 30 percent reduction in inflows to the Salton Sea and would effectively reduce the Sea's water level worsening the salinity and pollution concentrations in the Sea.

While the IID is not liable for damages associated with these conservation measures, neither is it relieved from the duty, arising under CEQA, to study the environmental impacts of whatever conservation mechanisms it considers implementing. IID prepared an Environmental Impact Report in 1986 and adopted a Statement of Overriding Considerations regarding the impacts of the conservation program. The District has been involved in negotiations with other agencies for indemnification for negative impacts of increased salinity associated with water conservation efforts.

The IID's immunity from liability extends only to damage attributable to conservation measures. IID is not relieved from liability for injuries associated with past and future discharges if the extent of damage caused by discharges can be distinguished from damages resulting from conservation measures. The difficulty of separating the degree of damages resulting from the two causes may have the effect of insulating IID from any liability for salinity damages to the Sea.

IID's role in the Salton Sea may also be analagous to the role of the United States Bureau of Reclamation (USBR) in the Kesterson Wildlife Reservoir. As discussed in the section on the USBR, the Bureau was ordered by the State Water Resources Control Board to clean-up pollution in the reservoir attributable to discharges of irrigation waters flowing into Kesterson from USBR drainage structures. IID

could experience similar regulation, since it operates and maintains the agricultural drainage system discharging into the Sea. The Department of the Interior might also issue an order to IID to cease drainage to the Sea if migratory birds are threatened as a result of the flow of irrigation waters to the Sea. Such an order was issued by DOI against the USBR when the Bureau's drainage practices were shown to be responsible for the death of migratory birds at the reservoir.

Under the in-sea impoundment option, involvement of IID could be triggered through impacts affecting land ownership, and/or a change in sea level due to construction and operation of the in-sea impoundment area. IID is a major landowner in the Salton Sea area. The District owns or has interest in lands underlying the Sea which are not otherwise held by the federal government, the Indian Reservation or a few private owners. In addition to the Public Water Reserve and Bureau of Reclamation withdrawn lands lying below -220 feet, the IID has acquired most of the privately held lands below this elevation through fee title, or has obtained flooding rights to these lands. The District also owns and leases lands included along the shoreline of the Salton Sea National Wildlife Refuge and the Salton Sea State Recreation Area.

The District administers engineering control over the gradient of drainage ditches and the New and Alamo Rivers and has constructed control structures to maintain the necessary gradient in these streams. Dredging activities in the "freshwater" channel and the deposition of dredged material would have to be coordinated with the District to avoid interference with this system. Finally, construction of the impoundment structure and connecting causeways might involve District-owned lands on the sea bed or shore. In this case, the District Board would have the authority to lease or otherwise dispose of its property.

Under the pump out/evaporation/solar ponding option, the IID could again become involved through issues of land management and ownership, as well as through its authority over the production and/or transmission of electrical energy. IID's land management and ownership interests would be similar to those discussed above.

IID's authority over energy issues includes the power to purchase or lease power from a public or private entity, construct and operate power transmission facilities, provide for the acquisition and operation of power plants and transmission facilities, and lease or sell electric power to municipalities, public entities or private interests. Under this option, the District might contract with the responsible agency for delivery of power for the pumping

operations using the District's existing electric power system. Construction of the solar power plant could trigger IID involvement in areas of facility operation and maintenance, power distribution and sales.

The Gulf Waterway alternative would involve IID in much the same way as the options discussed above. Specifically, entry onto and use of District property for construction and operation of the canal and supporting facilities would trigger the Board's authority over property acquisition and disposal. Existing irrigation and drainage facilities might be impacted, necessitating relocation and engineering changes, as well as cooperation among various landowners and agencies in Imperial and Riverside Counties. The District may cooperate with the federal government, state governments, counties, public agencies and private interests for joint acquisition of property, including property in another state or nation.

2. Coachella Valley Water District

The Coachella Valley Water District (CVWD) is a public agency of the State of California, organized in 1918 under the California County Water District Act for the purposes of protecting and conserving underground water supplies for the future and present use of the Coachella Valley, and for bringing supplemental water to the Valley. Since its formation, CVWD has expanded its activities to include a range of water management services including water conservation and groundwater recharge, irrigation water delivery, domestic water production, storage and delivery, wastewater and sewage reclamation, stormwater protection and flood control. In performing these functions the District is dependent on the Salton Sea as a repository for agricultural drainage water, floodwater and domestic waste water.

The CVWD encompasses a total area of over 600,000 acres in Riverside, Imperial and San Diego Counties. Improvement District 1 of the CVWD, which is served by Colorado River water, comprises approximately 82,000 acres, of which 79,000 acres are in agricultural production. The District's water supply consists of deep well water (used for agricultural and domestic supplies) and Colorado River water. Deliveries of Colorado River water to the Valley began in 1949 with the completion of the Coachella Branch of the All-American Canal. Through contracts with the federal government, the District operates the Coachella Branch of the All-American Canal. The irrigation distribution system consists of 500 miles of supply pipelines, and nearly 200 miles of drainage pipes and open ditches for collection of drainage waters from on-farm tile drainlines. Drainage waters are discharged into the Salton Sea.

In addition to irrigation supplies, the CVWD provides stormwater protection, urban water service, and wastewater reclamation service. With respect to water conservation, the District operates percolation ponds to allow delivered waters to replenish the groundwater supply. The District is affected by conditions of the Salton Sea because some of its water management facilities are located along the shore line.

The District obtains its Colorado River water supply through contracts with the United States Department of Interior, and through an exchange agreement with the Desert Water Agency and the Metropolitan Water District. The District also has contracted with the United States for repayment of project costs for lining 48 miles of the Coachella Canal pursuant to the Colorado River Salinity Control Act (43 U.S.C. 1571 et seq.).

