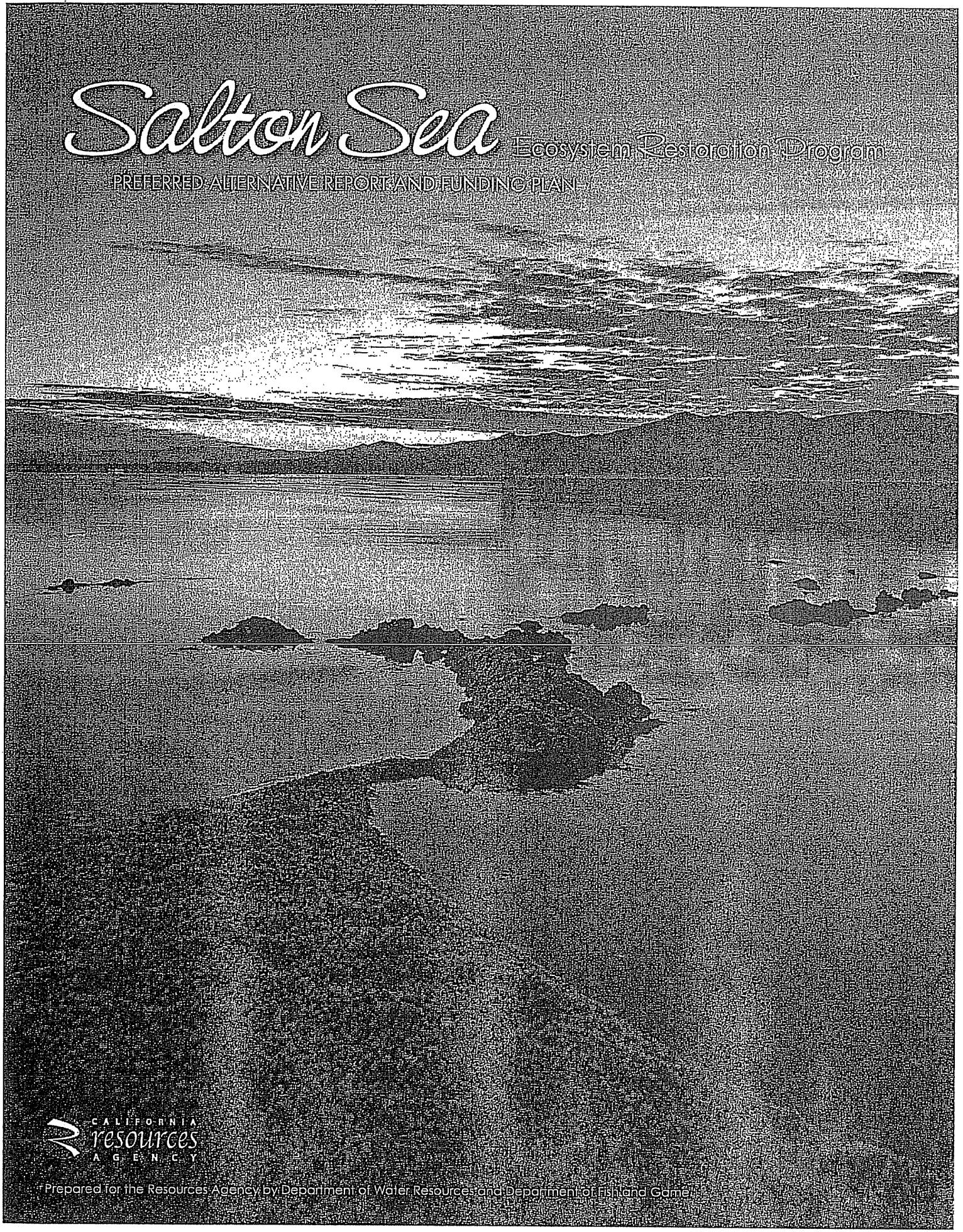
EXHIBIT 5

Salton Sea Ecosystem Restoration Program

PREFERRED ALTERNATIVE REPORT AND FUNDING PLAN



CALIFORNIA resources AGENCY

Prepared for the Resources Agency by Department of Water Resources and Department of Fish and Game

Cover Photo by Ian Parker, 2005

SALTON SEA ECOSYSTEM RESTORATION PROGRAM

Preferred Alternative Report and Funding Plan

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INTRODUCTION

This Preferred Alternative Report is the culmination of a process that began in 2003, shortly after state legislation was passed to facilitate implementation of the historic Quantification Settlement Agreement (QSA). The QSA provides, for a period of 35 to 75 years, a resolution of issues regarding the reasonable and beneficial use of Colorado River water and provides part of the mechanism for California to reduce its use of Colorado River water. This report satisfies the state legislative intent to determine a preferred alternative for restoration of the Salton Sea ecosystem.

The open, inclusive process undertaken by the Secretary for Resources and the Salton Sea Advisory Committee to develop a preferred alternative engaged a vast number of stakeholders and the public. This process was designed to bring all interested groups together in order to work collectively toward restoring this ecologically significant body of water. Although a number of studies have been undertaken during the past 20 years related to Salton Sea restoration, none, until now, have resulted in a plan that the majority of stakeholders could accept.

While this document does not necessarily grant all parties with everything they felt was necessary, the Preferred Alternative provides a sound starting point, where all interests are represented, and from which Salton Sea ecosystem restoration can commence. It also does not preclude any idea from being part of an eventual Salton Sea restoration.

The document represents a collective 75 year vision to restore the Salton Sea. There is great hope that it also reflects the broad interests and tireless work of all those committed to that vision. While this report may represent a beginning, it is only by continuing to work together that the future will embrace our vision and common goal of a restored Salton Sea.

BACKGROUND

The Salton Sea, located in Imperial and Riverside counties, is the largest lake in California (see Figure 1). Its ecosystem, which in modern times has existed for about 100 years, is an extremely valuable resource for resident and migratory birds, including a large number of birds listed as threatened, endangered, or species of concern. Until recently, the Salton Sea also supported a robust marine sport fishery. However, increasing salinity and declining water quality have all but eliminated marine fish species with the exception of tilapia. Diminished inflows to the Salton Sea due to various factors and increased evaporation due to climate change effects will cause the total ecosystem collapse of the Salton Sea over the next decade or two with or without the QSA. In recognition of the importance of the Salton Sea ecosystem, the state legislature passed the Salton Sea Restoration Act and related legislation in 2002, 2003, and 2004 that established a state policy for restoring the Salton Sea and permanently protecting the dependent fish and wildlife resources. This legislation was codified in the Fish and Game Code and the Water Code and directs the Secretary for Resources to take certain actions related to planning for restoration of the Salton Sea.

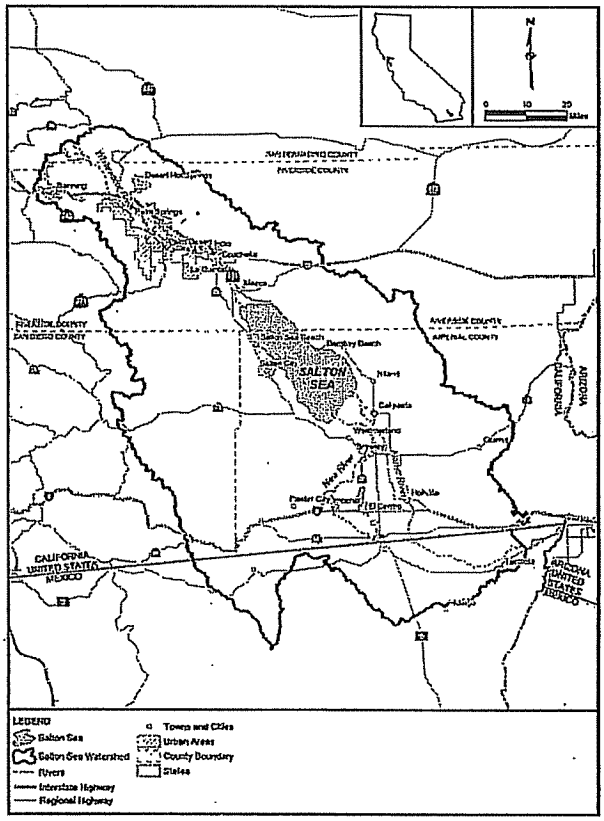


FIGURE 1
SALTON SEA WATERSHED

The Salton Sea Restoration Act requires that the Secretary for Resources undertake an Ecosystem Restoration Study to determine a preferred alternative for the restoration of the Salton Sea ecosystem and the permanent protection of wildlife dependent on that ecosystem. The preferred alternative must provide the maximum feasible attainment of the following objectives:

- Restoration of long term stable aquatic and shoreline habitat for the historic levels and diversity of fish and wildlife that depend on the Salton Sea;
- Elimination of air quality impacts from the restoration project; and
- Protection of water quality.

The legislation also requires the preparation of programmatic environmental documents and a funding plan. In October 2006, a Draft Programmatic Environmental Impact Report (PEIR) and Ecosystem Restoration Study were distributed for public comment. The Final PEIR will be available in June 2007.

ALTERNATIVES CONSIDERED IN DRAFT PROGRAMMATIC ENVIRONMENTAL IMPACT REPORT

The Draft PEIR included an evaluation of a range of alternatives that addressed the restoration objectives established by the legislation. The results were compared to Existing Conditions and projected conditions for the No Action Alternative that is described below.

No Action Alternative

The No Action Alternative is intended to reflect Existing Conditions plus changes that are reasonably expected to occur in the foreseeable future if none of the alternatives are implemented. Foreseeable future projects at the Salton Sea include implementation of mitigation measures for the QSA and Imperial Irrigation District Water Conservation and Transfer Project. The mitigation measures related to the Salton Sea include Air Quality Management actions for exposed playa, protection of desert pupfish (including extension and connection of agricultural drains that provide pupfish habitat), modification of recreational facilities, and delivery of water to the Salton Sea until 2017.

The facilities that could be constructed under the No Action Alternative are shown in Figure 2. The actual facilities to be constructed would be determined under a process established to implement the mitigation measures for the Imperial Irrigation District Water Conservation and Transfer Project. The PEIR takes a conservative approach to define the actions and facilities needed.

The capital costs of the No Action Alternative were estimated to be $801 million with annual operations and maintenance costs of $49 million. In accordance with state law and the QSA and its related agreements executed in 2003, the state could be responsible for a significant portion of these costs if the cost of mitigation for the Imperial Irrigation District Water Conservation and Transfer Project exceeds $133 million.

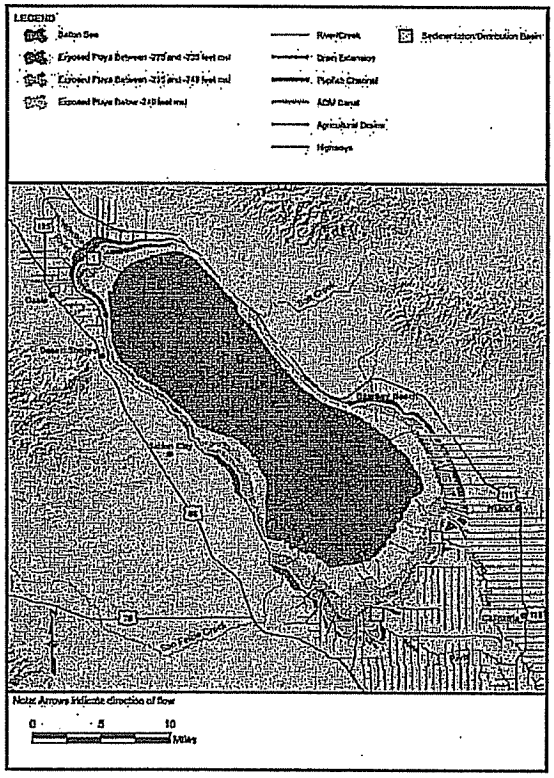


FIGURE 2
NO ACTION ALTERNATIVE VARIABILITY CONDITIONS

The No Action Alternative is based on projected conditions through 2078, which includes the implementation of the QSA and its related agreements. Future action could change these projected conditions. For example, changes in the QSA may modify the required actions and facilities or the related state obligations. However, such future changes, if any, are too speculative under the California Environmental Quality Act to be considered at this time. Such changes were therefore not included in the No Action Alternative.

Range of Alternatives Considered

Eight action alternatives were considered in the Draft PEIR. These eight action alternatives consist of the following:

- Alternative 1 – Saline Habitat Complex I (38,000 acres of Saline Habitat Complex with minimum recirculation facilities and Air Quality Management);
- Alternative 2 – Saline Habitat Complex II (75,000 acres of Saline Habitat Complex with brine recirculation and Air Quality Management);
- Alternative 3 – Concentric Rings (61,000 acres of Marine Sea in two concentric rings, Air Quality Management, and no Saline Habitat Complex cells);
- Alternative 4 – Concentric Lakes (88,000 acres of habitat similar to Saline Habitat Complex in four concentric water bodies as defined by the Imperial Group, with dedicated inflows for Air Quality Management but no long-term facilities);
- Alternative 5 – North Sea (62,000 acres of Marine Sea in the northern sea bed, 45,500 acres of Saline Habitat Complex in the southern sea bed, and Air Quality Management);
- Alternative 6 – North Sea Combined (74,000 acres of Marine Sea in the northern, western, and southern sea bed; 29,000 acres of Saline Habitat Complex cells in the southern sea bed; and Air Quality Management);
- Alternative 7 – Combined North and South Lakes (104,000 acres of Marine Sea in the northern, western, and southern sea bed; 12,000 acres of Saline Habitat Complex cells in the eastern sea bed; water treatment of inflows and water withdrawn from the eastern portion of the northern Marine Sea; and use of Brine Stabilization for Air Quality Management at lower elevations); and
- Alternative 8 – South Sea Combined (83,000 acres of Marine Sea primarily in the southern sea bed with a smaller Marine Sea in the western and northern sea bed, 18,000 acres of Saline Habitat Complex in the southern sea bed, and Air Quality Management).

METHODOLOGY TO RECOMMEND THE PREFERRED ALTERNATIVE

In accordance with restoration legislation, the Secretary for Resources is to recommend a Preferred Alternative for restoration of the Salton Sea ecosystem to the California Legislature. The Preferred Alternative, shown in Figure 3, was developed based upon input from the Salton Sea Advisory Committee, broad public input, and the results of technical evaluations. The methodology and the results of each of these processes are described below.

Salton Sea Advisory Committee Recommendations

The Salton Sea Advisory Committee, a 32-member body, established by legislation and composed of local agencies and stakeholders, state and federal agencies, and environmental organizations, was involved in the screening and development of the alternatives and reviewed the results of the impact assessment presented in the PEIR. Throughout the PEIR process, the Salton Sea Advisory Committee formed several working groups to evaluate specific issues, including habitat and air quality. The committee

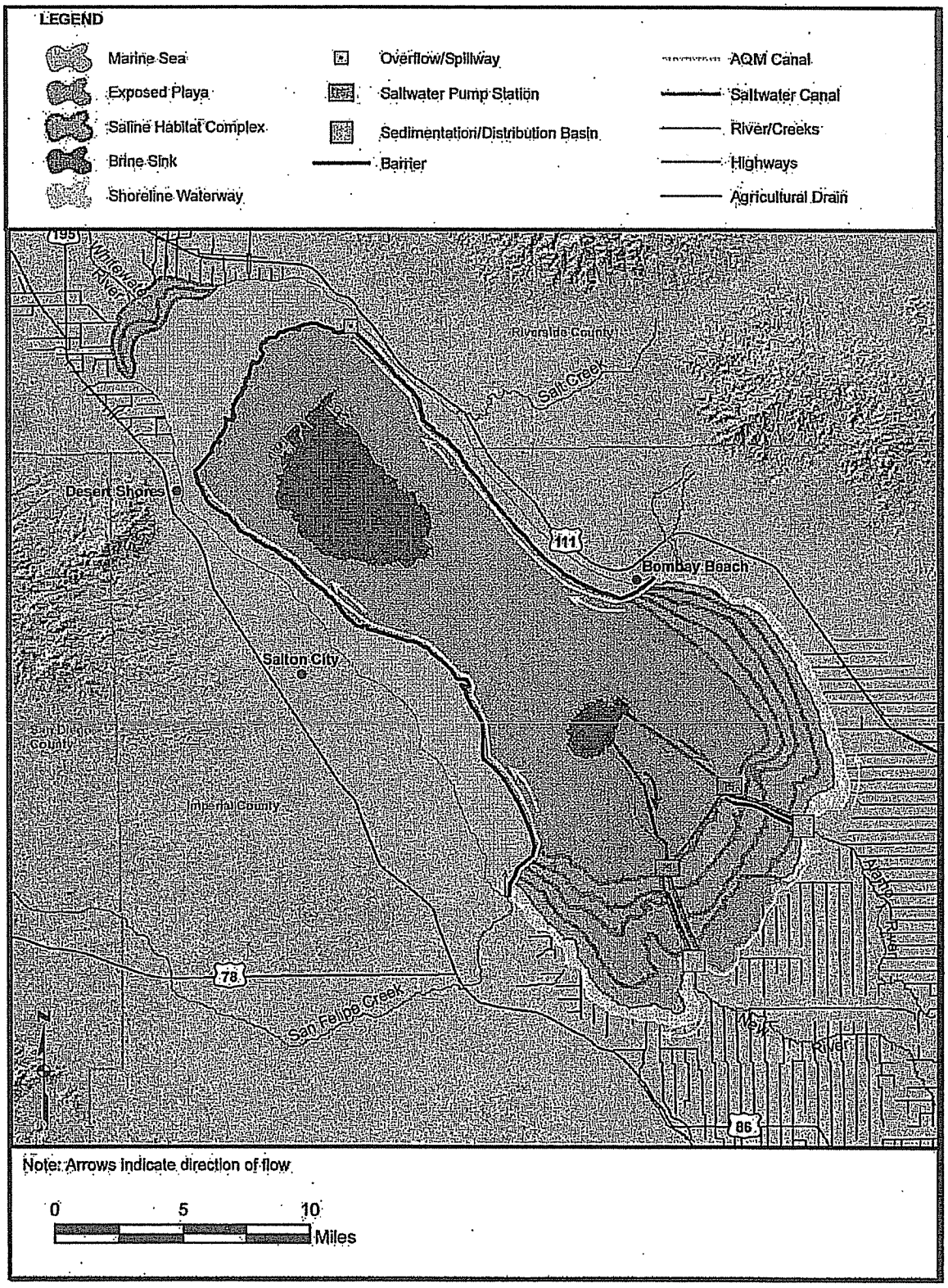


FIGURE 3
PREFERRED ALTERNATIVE

also established a Preferred Alternative Process Working Group to identify a process to compare the attributes of the Draft PEIR alternatives and define recommendations for the Preferred Alternative.

Comments on the Draft Programmatic Environmental Impact Report

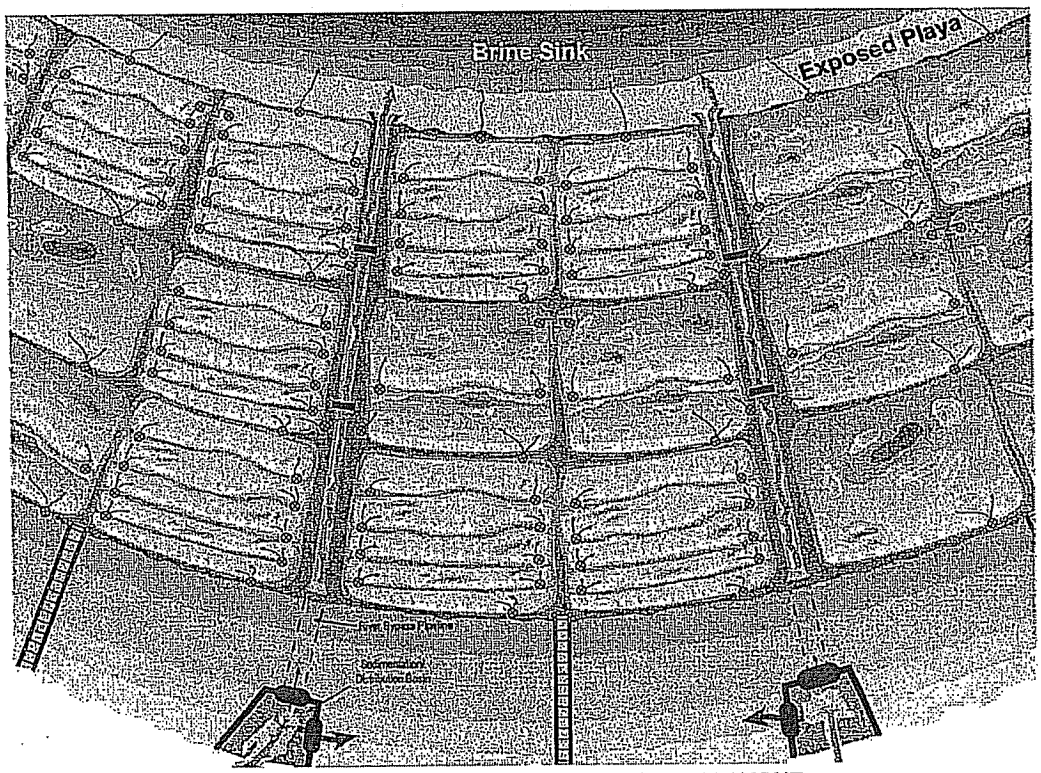
Approximately 34,000 comment letters were submitted on the Draft PEIR by agencies, the Torres Martinez Desert Cahuilla Tribe, interest groups, and individuals. Most of the comments were related to biological resources, climate and air quality, recreation, and use of the Salton Sea as an agricultural repository and a recreation area. Many comments encouraged development of a preferred alternative that would be adaptable to changes in water inflows, climate, land uses, and habitat needs. All of the comments were considered by the Resources Agency in the preparation of the Preferred Alternative.

PREFERRED ALTERNATIVE

Eight alternatives were evaluated in the Draft PEIR. The Preferred Alternative closely resembles Alternative 5, but takes aspects from many of the other alternatives evaluated. The Preferred Alternative, shown in Figure 3, includes Saline Habitat Complex in the northern and southern sea bed, a Marine Sea that extends around the northern shoreline from San Felipe Creek to Bombay Beach in a "horseshoe" shape, Air Quality Management facilities to reduce particulate emissions from the exposed playa, Brine Sink for discharge of salts, Sedimentation/Distribution facilities, and Early Start Habitat to provide habitat prior to construction of the habitat components. The Preferred Alternative also could be configured to accommodate future geothermal development. These components are described below.

Saline Habitat Complex

Saline Habitat Complex is composed of a series of approximately 1,000-acre cells. Each cell would contain a variety of habitat features, such



CONCEPTUAL SALINE HABITAT COMPLEX LAYOUT

as shoreline, islands, peninsulas, and snags and water depths in the cells would range from a few inches to 15 feet in deep holes. These features would be constructed for use by a variety of shorebirds, wading birds, fish, and invertebrates. Berms for the Saline Habitat Complex would be constructed of suitable soils excavated from the sea bed. Salinity within the Saline Habitat Complex could range from near 20,000 milligrams per liter (mg/L) to 200,000 mg/L. To provide a general context, typical ocean water salinity is approximately 35,000 mg/L. Maintaining most of the Saline Habitat Complex with saline water (greater than 20,000 mg/L) would reduce vegetation growth, selenium ecorisk, and vector populations.

Early Start Habitat

The Preferred Alternative would include up to 2,000 acres of shallow saline habitat for use by birds after the Salton Sea salinity becomes too high to sustain some species. This habitat would be established prior to construction of full-scale habitat components, and is referred to as Early Start Habitat. Early Start Habitat could either be permanent or a temporary feature to be eliminated or assimilated as other components are constructed.

Marine Sea

The Marine Sea is intended to support a marine fishery and fish-eating birds (such as pelicans, double-crested cormorants, and black skimmers). The Marine Sea would be formed through the construction of a rock-filled Barrier. The source of rock for the Barrier has not been identified at this time and additional analysis of potential rock sources is needed.

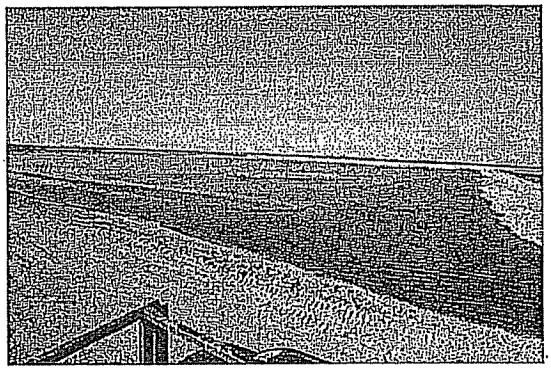
The Marine Sea would stabilize at a water surface elevation of -230 feet mean sea level (msl) with a salinity between 30,000 mg/L and 40,000 mg/L. The water depth would be less than 10 to 12 meters (39 feet) to reduce hydrogen sulfide generation and potential fish kills due to long term temperature stratification (temperature variations from top to bottom of the lake).

Air Quality Management

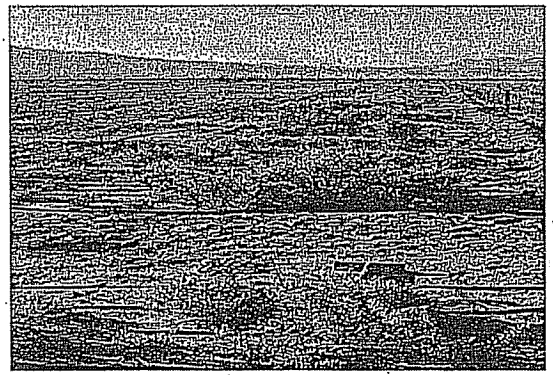
For the purpose of the analyses, the Preferred Alternative assumes a conservative approach to air quality management, and includes evaluation and monitoring of the exposed playa (dry sea bed). If dust emissions occur from the playa, a combination of methods will be considered for control, including chemical controls, sand fences, and irrigated water efficient vegetation (such as salt bush). Use of irrigated water efficient vegetation requires water conveyance facilities (Air Quality Management Canals), filtration equipment, and distribution of water in buried drip irrigation pipelines.