With regard to the management of the Salton Sea, CVWD has authority over water (including floodwater and drainage), property, sewer and wastewater facilities, recreation and power generation. The District's powers in each area are largely discretionary. In the area of water management, the District has powers to appropriate, acquire, and conserve water for any useful purpose, and may operate water rights, works and property to convey, supply, store or make use of water for any beneficial purpose. Like an irrigation district, CVWD may establish rules and regulations for use and distribution of water, may fix rates, and may restrict water use during times of shortage. The District has powers to, but is not required to, drain and reclaim lands, and may utilize drainage and flood waters.

The Coachella Valley Water District, unlike IID, does not control lands in and around the Salton Sea. The CVWD does have the same authority to acquire property necessary to carry out its purposes. The District has powers generally to collect, treat, dispose of sewer and waste waters, independently or in cooperation with other public agencies. The District also may use its water or land resources for recreational purposes. In the area of power generation, the water district is empowered to construct, maintain and operate hydroelectric power plants and transmission facilities, and may lease facilities and sell power to public agencies engaged in the distribution of electric power. However, the District does not have powers to sell electric power to consumers other than a public utility. In performing its duties, the District has the authority to set rules and levy assessments.

While the District depends on the primary use of the Salton Sea as a repository for floodwater, agricultural

drainage water and domestic waste water, the District does not have authority over conditions of the Sea itself. Water elevation and salinity levels affect District operations only in so far as they interfere with drainage and discharge facilities and recreational resources.

The District supports efforts to protect and preserve the recreational resources of the Salton Sea, provided that such measures do not impact the function of the Sea as a repository for irrigation drainage waters. The District also has indicated that it supports investigations and measures to control water quality and water surface elevations in the Salton Sea generally. In response to recent flood-related damages in the Salton Sea area, the District has taken the general position that the federal government is responsible for damages attributable to increased sea levels.

Under the no action alternative and other project alternatives, the District will continue to operate and maintain its water supply and drainage facilities according to the statutory and management duties outlined above, and will continue to pursue various programs for water conservation and improved efficiency.

Under the no action alternative, inflows to the Sea will decrease over time as irrigation practices in the area improve under regulatory and market pressures. While decreased water levels can help ensure the proper functioning of the District's discharge facilities, and to reduce flood-related property damages in the Salton Sea area, increased salinity levels associated with reduced inflows could have a negative impact on the recreational values of the Sea. It is possible that the District would participate jointly in measures to reduce salinity and protect recreational facilities, but the exact nature and extent of involvement cannot be predicted at this time. The District's potential responsibility for damage to the Sea caused by irrigation return flows is similar to that of the Imperial Irrigation District, discussed in Section IV.G.1, with the exception of the issues surrounding Water Board Decision 1600.

Under the "in-Sea evaporation" option, the impoundment and evaporation of Sea water within the diked area is likely to result in a gradual lowering of the Sea level and a dilution of salinity concentration in the Sea. The rate of decrease in sea level will depend on the rate at which Sea water is pumped into the impoundment relative to the rate of at which drainage water flows into the Sea. The involvement of CVWD could be triggered through impacts related to land ownership, changes in water level and increased salinity. If Sea levels increase (as might be the case if inflows to

the Sea exceed water removal), facilities CVWD's water management facilities adjacent to the Sea might be affected. The district could exercise its authority to acquire property rights to protect against any potential flood damage claims. Construction and operation of the diked area will not involve District owned lands on the Salton Sea bed.

The in-sea evaporation option is designed to reduce salinity by isolating and evaporating water in a containment area at a rate which exceeds the rate of agricultural inflow into the Sea. The effectiveness of this option is dependent on drainage inflows with a lower concentration of salts than salinity levels in the Sea. If this dilution effect is offset by any additional concentration of salts in the inflow streams, even for a short period, recreational values might be impacted. CVWD has indicated that it will support measures to protect these values.

The CVWD might become involved in the "pump out evaporation" option through issues of land management and ownership, a change in water level, and the production and transmission of electricity. The discussion of this option relative to the authority of the Imperial Irrigation District generally applies in this case. Briefly, construction of the evaporation area on District-owned lands would require the approval of the District. A proposal to use or re-route existing drainage pipelines or canals to directly convey return flows to the evaporation site also would require District approval and involvement. As previously discussed, a change in sea levels due to pumping might trigger District actions to acquire additional property or easements adjacent to the Sea, particularly in areas where District-owned water management facilities are located.

The CVWD has the authority to maintain and operate hydroelectric power plants and ancillary transmission lines. Under County Water District Law the District may lease, sell or use power plants for power generation but may only offer power for sale to other public agencies or utilities. If the 25MW solar energy power plant proposed as part of this option is to be located within the CVWD jurisdiction, it is not clear that CVWD would have the authority to operate and maintain the facility.

The "pump out discharge" alternative would necessitate CVWD involvement if project-related activities or facilities were constructed on or interfered with property owned by the District, if the construction and operation of the project required delivery of electric power supplies by the District, or if Sea level elevation changed as a result of water exchanges between the Salton Sea and the Gulf. It is most likely that the canal would be constructed from the

southern end of the Sea and would not impact lands within the jurisdiction of the Coachella Valley Water District. The discussion of this option relative to the involvement of the Imperial Irrigation District analyzes these areas of potential involvement in more detail.

APPENDIX F

SUMMARY ANALYSIS OF AUTHORITIES AND RESPONSIBILITIES ASSOCIATED WITH THE SALTON SEA

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