Brine Sink

The Brine Sink would provide the repository necessary to store excess salts; water discharged from the Saline Habitat Complex, Marine Sea, and Air Quality Management areas; and excess inflows. The elevation of the Brine Sink would fluctuate seasonally as well as annually based upon the patterns of inflows.



PILOT SALINE HABITAT COMPLEX PROJECT NEAR THE ALAMO RIVER
(COURTESY OF DOUG BARNUM)



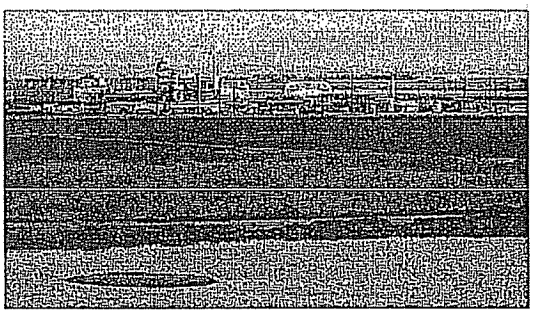
WATER EFFICIENT VEGETATION FOR CONTROL OF FUGITIVE DUST

Sedimentation/Distribution Basins

Inflows from the New and Alamo rivers would be captured in two 200-acre Sedimentation/Distribution Basins to divert desilted river water into canals. Flood flows would be bypassed into the Brine Sink.

Area for Geothermal Development

Imperial County has one of the larger known geothermal resource areas in the world, which includes lands near the southern shoreline of the Salton Sea. The Preferred Alternative includes an area designated for future geothermal development, and also includes Air Quality Management efforts for exposed playa in this geothermal development area.



GEOTHERMAL PLANT NEAR THE SALTON SEA

PREFERRED ALTERNATIVE FACTS AND FIGURES

- **Marine Sea** = 45,000 acres
  - Completed by 2022
  - Less than 40,000 mg/L in 2024
- **Saline Habitat Complex** = 62,000 acres (total)
- **Brine Sink** = 17,000 acres
- **Exposed Playa** = 106,000 acres
  - Includes 4,000 acres in the Geothermal Area
- **Barriers** = 52 miles
- **Berms** = 158 miles
- **Capital Cost** = $8.879 Billion
- **Annual Operation and Maintenance** = $142 Million

Note: All facts and figures at full build-out. Costs in 2006 dollars.

IMPLEMENTATION OF THE PREFERRED ALTERNATIVE

Implementing Entity(ies)

An implementing entity(ies) has not been identified at this time. There are federal, local, and state interests involved in Salton Sea restoration. The federal government owns a significant amount of land currently inundated by the Salton Sea that will be exposed as the water level recedes. Local interests, including Tribal interests, own the remaining land currently inundated. A consortium of these interests will be needed for effective implementation of any restoration program. A implementing entity(ies) would need to be identified prior to project implementation.

Implementation Schedule

Implementation of the Preferred Alternative would be accomplished in four periods:

- Period I: Five Year Plan/Pre-construction—This period would be initiated in 2007 assuming the California Legislature selects the Preferred Alternative, provides authorization for the next period, and appropriates funds by late 2007. Actions include filling critical data gaps with additional data collection and analysis along with completion of project-level environmental documentation, permitting, and design work. Additional coordination with interested parties, including local stakeholders and interested parties, and local Tribal interests, would also occur during this period.

- Period II: Major Construction—This period would start in 2014 and last through 2025 and would include the majority of the construction activities. These include construction of the following facilities: Marine Sea Barrier, Sedimentation/Distribution Basins, Air Quality Management Canals, and initial construction of the Saline Habitat Complex and Air Quality Management facilities as the Salton Sea recedes. The Marine Sea Barrier would be completed and closed in this phase.

- Period III: Construction Completion—This period would start in 2026 and last through 2035 and would include any remaining construction activities, such as construction of the remainder of the Saline Habitat Complex and Air Quality Management facilities as the Brine Sink recedes.
- Period IV: Operations and Maintenance—This period would start in 2036 and last through 2078 and would consist of operations and maintenance activities.

The near-term, Five Year Plan/Pre-construction Period is described in more detail below.

Five Year Plan/Pre-construction Period

It is assumed that the California Legislature would select the Preferred Alternative, provide authorization for the next period, appropriate funds by late 2007, and identify an implementing entity(ies). Following these actions, it is anticipated that the implementing entity(ies) would initiate a Five Year Plan that would include project-level analyses. As described in the PEIR, many issues could not be fully evaluated in the programmatic analysis due to lack of data or the need to select specific locations for facilities. Therefore, the Five Year Plan will focus on filling some of the data gaps, implementation of the Early Start Habitat, collection of additional biological and physical data, project-level environmental analyses, and design of facilities for the Major Construction Period.

A preliminary schedule for the Five Year Plan is provided as Figure 4. However, the preliminary cost and schedule will need to be refined by the implementing entity(ies) as more information on the level of detail and extent of the activities is known.

Specific actions in the Five Year Plan include the following:

- Implementation of the Demonstration Project and Early Start Habitat
- Conducting biological data collection and monitoring

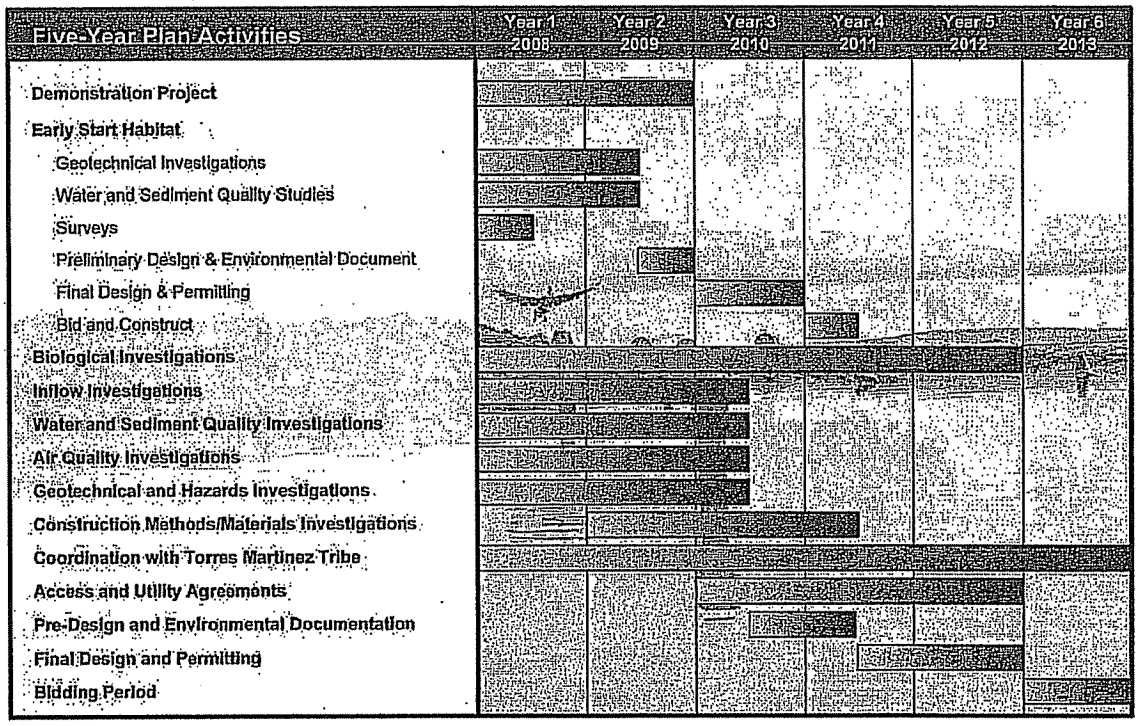


FIGURE 4
FIVE YEAR PLAN/PRE-CONSTRUCTION PERIOD PRELIMINARY SCHEDULE

- Conducting inflows, water quality, and sediment quality investigations
- Conducting air quality investigations
- Conducting geotechnical and hazards surveys and analyses
- Evaluating construction methods and materials (including selecting a rock source)
- Coordinating with the Torres Martinez Desert Cahuilla Indians and other stakeholders
- Executing land access and utility agreements
- Preparing project-level environmental documentation and final design
- Conducting the construction bidding period

Estimated Cost

A cost estimate for construction and operations and maintenance of the Preferred Alternative was developed. Total estimated capital costs over the 75-year project is $8.9 billion, and annual operations and maintenance is expected to be $142 million at build-out. Table 1 provides estimated costs by major component.

FUNDING PLAN

The estimated capital costs and operations and maintenance costs, phased over the 75-year program, are presented in Table 2. These estimated costs are provided in five-year increments to allow for a cash flow analysis. A variety of major funding sources could be utilized for construction and operations and maintenance of the Preferred Alternative, including the following:

- Salton Sea Restoration Fund—The Restoration Fund was established and is administered pursuant to Fish and Game Code Section 2081.7 and 2932. Fund monies come from local water agencies, actions on the Colorado River, additional water transfers from the Imperial Irrigation District, and water transfers identified in Fish and Game Code Section 2081.7. The Restoration Fund currently has over $20 million.
- State funding sources—State funding sources could include bond monies under Propositions 50 and 84. Most of the funds in Proposition 50 have been allocated and are no longer available. However, Proposition 84

Table 1
Estimated Capital and Operations and Maintenance Costs For Preferred Alternative
(In Million Dollars, 2006 Dollars)

Items	Capital Cost	Annual Operations and Maintenance Cost at Build-out
Barriers	$3,991	$27
Saline Habitat Complex (including Early Start Habitat)	$758	$10
Water Conveyance	$168	$6
Air Quality Management	$891	$99
Subtotal	$5,808	$142
Additional Miscellaneous Items at 5% of Subtotal Above	$290	—
Total Construction Cost	$6,098	—
Contingencies at 30% of Total Construction Cost	$1,830	—
Subtotal	$7,928	—
Engineering, Administration, and Legal at 12% of Subtotal Above	$951	—
Total Capital Costs	**$8,879**	**$142**

Note: Costs do not include cost of Demonstration Project, permits, land or easement acquisition, or interest on borrowing funds.

authorized $5.4 billion in state general obligation bonds to fund a variety of water projects including $47 million for Salton Sea restoration.

- Federal funding sources—Federal funding sources include "line item" funding of specific projects within federal agency budgets, grant or loans, and appropriations by Congress.
- Salton Sea Infrastructure Financial District—In 1999, special legislation was enacted to amend the California Infrastructure Financing District Act to authorize the Salton Sea Authority to form an infrastructure-financing district to collect tax increment revenue to fund restoration projects. The Salton Sea Authority has identified a preliminary geographical area around the Salton Sea for the Infrastructure Financing District. Further legislation may be needed to allow the use of the Infrastructure Financing District to collect funds for operations and maintenance.

User fees—User fees could also be used to repay long-term borrowing for construction, such as for bonds, and for operations and maintenance. Although user fees are not adequate to fully fund the construction or operations and maintenance, they could be used to defer some of the costs.

- Other local agency funds—Other local agency funds could include the use of local bonds, reserve funds, or special assessments. Bonds are used to spread out payments over a long-time period and are repaid through user fees or special assessments. Reserve funds are used to fund construction without incurring debt. User fees, special assessments, and special taxes frequently are used to fund operations and maintenance and repay debt service.
- Private-public partnerships—Partnerships between the public and private sectors in the public works industry range from providing basic services and supplies to the design, construction, operation, and ownership of facilities.

Table 2
Cash Flow Estimate For Preferred Alternative
(In Million Dollars, 2006 Dollars)

Items	Pre-Construction Period 2011-2013	Major Construction Period 2014-2020	Construction Completion Period 2020-2025	2025-2030	2030-2035	Operations and Maintenance Period 2035-2078
Demonstration Project, Investigations, and Administration	$25.9	—	—	—	—	—
Design & Environmental for Major Construction Period	$395.8	—	—	—	—	—
Early Start Habitat	$76.4	—	—	—	—	—
Barriers	—	$5,720.1	—	—	—	—
Saline Habitat Complex	—	$63.3	$462.5	$382.1	$170.6	—
Water Conveyance[a]	—	$146.9	$10.2	$58.3	$32.2	—
Air Quality Management	—	—	$218.3	$192.6	$950.3	—
Total Study and Capital Costs[b]	**$508.9**	**$5,930.3**	**$691.0**	**$633.0**	**$1,153.1**	—
Annual Operations and Maintenance	**$3.9**	**$4.8**	**$52.2**	**$70.9**	**$141.9**	**$141.9**

Note: Costs do not include cost of permits, land or easement acquisition for Preferred Alternative, or the cost to borrow funds.

[a] Water Conveyance costs includes Sedimentation/Distribution Basins, Air Quality Management Canals, Saltwater Conveyance, Marine Sea Outlet, and roads associated with conveyance facilities.

[b] Capital costs include 5% for unlisted items, 30% for contingences, and 12% for engineering, administration, and legal.

GOVERNANCE PLAN

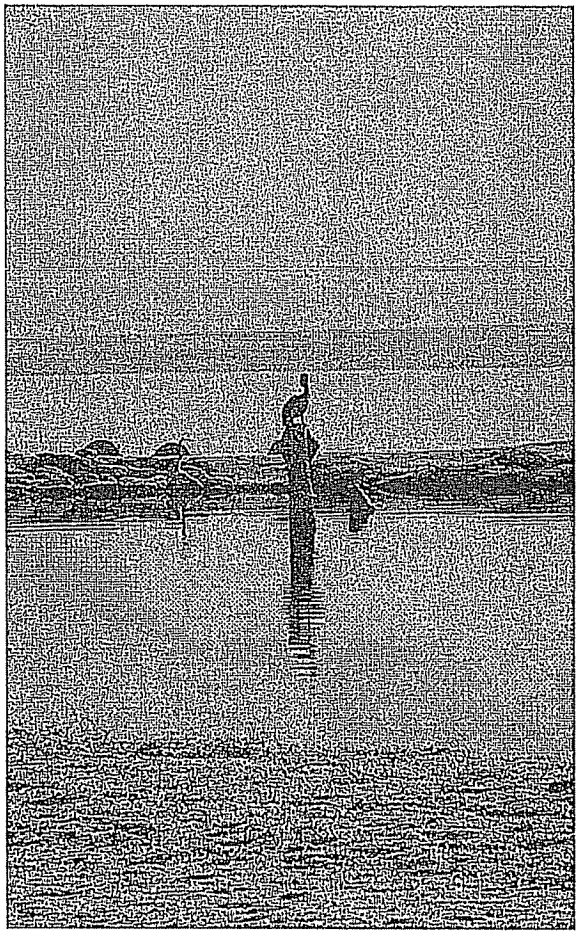
There are multiple federal, state, and local agencies that have responsibility for actions that will occur at the Salton Sea with or without the restoration program. The Preferred Alternative includes facilities that could be developed, owned, and operated by one entity or several entities with a steering group to integrate the facilities. Additionally, the Preferred Alternative will require significant capital and operations and maintenance funds that may not be available from any one source. Therefore, many agencies may be involved in the shared decision-making and funding of the Preferred Alternative.

There are many different types of organizations that may be considered, including integration of several agencies into a steering committee through voluntary actions or legislative mandates. However, a legal entity, like a Conservancy, may be required to acquire and allocate funds, hire staff, and receive permits and approvals. Committees of agencies and interest groups may be developed which can serve as an advisory group or be required by authorization of the entity to be a voting group. The entity or steering group must be open to the public to allow opportunities for participation and information transfer as the Preferred Alternative is developed in an adaptive management manner.

Types of entities that may be considered include conservancies created by the state Legislature or voter initiative that could be governed by both public agencies and private groups or individuals, joint agency agreements with specific division of authorities, joint powers authorities created by the state Legislature or voter initiative as a separate agency with members from other agencies, or specified partnerships between public agencies and private groups or non-profit foundations. Participation of the state or federal agencies in these types of entities as a lead agency or voting member that would have financial or operational responsibilities would require action by the appropriate legislatures.

CONCLUSION

This Preferred Alternative, as required by legislation, provides a vision for the restoration of the Salton Sea ecosystem. The 75-year life of the project makes it unlikely that the Preferred Alternative will be constructed exactly as described here. Rather, the Preferred Alternative represents a starting point for a Salton Sea restoration plan that is adaptable, flexible, sustainable, and functions under a wide variety of conditions that may arise over the course of the next 75 years. While the Preferred Alternative does not necessarily provide all parties with their desired outcome, this vision provides a sound starting point at which restoration of this important ecosystem can commence.



BROWN PELICAN AT THE SALTON SEA

CONTENTS

Tables

Figures

DESCRIPTION OF THE PREFERRED ALTERNATIVE

The Salton Sea is located in Imperial and Riverside counties, as shown in Figure 1, and is the largest lake in California. It is 35 miles long and 15 miles wide. The surface water elevation is currently -228 feet mean sea level (msl) and the greatest water depth is 50 feet.

Since the Salton Sea was created by a levee break along the Colorado River in 1905, it has supported a dynamic fishery and is currently a valuable resource for resident and migratory birds, including a large number which are listed as either threatened, endangered, or species of concern. However, the Salton Sea is continually changing due to the lack of a natural outlet, evaporation, and the salinity of inflows. Marine fish species, which at one time formed a popular sport fishery, have not been detected since 2003. Today, salt-tolerant tilapia remains as the primary fish species. Continuing changes at the Salton Sea now threaten its ability to continue to support fish, avian, and other wildlife species. In recognition of the importance of the Salton Sea ecosystem, the Legislature established a state policy for restoring the Salton Sea ecosystem and permanently protecting the dependent fish and wildlife resources.

State law requires that the Secretary for Resources undertake a Salton Sea Ecosystem Restoration Study and prepare programmatic environmental documents to identify a Preferred Alternative for restoration of the Salton Sea ecosystem, including a proposed funding plan. In October 2006, a Draft Programmatic Environmental Impact Report (PEIR) was distributed for public comment. Comments from the public review of the Draft PEIR, input from the Salton Sea Advisory Committee (described below), and review of the results of the impact analyses presented in the PEIR were used by the Resources Agency to develop the Preferred Alternative.

This document describes the background for the Salton Sea Ecosystem Restoration Program, alternatives considered in the PEIR, comments considered in the evaluation of the alternatives, the Preferred Alternative, Funding Plan, and projections for cash flow.

SALTON SEA ECOSYSTEM RESTORATION PROGRAM DESCRIPTION

Many of the projected effects and requirements for restoration of the Salton Sea occurred due to the federal Quantification Settlement Agreement (QSA). In 2003, the QSA was signed by Imperial Irrigation District (IID), Coachella Valley Water District (CVWD), and Metropolitan Water District of Southern California (Metropolitan) to settle long-standing disputes among the agencies regarding use of California's apportionment of Colorado River water. The QSA and more than 30 related agreements cover intrastate management of Colorado River water, allow California to have access to special surplus water for a 15-year period, and provide for specified water transfers. The QSA and related agreements are the mechanism by

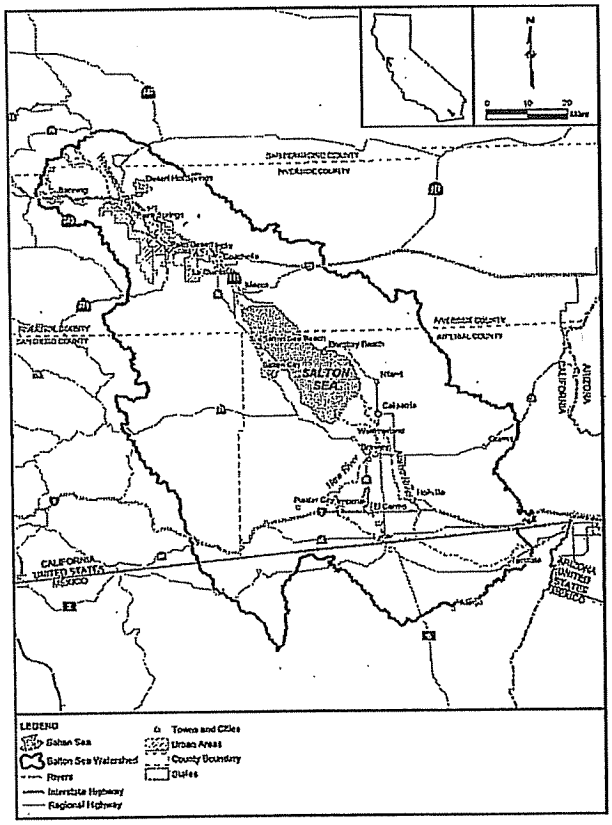


FIGURE 1
SALTON SEA WATERSHED

which these water agencies are reducing their use of Colorado River water to California's basic apportionment of 4.4 million acre-feet annually from a larger historic quantity. The QSA components provide a framework for conservation measures and water transfers for a period of up to 75 years. QSA water transfers from IID to San Diego County Water Authority (SDCWA) will reduce the inflows of agricultural runoff that constitute the Salton Sea's primary source of water.

During the first 15 years of the transfer, IID is providing water to the Salton Sea to meet the inflow trajectory that would have occurred without the transfer. The inflows are projected to continue to decline during this period due to other activities in the watershed unrelated to the QSA, such as reduced flows in the New River from Mexico. The mitigation water provision was intended to minimize the effects of the first 15 year transfer; however, the current Salton Sea fish species may continue to decline due to increased salinity. After the first 15 years and the end of additional flow diversions by IID into the Salton Sea, transfers will reduce agricultural return flows to the Salton Sea and accelerate progressive increases in salinity. This will decrease the time that the Salton Sea can continue to support fish, avian, and other wildlife species. The reduced agricultural return flows projected under the QSA will also reduce the physical size of the Salton Sea and expose lake bed sediments (dry sea bed, or playa) that, with the prevailing winds in this area, could exacerbate dust problems for an already degraded air basin.

One of the conflicts identified during negotiations of the QSA was the extent of ecosystem mitigation and associated need for restoration within the Salton Sea watershed, and specifically for the Salton Sea. Recognizing these conflicts, the Legislature passed Salton Sea restoration legislation to facilitate environmental mitigation and allocate responsibility among water agencies involved in the QSA and the state. Salton Sea restoration legislation not only allowed the QSA to be executed, but also limited environmental mitigation responsibilities for IID, CVWD, and SDCWA. The legislation establishes a cost limit on environmental mitigation requirements for the water agencies involved in the QSA. Under the law, any future actions by the state to restore important functions of the Salton Sea will become the state's responsibility.

The Salton Sea restoration law requires the Secretary for Resources to undertake a restoration study to determine a Preferred Alternative for the restoration of the Salton Sea ecosystem and the permanent protection of wildlife dependent upon that ecosystem. The Salton Sea ecosystem is defined to include, but not be limited to, the Salton Sea, agricultural lands surrounding the Salton Sea, and the tributaries and drains within the Imperial and Coachella valleys that deliver water to the Salton Sea. The Preferred Alternative must provide the maximum feasible attainment of the following objectives:

- Restoration of long term stable aquatic and shoreline habitat for the historic levels and diversity of fish and wildlife that depend on the Salton Sea;
- Elimination of air quality impacts from the restoration project; and
- Protection of water quality.

Background

Though the current Salton Sea has existed only since 1905, a much larger lake known as Lake Cahuilla filled the Salton Sink on several occasions in past centuries. The Colorado River periodically changed course, and sometimes flowed into the Salton Sink. After flow in the river returned to the Gulf of Mexico, Lake Cahuilla gradually evaporated until the next time the Colorado River changed course. Current water development and control projects in the Colorado River Basin prevent the river from returning to the Salton Sink.

The current Salton Sea is a hypersaline (salty) and eutrophic (nutrient-rich) water body with no outlet. Most of the water that flows into the Salton Sea is agricultural drain water that was originally diverted

from the Colorado River for irrigation in Riverside County's Coachella Valley, Imperial Valley in Imperial County, and Mexico's Mexicali Valley. The California agricultural industry's ability to use the Salton Sea as a repository of agricultural drainage was protected when President Calvin Coolidge in 1924 and 1928 ordered specific sections of land under the Salton Sea to be withdrawn from settlement, location, sale, or entry, and reserved for the purposes of creating a drainage reservoir. Precipitation in the watershed is low and contributes little natural runoff to the Salton Sea.

Until recently, inflows to the Salton Sea were about equal to the water evaporated from the surface of the Salton Sea. Therefore, the Salton Sea elevation has remained relatively stable. Because the Salton Sea is a terminal body of water, the salinity continues to increase as salts are left behind when water evaporates from the surface. The current salinity averages about 48,000 milligrams/liter (mg/L). By way of example, the average salinity of ocean water is 35,000 mg/L. Over time, the Salton Sea naturally became more saline, similar to other terminal water bodies, such as Mono Lake in California, Great Salt Lake in Utah, and Dead Sea in Israel.

The Salton Sea is a dynamic system and is constantly changing over time. Many of these changes, such as the gradual increase in salinity and fluctuations in the elevation, occur naturally. However, the speed at which these changes occur is expected to increase due to ongoing and anticipated future human activities.

Importance of the Salton Sea Ecosystem

The Salton Sea is adjacent to the lower Colorado River delta and the northern portion of the Gulf of California. Due to the significant loss of wetlands in California and other areas, the Salton Sea ecosystem has become one of the most important areas for birds in North America and supports some of the highest levels of avian biodiversity in the southwestern United States. Recent studies have documented the great importance of the Salton Sea ecosystem in providing habitat for migrating and resident waterbirds, particularly Pacific Flyway waterbirds. More than 400 resident, migratory, and special status bird species have been recorded in the Salton Sea area since its formation, with some 270 of those species using the Salton Sea on a fairly regular basis. Large proportions of the entire population of some species of birds rely on the Salton Sea ecosystem.

The Salton Sea has become an internationally significant stopover site for hundreds of thousands of birds moving north and south along the Pacific Flyway, and east into the Great Basin Prairie Pothole region as well as the winter home for hundreds of thousands of individuals of numerous species from around North America.

Since the Salton Sea's formation in 1905, a series of aquatic communities have thrived. A single native fish, the desert pupfish (listed as endangered), had inhabited two streams and several inundated springs in the Salton Trough, and persists today in the two streams, agricultural drains, and shallow parts of the Salton Sea. The other original members of the Salton Sea fish community, including carp, striped mullet, humpback sucker, rainbow trout, and bonytail chub, were carried directly from the Colorado River into the Salton Sea as it was filling. In the late 1940s to the mid-1950s, the state Department of Fish and Game (DFG) stocked more than 30 species of marine fishes as the salinity of the Salton Sea approached ocean levels. During the 1960s and 1970s, tilapia unexpectedly invaded the Salton Sea from irrigation drains, and ultimately came to dominate the fish community. The tilapia population provided a new abundant forage base for the marine sport fish and fish-eating birds.

Supported by nutrients from agricultural drain water inflows, the Salton Sea fisheries from 1960 to 2000 were phenomenally productive. These popular fisheries were a fundamental driver of the burgeoning recreational use of the Salton Sea during those decades. However, as salinity and nutrients continued to increase, wildlife health was negatively affected and chronic large scale die-offs of fish and birds signaled a deteriorating ecosystem. Starting in 2000, all marine fish populations at the Salton Sea have undergone a dramatic decline due to a combination of increasing salinity and deteriorating water quality.

Future of the Salton Sea Without Restoration

Under the QSA and California Fish and Game Code, IID must convey water into the Salton Sea until 2017 to mitigate some of the adverse impacts caused by the transfer of water from IID. Between now and 2018 without restoration, surface water elevations in the Salton Sea will decline due to factors unrelated to the QSA from the existing elevation of about -228 feet msl to -235 feet msl, and salinity will increase from the current level of about 48,000 mg/L to 60,000 mg/L. After 2018, when IID no longer diverts water to the Salton Sea as mitigation for the transfer, inflows and the surface water elevation will decline rapidly and salinity will increase. By 2078, the elevation will be about -260 feet msl and salinity will exceed 300,000 mg/L. The surface water area would decline from the existing 230,000 acres to 213,000 acres in 2018 and 140,000 acres by 2078. As the salinity increases, more salt tolerant species, such as brine flies and brine shrimp, will initially increase (which could occur as early as 2020) but will disappear when salinity exceeds 200,000 mg/L.

Tilapia serves as the primary forage species for fish-eating birds at the Salton Sea. Tilapia tolerate the current salinity of 48,000 mg/L, but at some point will be eliminated as the salinity level approaches 60,000 mg/L by about 2018. Without restoration, other fish will continue to inhabit the drains, as well as constructed pupfish channels and sedimentation and distribution basins that are components of the No Action Alternative.

The decline and ultimate loss of open water fish populations will reduce and possibly eliminate use of the Salton Sea by fish-eating birds, such as pelicans, double-crested cormorants, and black skimmers. Some of these birds could use the areas where the rivers, creeks, and drains enter the Salton Sea if fish continue to persist in these locations, though the number of birds that could be supported in these areas would be far less than in the Salton Sea due to much smaller fish populations. The relative abundance of bird species that forage on invertebrates likely will change over time with increases in salinity and resultant changes in the invertebrate community.

As the Salton Sea recedes in future years, and with no restoration program in place, the distance between the open water, agricultural lands, and human communities will increase. Though air quality management methods would be implemented, there could be dust from the exposed playa, affecting both wildlife and humans.

OTHER SALTON SEA RESTORATION STUDIES

Over the past 40 years, more than 20 studies and investigations with several hundred alternatives have been completed to address the environmental problems at the Salton Sea. Individual study objectives have differed, but the main focus has generally been on controlling salinity and elevation of the Salton Sea to support fish and wildlife and the associated recreation and community goals. Several of these studies were completed.

In 1992, Congress enacted the Reclamation Projects Authorization and Adjustment Act (Public Law 102-575) which established that restoration of the Salton Sea was of national interest, and directed the Secretary of the Interior to conduct a research project for the development of a method or combination of methods to reduce and control salinity, provide endangered species habitat, enhance fisheries, and protect human recreational values of the Salton Sea. In 1993, agencies in Riverside and Imperial counties formed a joint powers authority, the Salton Sea Authority, to improve water quality, stabilization of water elevation, and enhance recreational and economic development potential. Subsequently, the Salton Sea Reclamation Act of 1998 (Public Law 105-372) was enacted by Congress to evaluate options that would permit the continued use of the Salton Sea as a reservoir for irrigation drainage, reduce and stabilize the salinity, stabilize the elevation, reclaim healthy fish and wildlife resources and habitats, and enhance potential for recreational uses and economic development of the Salton Sea.

Most recently, the Water Supply, Reliability, and Environmental Improvement Act of 2004 (Public Law 108-361) directed the Secretary of the Interior to complete a feasibility study on a preferred alternative for Salton Sea restoration. The ongoing feasibility study is to be prepared in coordination with the state and the Salton Sea Authority.

STATE LEGISLATION RELATED TO SALTON SEA ECOSYSTEM RESTORATION

Between 2002 through 2004, the California Legislature enacted a series of bills collectively known as the QSA legislation. The QSA legislation, Senate Bill 482 (Kuehl, 2002), Senate Bill 277 (Ducheny, 2003), Senate Bill 317 (Kuehl, 2003), Senate Bill 654 (Machado, 2003), and Senate Bill 1214 (Kuehl, 2004), amended various provisions of the Fish and Game Code and the Water Code. One of these bills, Senate Bill 277 (Ducheny, 2003), established the Salton Sea Restoration Act (Fish and Game Code Section 2930 *et seq.*). The Salton Sea Restoration Act provides that it is the Legislature's intent that the State of California undertake the restoration of the Salton Sea ecosystem and the permanent protection of the wildlife dependent on that ecosystem. The Act also establishes a Salton Sea Restoration Fund to be administered by DFG. A companion bill, Senate Bill 317 (Kuehl, 2003), directs the Secretary for Resources to prepare an ecosystem restoration study and programmatic environmental documents, in consultation with a Salton Sea Advisory Committee (Fish and Game Code Section 2081.7; Water Code Section 1013).

Water Transfers

Under the QSA and Fish and Game Code, up to 800,000 acre-feet of water conserved by IID will be conveyed into the Salton Sea until the year 2017 to mitigate a portion of the adverse impacts caused by the transfer of water from IID to SDCWA (Fish and Game Code Section 2081.7(c)(2)). Section 2081.7(c)(1) of the Fish and Game Code also allows for the transfer of a separate 800,000 acre-feet of conserved water from IID to Department of Water Resources (DWR) at $175/acre-foot in 2003 dollars and adjusted for inflation. These two allocations of water are referred to as (c)(2) water and (c)(1) water, respectively. No (c)(2) water may be transferred unless the Secretary for Resources determines that the transfer is consistent with the preferred alternative. DWR will be responsible for mitigating any environmental impacts related to the transfer of (c)(1) water and for environmental impacts due to changes in Salton Sea salinity related to the transfer of (c)(2) water, including methods to reduce impacts to air quality, fish and wildlife resources, recreation, land uses, and other resources near or in the Salton Sea.

Preparation of a Restoration Study

Under the Salton Sea Restoration Act, it is the intent of the Legislature that the State of California undertake the restoration of the Salton Sea ecosystem and permanent protection of wildlife dependent upon that ecosystem. This is to be based upon the preferred alternative developed in a restoration study and the alternative selection process (Fish and Game Code Section 2930 *et seq.*). The restoration study must evaluate the alternatives for the restoration of the Salton Sea that include consideration of strategies for salinity control, habitat creation and restoration, different water surface elevations along the shoreline, water surface area configurations, and range of inflow conditions (Fish and Game Code Section 2081.7(e)(2)(A)).

Fish and Game Code Section 2931 requires the restoration study to identify a preferred alternative that will provide the maximum feasible attainment of the following objectives:

- Restoration of long term stable aquatic and shoreline habitat for the historic levels and diversity of fish and wildlife that depend on the Salton Sea;

- Elimination of air quality impacts from the restoration projects; and
- Protection of water quality.

The Resources Agency must also undertake the necessary activities to assess the protection of recreational opportunities, including, but not limited to, hunting, fishing, boating, and birdwatching, and the creation of opportunities for improved local economic conditions, surrounding the Salton Sea, unless the Resources Agency determines that those activities would constitute a project purpose for the PEIR (Fish and Game Code Section 2081.8). However, specific recreational facilities were not defined in the PEIR alternatives. Recreational facilities funded by other programs may be integrated with restoration activities and evaluated in future project-level analyses.

Consultation with Other Agencies and Interest Groups

The Secretary for Resources conducted the restoration study in consultation with the DFG, DWR, Salton Sea Authority, appropriate air quality districts, numerous stakeholder groups, the Torres Martinez Tribe, and the Salton Sea Advisory Committee, as described in Fish and Game Code Section 2081.7. The Secretary also extended an invitation to the U.S. Department of the Interior, Geological Survey Salton Sea Science Office to participate in the restoration study. The Secretary for Resources also unsuccessfully sought a memorandum of understanding with the Secretary of the Interior to obtain federal participation in the restoration of the Salton Sea.

The Secretary for Resources established an Advisory Committee to provide balanced representation of the following interests in the process:

- Agriculture;
- Local governments;
- Conservation groups;
- Tribal governments;
- Recreational users;
- Water agencies;
- Air pollution control districts;
- Geothermal energy development; and
- Appropriate federal agency representatives.

The Resources Agency consulted with the Advisory Committee throughout all stages of the Preferred Alternative selection process. The Advisory Committee provided recommendations to the Resources Agency to assist in preparation of the restoration plan in accordance with a schedule established by the Resources Agency to ensure that the recommendations could be considered in a timely and meaningful manner as the restoration plan was developed.

STUDY PERIOD

The study period for the PEIR extends from 2003 to 2078. This 75-year study period is the same period for which the QSA could be in effect.

ALTERNATIVES CONSIDERED IN DRAFT PROGRAMMATIC ENVIRONMENTAL IMPACT REPORT

The Draft PEIR included an evaluation of a range of alternatives that addressed the restoration objectives established by the legislation. The results were compared to Existing Conditions and projected conditions for the No Action Alternative that is described below.

No Action Alternative

The No Action Alternative is intended to reflect Existing Conditions plus changes that are reasonably expected to occur in the foreseeable future if none of the alternatives are implemented. Foreseeable future projects at the Salton Sea include implementation of mitigation measures for the QSA and IID Water Conservation and Transfer Project. The mitigation measures related to the Salton Sea include Air Quality Management actions for exposed playa, protection of desert pupfish (including extension and connection of agricultural drains that provide desert pupfish habitat), modification of recreational facilities, and delivery of water to the Salton Sea until 2017.

The facilities that could be constructed under the No Action Alternative are shown in Figure 2. The actual facilities to be constructed would be determined under a process established to implement the mitigation measures for the IID Water Conservation and Transfer Project. The PEIR takes a conservative approach to define the actions and facilities needed. The capital costs of the No Action Alternative were estimated to be $801 million with annual operations and maintenance costs of $49 million. These costs would be funded as part of the mitigation measures for the IID Water Conservation and Transfer Project. Participants in the Water Conservation and Transfer Project would fund up to $133 million of the mitigation measures, including measures not associated with the Salton Sea. Costs for mitigation measures in excess of the $133 million dollars would be funded by the State of California.

The No Action Alternative is based upon projected conditions through 2078 which includes the QSA and its related agreements. Future actions could change the projected conditions. For example, changes in the QSA may modify the required actions and facilities or related state obligations. However, such future actions, if any, would be too speculative under the California Environmental Quality Act. Such changes, therefore, were not included in the No Action Alternative.

Range of Alternatives Considered

The initial range of alternatives was broad and included options to convey water to the Salton Sea from different water bodies, convey salts from the Salton Sea to offsite disposal areas, and options to provide a range of habitats and water quality improvements within the sea bed. The broad range of alternatives was screened based upon the ability to meet legislative objectives for the restoration program, regulatory requirements, and technical feasibility for large-scale programs. Several options were eliminated from further analyses due to inability to meet regulatory requirements. The results of the broad screening efforts were further evaluated relative to the California Environmental Quality Act (CEQA) Guidelines for development of a reasonable range of alternatives. Based upon the screening analyses, alternatives that would convey water from the Colorado River, Gulf of California, and the Pacific Ocean were eliminated from further evaluation due to regulatory limitations; jurisdictional boundaries; and anticipated complexities associated with the acquisition, control, and access to the site for construction and operations and maintenance. The screening analysis resulted in the identification of eight alternatives to be evaluated in detail in the PEIR.

The eight alternatives considered in the PEIR were composed of several components in different arrangements. The components included Saline Habitat Complex (a series of 1,000-acre shallow ponds formed by earthen berms with salinities ranging from 20,000 to 200,000 mg/L to support a variety of fish and wildlife); Marine Sea in a portion of the sea bed (a large water body in a portion of the sea bed formed by rock barriers with marine salinity between 30,000 to 40,000 mg/L); Brine Sink (located at the lowest elevation in the sea bed to store excess salts, overflows from other areas, and flood flows); various conveyance facilities; water treatment for one alternative; and Air Quality Management (to reduce particulate emissions from playa that is currently under the Salton Sea the PEIR assumed the use of several methods, including salt-tolerant vegetation, brine crust, and other cover material).

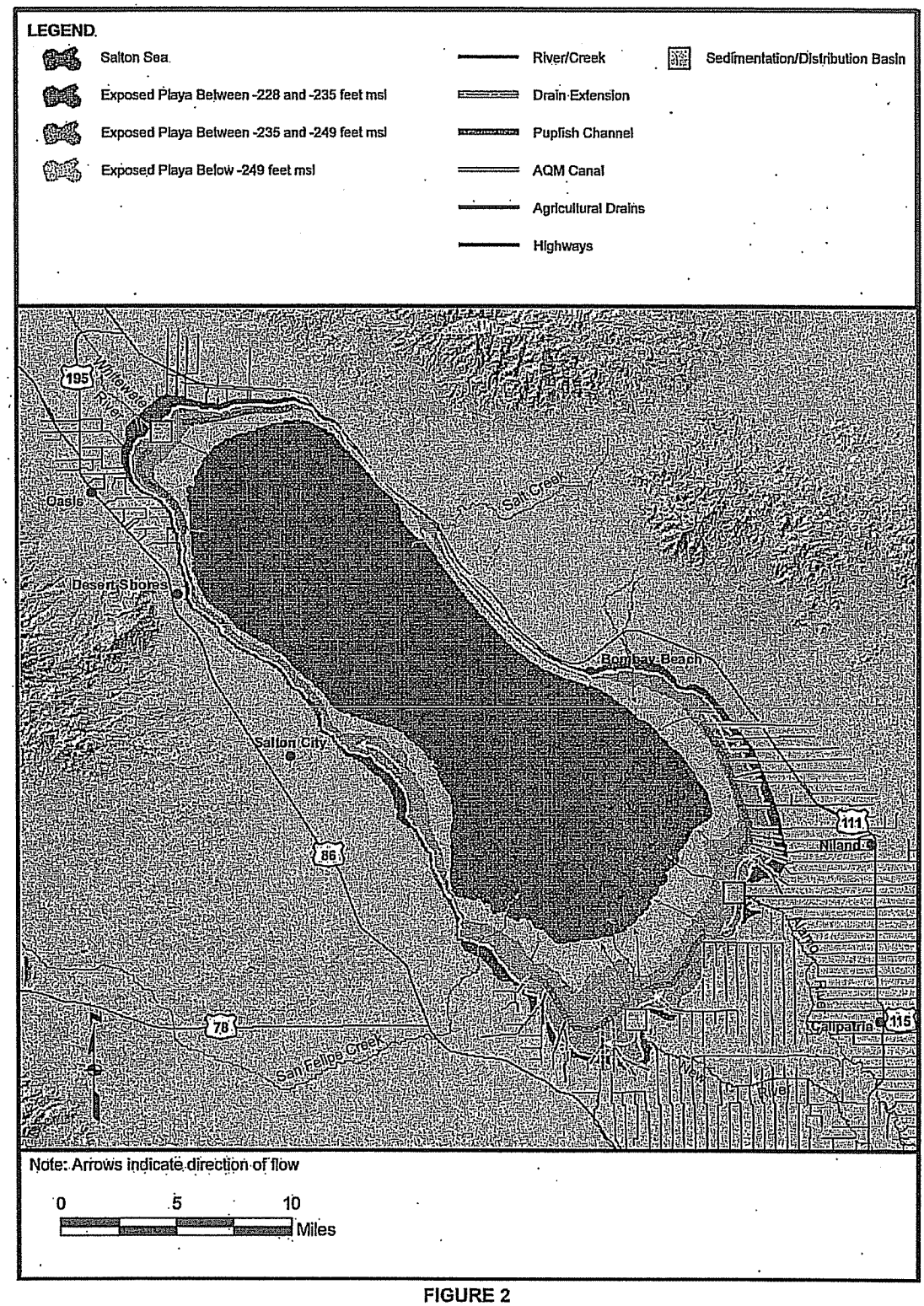


FIGURE 2
NO ACTION ALTERNATIVE VARIABILITY CONDITIONS

The final alternatives in the PEIR are listed in the following order to represent an increasing amount of complexity and number of components:

- Alternative 1 – Saline Habitat Complex I (38,000 acres of Saline Habitat Complex with minimum recirculation facilities and Air Quality Management);
- Alternative 2 – Saline Habitat Complex II (75,000 acres of Saline Habitat Complex with brine recirculation and Air Quality Management);
- Alternative 3 – Concentric Rings (61,000 acres of Marine Sea in two concentric rings, Air Quality Management , and no Saline Habitat Complex cells);
- Alternative 4 – Concentric Lakes (88,000 acres of habitat similar to Saline Habitat Complex in four concentric water bodies as defined by the Imperial Group, with dedicated inflows for Air Quality Management but no long-term facilities);
- Alternative 5 – North Sea (62,000 acres of Marine Sea in the northern sea bed, 45,500 acres of Saline Habitat Complex in the southern sea bed, and Air Quality Management);
- Alternative 6 – North Sea Combined (74,000 acres of Marine Sea in the northern, western, and southern sea bed; 29,000 acres of Saline Habitat Complex cells in the southern sea bed; and Air Quality Management);
- Alternative 7 – Combined North and South Lakes (104,000 acres of Marine Sea in the northern, western, and southern sea bed; 12,000 acres of Saline Habitat Complex cells in the eastern sea bed; water treatment of inflows and water withdrawn from the eastern portion of the northern Marine Sea; and use of Brine Stabilization for Air Quality Management at lower elevations); and
- Alternative 8 – South Sea Combined (83,000 acres of Marine Sea primarily in the southern sea bed with a smaller Marine Sea in the western and northern sea bed, 18,000 acres of Saline Habitat Complex in the southern sea bed, and Air Quality Management).

Results of the Impact Assessment

The alternatives were evaluated in accordance with CEQA. All of the alternatives, including the No Action Alternative, included construction activities within the sea bed. The primary differences between the alternatives are related to the ability to:

- Support a range of biological resources (primarily related to a range of habitats that could be provided by the habitat mosaics of the Saline Habitat Complex and the Marine Seas);
- Improve water quality (primarily related to salinity, selenium, dissolved oxygen, and hydrogen sulfide);
- Minimize air quality impacts (related to emissions from construction and operations and maintenance vehicles, and particulates from exposure of currently inundated playa); and
- Minimize impacts that could occur due to sea bed disturbances (air quality, unexploded ordinances, release of chemicals, and disturbances of cultural and paleontological resources).

METHODOLOGY TO RECOMMEND THE PREFERRED ALTERNATIVE

In accordance with the legislation, the Secretary for Resources must recommend a Preferred Alternative to the California Legislature. The Preferred Alternative was developed based upon recommendations by the Salton Sea Advisory Committee and public input. The methodology and the results of each of these processes are described below.

Salton Sea Advisory Committee Recommendations

The Salton Sea Advisory Committee was involved in the screening and development of the alternatives and reviewed the results of the impact assessment presented in the Draft PEIR. During the preparation of the Draft PEIR, the Salton Sea Advisory Committee formed several working groups, including Habitat and Air Quality working groups, to evaluate specific issues. The Salton Sea Advisory Committee also established a Preferred Alternative Process Working Group to identify a process to compare the attributes of the Draft PEIR alternatives and define recommendations for the Preferred Alternative. The Preferred Alternative Process Working Group identified and prioritized critical attributes, identified attributes that would require further consideration during project-level analyses, and scored alternatives with respect to the prioritized attributes. These efforts were completed by the Preferred Alternative Process Working Group in conjunction with the Habitat and Air Quality working groups and a Water Quality Science Panel. The working groups consisted of members of the Salton Sea Advisory Committee, or their representatives, as well as other interested individuals. The Science Panel included representatives of state and federal government agencies and several university professors who provided technical review of information considered in the Draft PEIR. Results of the evaluations considered by the Salton Sea Advisory Committee are described below.

Identification and Evaluation of Attributes Used for Comparison of Alternatives

The Preferred Alternative Process Working Group considered the programmatic objectives for the Salton Sea Ecosystem Restoration Program established by the Salton Sea restoration legislation. These objectives require the Preferred Alternative to provide the maximum feasible attainment of the following objectives:

- Restoration of long term stable aquatic and shoreline habitat for the historic levels and diversity of fish and wildlife that depend on the Salton Sea;
- Elimination of air quality impacts from the restoration project; and
- Protection of water quality.

The Salton Sea Advisory Committee determined that the Preferred Alternative must at least comply with these objectives. In addition, the Preferred Alternative Process Working Group considered other attributes identified by the public during preparation of the Draft PEIR. The legislation did not mandate that the Preferred Alternative maximize opportunities for these other attributes. However, the Preferred Alternative Process Working Group determined that the alternatives could be compared relative to the following attributes:

- Ability to provide recreation and local economic opportunities;
- Compatibility with existing and planned land uses along the shoreline of the sea bed;
- Changes to microclimate along the shoreline of the sea bed;
- Adaptability of the alternatives to changes in climate, inflows, and habitat characteristics;

- Ability to reduce Environmental Justice (fair treatment and meaningful involvement of all people) and reduce the impact of hazardous conditions; and
- Potential for visual degradation, noise disturbance, and traffic congestion during construction and operations.

Following the identification of the overall attributes, the Salton Sea Advisory Committee requested that the Habitat and Air Quality working groups consider these and further develop attributes that could be used to evaluate the alternatives based on descriptions and impact assessment results presented in the Draft PEIR. No additional analyses would be completed during this process.

Habitat Working Group Recommendations

The Habitat Working Group considered the overall attributes and the results of the habitat related impact analyses presented in the Draft PEIR. Using this information, the Habitat Working Group defined a series of habitat based attributes and compared the ability of each alternative to meet the attribute objectives. The habitat based attributes included:

- Potential for restoration of historic bird and fish diversity and abundance in 2078;
- Potential for habitat management flexibility;
- Availability of habitat over the 75-year study period;
- Potential for effects of selenium on birds and fish;
- Potential for fish kills resulting from hydrogen sulfide generation within water bodies;
- Total volume of imported rock and gravel that could affect air quality, transportation congestion, and aesthetic characteristics;
- Potential for habitat disturbance due to potential recreational opportunities;
- Extent of habitat disturbance within the currently inundated sea bed during construction and operations;
- Extent of disturbance to riparian habitat adjacent to the Salton Sea and special status species that use the Salton Sea during construction;
- Potential for hazardous conditions associated with the Brine Sink after reaching a salinity of 200,000 mg/L; and
- Potential for habitat disturbance due to adjacent land uses.

The group also considered other attributes that were not included in the final analysis. Some of these attributes did not provide any differentiation between alternatives. For example, each alternative would be designed to protect and support special status species, including the desert pupfish. Therefore, the attribute "Ability to support desert pupfish" was not used as a stand alone attribute in the final analysis by the Habitat Working Group, but was included in the first attribute listed above. Some attributes were not considered because adequate information was not available in the programmatic analysis, such as "Potential for wildlife disease risk." Moving forward, additional evaluations could be conducted during project-level analyses for these types of attributes.

The Habitat Working Group used a method that combined grading and weighting to identify alternatives that provided the highest benefits for habitat. The alternatives considered to provide the highest benefits for habitat were Alternatives 1, 2, and 4 due to the presence of Saline Habitat Complex or similar habitat

with a mosaic of shallow saline water bodies. Alternative 3 provided the highest level of connectivity for pupfish habitats located around the shoreline and a more shallow Marine Sea habitat than other alternatives. Alternative 5 was the highest rated alternative with a deep Marine Sea while also providing Saline Habitat Complex. However, the potential for hydrogen sulfide release in the deep Marine Sea may continue to result in fish kills as has occurred in the past at the Salton Sea. The scoring identified three distinct groupings of alternatives, which were Saline Habitat Complex (Alternatives 1, 2, and 4), shallow concentric water bodies (Alternatives 3 and 4), and deep Marine Sea with Saline Habitat Complex (Alternative 5).

The Habitat Working Group determined that the Saline Habitat Complex would provide extensive potential for historic bird diversity and abundance with the least uncertainty and risk, though fish diversity would be low. The Habitat Working Group also determined that an alternative with a Marine Sea could increase overall diversity of fish and bird species, though there is more risk due to water quality issues associated with hydrogen sulfide build up in the lower water depths. However, a deep Marine Sea with depths of less than 12 meters (39 feet) would minimize the long-term temperature stratification, in which warm surface water overlies cooler bottom water, that can lead to development and release of large amounts of hydrogen sulfide. Therefore, the Habitat Working Group determined that the best alternative might be a hybrid that combines the components from several alternatives and that habitat management flexibility would be crucial to manage for future uncertainty of biological and physical characteristics of the habitats.

Air Quality Working Group Recommendations

The Air Quality Working Group primarily compared the alternatives to the ability to comply with regulatory requirements. The air quality based attributes included:

- Ability to demonstrate conformity with applicable State Implementation Plans in accordance with the federal Clean Air Act; and
- Ability to meet particulate and nitrogen compound regulatory requirements (local significance thresholds) as developed by air quality management districts.

The Air Quality Working Group determined that most of the alternatives could not meet these requirements and would require further analyses to develop specific mitigation measures during project-level analyses. The Air Quality Working Group identified several mitigation measures such as extending the construction period to reduce annual emissions and particulates, development and use of low-emission equipment that currently is not available or under design, and identification of construction materials and methods that would reduce life-cycle air quality impacts. The Air Quality Working Group also identified the need for additional air quality monitoring around the Salton Sea; research on playa emissivity (ability of soil particles to become airborne); research on the ability of salt/brine crusts to limit playa emissivity throughout the year, including periods with high humidity when brine crusts frequently break apart; and pilot testing of various dust control methods as the playa becomes exposed.

The Air Quality Working Group used a method that combined ranking and weighting to identify alternatives that provided the best ability to meet air quality regulatory requirements. The alternatives best meeting regulatory requirements were Alternatives 1, 2, 3, 4, and 5. These alternatives require the least amounts of imported rock and gravel, sea bed disturbance, and operations and maintenance activities; and therefore, would result in the least amounts of emissions.

Water Quality Science Panel Recommendations

The Salton Sea Advisory Committee also requested that the Science Panel review attributes related to water quality parameters. The Science Panel subsequently met to review attributes, determine their priority, and determine appropriate scoring for evaluating the attributes. The Science Panel considered

four water quality parameters to be the most important for consideration in restoration of the Salton Sea ecosystem – selenium, hydrogen sulfide, water temperature, and dissolved oxygen.

The habitat risk from selenium (an essential element chemically related to sulfur) was considered by the Science Panel to be the most important water quality parameter affecting restoration efforts at the Salton Sea. The source of selenium in the Salton Sea is Colorado River water that has been used for irrigation on surrounding agricultural lands. In the shallow water habitats, selenium exposure routes for birds include exposure through the food web and mixing into the water column by winds. The concern for shallow water habitats is that selenium could increase over time, which would increase the potential for adverse effects to birds and may require periodic cleaning of habitat cells. The expected effects from selenium in birds would be some level of decreased hatchability of eggs in some breeding species of birds. Transitory species would not be affected because selenium is rapidly depleted in birds once they are removed from a selenium source. Effects were considered to be limited and could be mitigated. The Science Panel suggested actions to decrease potential adverse effects from selenium including avoidance of placing habitat in areas with high selenium concentrations in soils, increase habitat for those species most at risk for effects from selenium, and reduce selenium in water by diverting inflows with high selenium loads to the Brine Sink or geothermal re-injection.

Hydrogen sulfide was considered by the Science Panel to be a manageable issue, but was still weighted high in importance. Hydrogen sulfide is produced in the lower depths of the Salton Sea due to decomposition of organic matter that uses up oxygen in the water. Hydrogen sulfide produces adverse effects to fish, either directly or through effects on the food web. Therefore, both attributes were included in scoring of the alternatives. Deep sea configurations would be subject to prolonged temperature stratification which could result in periodic releases of hydrogen sulfide. The Science Panel advised that shallower sea configurations 10 to 12 meters (33 to 39 feet) deep would decrease the duration of stratification and lead to more frequent mixing of surface and bottom water, which would limit the development of hydrogen sulfide. Hydrogen sulfide levels could also be controlled to some degree with phosphorus reduction in the inflows to the Salton Sea, such as projected under proposed Total Maximum Daily Load (TMDL) limits developed in accordance with the Clean Water Act. However, existing sediments on the sea bed would continue to contribute phosphorus for some period of time. Due to limited data available, it was not possible for the Science Panel to determine the period of time that would be needed for phosphorus contributions from the sediments to be reduced, with subsequent reductions in hydrogen sulfide.

Water temperature was considered moderate in importance, but only for certain fish species, such as tilapia, in shallow water habitats. Deeper lakes would usually stay warm enough in winter to support tilapia due to the large mass of water that would retain heat. However, as observed at the Salton Sea in early 2007, even a large lake can occasionally experience fish kills during unusually cold weather. Temperature effects in shallow water habitats were considered important due to the limited diversity of fish that would be present. If only tilapia are present, cold weather could decimate the population, and birds dependent on that population (such as pelicans in winter) would be adversely affected.

Issues for dissolved oxygen include diurnal (daily) fluctuations in shallow water habitats due primarily to photosynthesis and respiration of algae, and seasonal levels due to temperature stratification in deep water habitats. Dissolved oxygen was not a high priority for the Science Panel since control of other water quality parameters (primarily hydrogen sulfide and nutrients) would resolve the dissolved oxygen issue.

Greater concern for effects from selenium and hydrogen sulfide than for the other water quality parameters resulted in the Science Panel determining that alternatives comprised of shallow water habitat posed the least adverse water quality impacts. Mitigation strategies of maintaining depths of less than 12 meters (39 feet) and nutrient control for inflows were identified to significantly improve the water quality in the Marine Sea.

Overall Preferred Alternative Process Working Group Recommendations

The Preferred Alternative Process Working Group reviewed the recommendations of the other working groups and Science Panel and also considered other attributes not related to biological resources, air quality, and water quality. Overall, this working group determined that most of the potential impacts identified in the PEIR could be reduced through mitigation measures developed during project-level analyses. However, it was recognized that many of the impacts may not be reduced to levels of less than significant in a CEQA analysis.

The Preferred Alternative Process Working Group also determined that due to the programmatic nature of the PEIR, some details would need to be further defined and evaluated as a range of options during the project-level analyses. For example, recreation and local economic opportunities could be incorporated into any alternatives; however, the nature of the opportunities could be different. It was also determined that Early Start Habitat (2,000 acres of a pilot-type Saline Habitat Complex to be located near the southern shoreline) and Saline Habitat Complex-type of habitat should be included in the Preferred Alternative. However, the purpose of this working group was to define the process for determining a preferred alternative and provide some guidance to the Salton Sea Advisory Committee. Therefore, no specific recommendations for a Preferred Alternative were prepared by the Preferred Alternative Process Working Group.

Salton Sea Advisory Committee Recommendations on February 27, 2007

The results of the working group evaluations were considered by the Salton Sea Advisory Committee on February 27, 2007. Based upon this information and discussion that occurred at the meeting, the Advisory Committee recommended that the Preferred Alternative include:

- Saline Habitat Complex and Marine Sea habitat (as in Alternative 5);
- Early Start Habitat (as in all alternatives);
- Methods to protect air quality with conservative methods such as irrigated salt-tolerant vegetation (as in Alternatives 1, 2, 3, 5, 6, and 8); and
- Methods to protect water quality to improve habitat and reduce odors, including limiting the depth of the water bodies to less than 12 meters (39 feet) (as in Alternative 3).

The Advisory Committee compared these attributes to the alternatives and determined that Alternative 5 provided these attributes to a larger extent than other alternatives. However, Alternative 5 could not be recommended without incorporation of the following components that were evaluated as part of other PEIR alternatives:

- Expanded areas of the Marine Sea adjacent to existing communities as well as the State Recreation Area (as in Alternative 3); and
- Expanded Saline Habitat Complex areas (as in Alternative 2).

Salton Sea Advisory Committee Comments on March 27, 2007

On March 27, 2007, the Preferred Alternative proposal was presented to the Salton Sea Advisory Committee. This proposal included a Marine Sea formed by a barrier with water depths of less than 12 meters (39 feet). The Marine Sea shoreline was located at -230 feet msl, while the barrier was located at the -270-foot and -260-foot contours to provide water adjacent to existing communities and recreational areas. The Saline Habitat Complex was expanded along the southern sea bed from -230 feet to -266 feet msl contours.

The Advisory Committee provided comments related to the need to provide a portion of the Saline Habitat Complex in the northern sea bed near the confluence of the Whitewater River, moving the Marine Sea Barrier to a deeper location to provide a larger Marine Sea, providing a Marine Sea area near the southern shoreline for increased recreational opportunities, and providing access for geothermal generation development. Some of the Advisory Committee members also discussed the use of water treatment for the inflows to improve water quality in a deeper Marine Sea.

Considerations of Comments on the Draft Programmatic Environmental Impact Report

Nearly 34,000 comment letters on the Draft PEIR were submitted by agencies, Torres Martinez Tribe, interest groups, and individuals. Many of the letters were developed by interest groups and submitted by individuals. Most of the comments were related to biological resources, climate and air quality, recreation, and use of the Salton Sea as an agricultural repository and a recreation area. Many comments encouraged development of a Preferred Alternative that would be adaptable to changes in inflows, climate, land uses, and habitat needs.

With respect to biological resources, most of the comments requested the inclusion of a small Marine Sea in the northern sea bed, at least 25,000 to 50,000 acres of Saline Habitat Complex in the southern sea bed, Early Start Habitat, and methods to reduce water quality problems in all water bodies.

Most of the comments concerning air quality encouraged the use of a variety of methods to reduce air quality problems, implementation of research activities to reduce particulates from the playa, and use of water to protect agricultural microclimates and prevent salt dust on lands adjacent to the southern shoreline.

Many comments included reminders that Executive Orders over 80 years ago established the Salton Sea as an agricultural repository for drainage, and that the alternatives could not modify this use.

There were also many comments that identified the need to maintain water near shoreline communities and the State Recreation Area, incorporate the proposed land use plans for the Torres Martinez Reservation, and include recreational opportunities into the alternatives. There was discussion of establishing the shoreline water elevation at -228 feet msl to reduce the need for Air Quality Management methods by land owners of the exposed playa.

PREFERRED ALTERNATIVE

Information in the Draft PEIR and comments received from the public review of the 8 alternatives described in the Draft PEIR were evaluated to develop a Preferred Alternative. Many of the components described by the Salton Sea Advisory Committee members, the Torres Martinez Tribe, agencies, interest groups, stakeholders, and the public were incorporated into the recommendations. Several of the comments were not incorporated due to technical reasons. The Preferred Alternative is most similar to Alternative 5 with components described in the other alternatives. A description of the components, estimated costs, and implementation methods are described below.

Components of the Preferred Alternative

The Preferred Alternative, as shown in Figure 3, includes Saline Habitat Complex in the northern and southern sea bed, a Marine Sea that extends from San Felipe Creek to Bombay Beach (formed by barriers located at elevations from -260 to -270 feet msl), Air Quality Management facilities to reduce particulate emissions from the exposed playa, Brine Sink for discharge of salts, Sedimentation/Distribution facilities, and conveyance facilities. The Preferred Alternative also would include Early Start Habitat to provide habitat prior to construction of habitat components and an exclusion area for geothermal development. These components are described below.

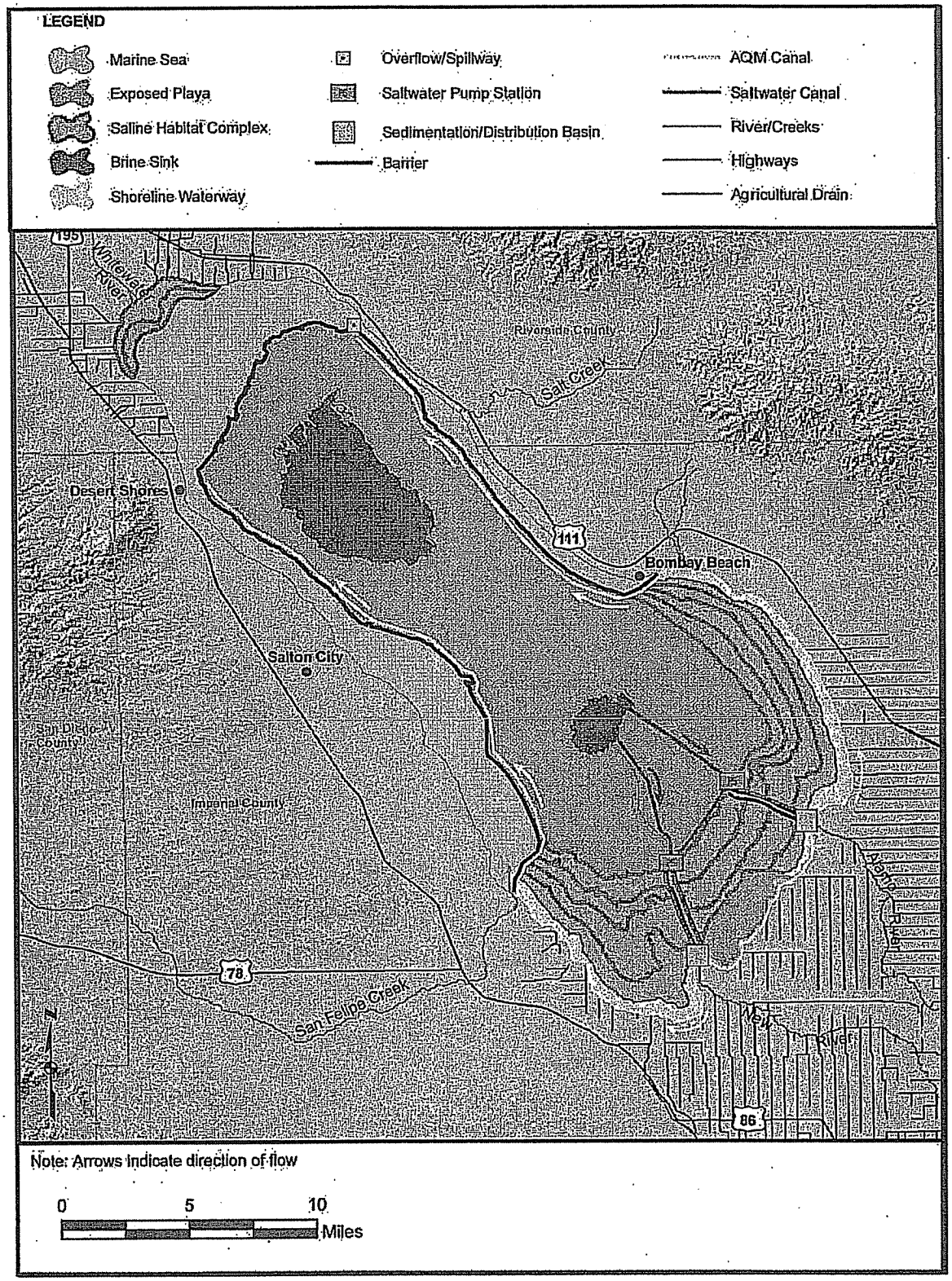


FIGURE 3
PREFERRED ALTERNATIVE

The Preferred Alternative was developed for the PEIR based upon the same assumptions used for all alternatives in the Draft PEIR, including inflows. Inflows into the Salton Sea are influenced by multiple factors, including drainage flows from Imperial and Coachella valleys, flows from Mexico, and precipitation. Historically, inflows have exceeded 1.2 million acre-feet/year. As previously described, a portion of these inflows are projected to be reduced after 2017 due to the IID Water Conservation and Transfer program. IID is providing additional inflows as a mitigation measure to maintain the salinity at less than 60,000 mg/L until 2017 which is when the salinity was projected to exceed this concentration without the transfer. When the salinity increases above 60,000 mg/L, it is anticipated that all of the fish except desert pupfish will cease to exist in the main body of the Salton Sea.

Location and Sizing of the Components

The location and sizing of several components were based upon specific criteria and in consideration of available inflows. For example, the location and size of the Marine Sea was based upon criteria to provide water along shorelines in existing communities and minimize water quality risk.

Saline Habitat Complex was located along the southern shoreline due to the proximity of the area with wildlife refuges, agricultural fields, and areas historically supporting large numbers of birds. However, the specific size of the Saline Habitat Complex was based upon the long-term availability of inflows.

The sizes of the Brine Sink and the exposed playa were based upon inflows and the balancing of water demands. The first and second priorities for use of inflows (based on two of the primary objectives of the Salton Sea Ecosystem Restoration Legislation), would be for habitat associated with the Saline Habitat Complex and Air Quality Management, respectively. The last priority would be for the Marine Sea. Therefore, if inflows decline to levels less than the "design flow," only the inflows to the Marine Sea would be reduced.

As described in the Draft PEIR, inflows may also decline because of water recycling in Mexico, changes in agricultural practices to meet projected Total Maximum Daily Loads, and changes to municipal wastewater disposal practices to meet discharge regulations. These types of changes have occurred in other areas of California. In addition, global climate change models are predicting an increase in evaporation rates which could further reduce inflows and increase evaporation from the Salton Sea, Saline Habitat Complex, or Brine Sink. Therefore, the Draft PEIR included risk-based analyses of inflows considering the various water sources. The results of the analyses identified the average annual inflow for the period 2018 through 2078 (the period after IID ceases to divert mitigation water) as 717,000 acre-feet. This value was used to compare the operations of the Draft PEIR alternatives and is used to define operations parameters for the Preferred Alternative.

If the average annual flow value (717,000 acre-feet) was used for the "design flow," the Marine Sea would not receive adequate inflows in about half of the years in the 2018 through 2078 period. Therefore, the "design flow" criteria were based upon adequate inflows in at least 80 percent of the years in the 2018 through 2078 period. This average annual "design flow" is 650,000 acre-feet for the 2018 through 2078 period. When inflows exceed 650,000 acre-feet/year, flows not used in the Saline Habitat Complex, Air Quality Management of exposed playa with irrigated vegetation, and Marine Sea could be used to establish salt crust or additional temporary habitat on other portions of the exposed playa.

Saline Habitat Complex

The Saline Habitat Complex is intended to provide a diversity of habitats to support food web organisms (e.g., invertebrate and fish), that will provide an avian forage base similar to that which developed at the Salton Sea. Berms, islands, peninsulas, and snags would contribute to use by a variety of shorebirds and wading birds. Excavated areas up to 15 feet in depth would be incorporated to increase habitat diversity and provide shelter for fish and invertebrates, as shown in Figure 4.

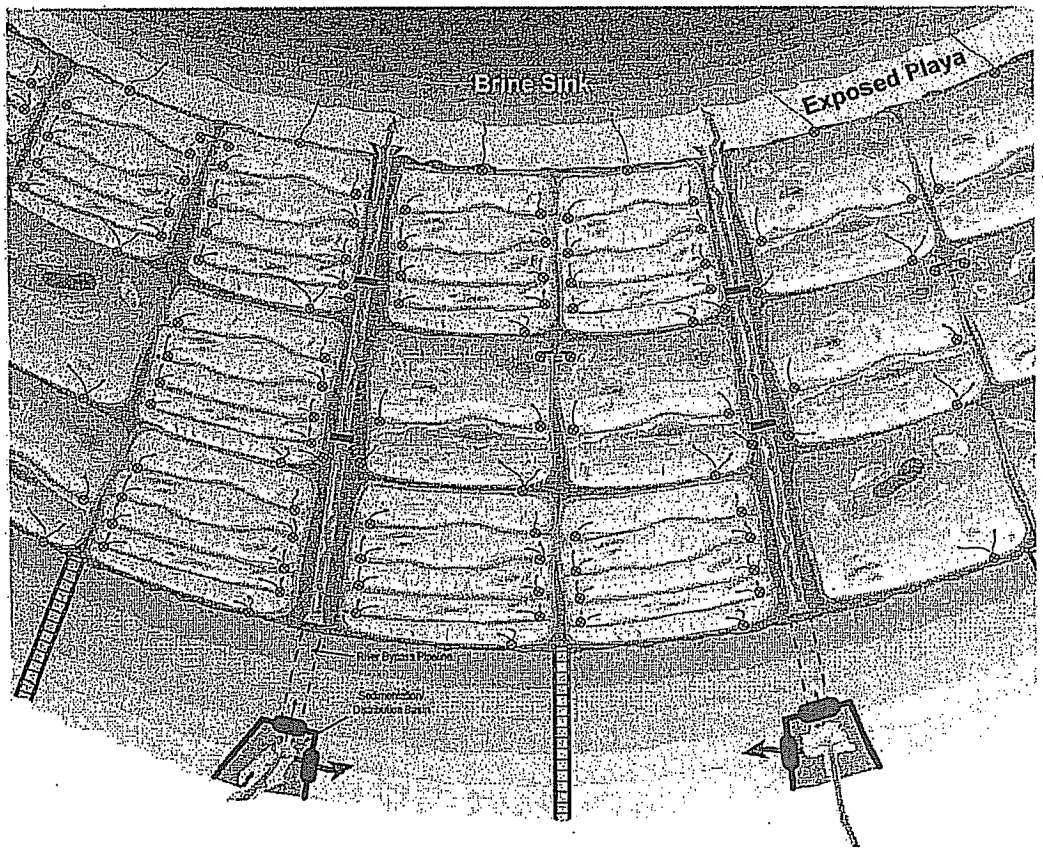


FIGURE 4
CONCEPTUAL SALINE HABITAT COMPLEX LAYOUT

Salinity within the Saline Habitat Complex could range from near 20,000 mg/L to 200,000 mg/L. Maintaining most of the Saline Habitat Complex with saline water (greater than 20,000 mg/L) would reduce vegetation growth, selenium ecorisk, and vector populations. The water supply would be from the New, Alamo, and Whitewater rivers plus water recycled from the Brine Sink or upgradient Saline Habitat Complex cells to achieve a minimum salinity of 20,000 mg/L.

The first rows of the eastern and western southern Saline Habitat Complex that will extend from the shoreline (at -230 feet msl) to the first Berm (at -236 feet msl) would not be divided into ponds. This area would serve as a mixing zone for the inflows and saline water and would be maintained at a salinity of 20,000 to 30,000 mg/L. Desert pupfish that inhabitat the eastern and western Imperial Valley drains would be able to use these first rows for connectivity. However, there will be two distinct desert pupfish populations in the eastern and western Saline Habitat Complex that would be separated by the geothermal area. This mixing zone would not be provided in the northern Saline Habitat Complex.

Berms would be constructed of suitable earthfill materials excavated from the sea bed with 3:1 side slopes. A 20-foot wide gravel road on top of each Berm would allow access for maintenance. Rock slope protection would be placed on the water side of the Berm. Water depths would be less than 6 feet (2 meters). Berms could not be constructed until the Brine Sink (residual Salton Sea) recedes to an elevation below the Berm location.

Early Start Habitat could be constructed in addition to the Saline Habitat Complex, as described below.

Marine Sea

A Marine Sea would be formed through the construction of a Barrier. The Marine Sea would eventually stabilize at a surface water elevation of -230 feet msl with a salinity between 30,000 mg/L and 40,000 mg/L. Salinity in the Marine Sea would be managed through regulation of inflows and discharges. Air Quality Management Canals, Sedimentation/Distribution Basins, and Early Start Habitat would be constructed between the -228 and -230 foot msl contours and would avoid conflicts with existing land uses along the shoreline.

Inflows to the Marine Sea would include direct flows from the Whitewater River, Coachella Valley drains, Salt Creek, San Felipe Creek, and local drainages. Flows from the New and Alamo rivers would be blended in a large Air Quality Management Canal and diverted into the Saline Habitat Complex and the southeastern and southwestern portions of Marine Sea. The portion of the Air Quality Management Canal located between the Sedimentation/Distribution Basins and Marine Sea would be located along the shoreline of the Saline Habitat Complex and would be siphoned under major drainages and agricultural drains to ensure that existing drainages are not impacted and that connectivity is provided for desert pupfish between the drains and the Shoreline Waterway. Air Quality Management Canals would continue on the interior side of the Barrier where the Marine Sea is located. Flows from the Marine Sea would be spilled to the Brine Sink to maintain salinity and elevation control.

The water depth would be less than 12 meters (39 feet) to reduce the potential for hydrogen sulfide generation and potential fish kills, due to long-term temperature stratification. The Preferred Alternative assumes implementation of the proposed TMDLs for nutrients and selenium, and therefore, additional water treatment for inflows would not be required. However, there is insufficient information to determine the role that nutrients contained in sediments will have in continued production of hydrogen sulfide in the Marine Sea. Therefore, the Preferred Alternative is based upon a conservative approach that maintains water depth to less than 12 meters (39 feet). During project-level analyses, additional data should be collected and the maximum water depth should be re-evaluated prior to final design.

The Marine Sea would provide a continuous water body to allow continuity of desert pupfish populations that currently inhabit San Felipe Creek, Coachella Valley drains, and Salt Creek.

The Barrier would be constructed of rock with a seepage barrier on the upstream face. The Barrier would be up to 47 feet above the existing sea bed and up to a half-mile wide at the base. The final slope of the Barrier would be 10:1 on the Marine Sea side and 15:1 on the down gradient side. The structure would require compliance with DWR, Division of Safety of Dams regulations. For the purposes of the PEIR, it was assumed that the Barrier would be constructed using barges. Therefore, the Barrier would need to be constructed before the Brine Sink (residual Salton Sea) recedes. Rock used to form the Barrier could be delivered to the barges by a railroad trestle or at a harbor that could be used for Marine Sea access after construction. During project-level analyses, specific construction methods need to be evaluated to provide a cost-effective construction approach and to reduce construction impacts.

Sedimentation/Distribution Basins

Inflows from the New and Alamo rivers would be captured in two 200-acre Sedimentation/Distribution Basins to divert desilted river water into one of several Air Quality Management Canals or bypass flows into the Brine Sink. The unlined Sedimentation/Distribution Basins would be excavated along the shoreline and would be located from -228 to -230 feet msl. Water depths would be about 6 feet. Sediment collected in the basins would be periodically dredged and flushed into the Brine Sink.

Air Quality Management

Prior to design of Air Quality Management facilities, monitoring and testing activities would be conducted to identify the potential for and rate of dust emissions, determine chemical characteristics of

the playa, analyze response of salt crusts and sediments to humidity and wind. If potential for significant dust emissions occur, several actions could be implemented to reduce air quality problems. It is anticipated a combination of actions would be used because the playa characteristics may vary throughout the sea bed. For the purposes of the PEIR and the Preferred Alternative, the following assumptions were used to define Air Quality Management components:

- 30 percent of the total exposed playa would be non-emissive and require no actions;
- 20 percent of the exposed playa would use management options that do not require freshwater supplies, such as Brine Stabilization, sand fences, or chemical stabilizers; and
- 50 percent of the exposed playa would use water efficient vegetation that is irrigated with a portion of the inflows to the Salton Sea.

The conservative approach for control of dust emissions would use Air Quality Management Canals to convey water from the Sedimentation/Distribution Basins to a series of 2-square mile units on the exposed playa. Each 2-square mile unit would include water filtration and chemical treatment units to prevent clogging and scale in the irrigation system, pumps, and buried distribution and drip irrigation pipes. The drip irrigators would be buried to reduce potential for selenium toxicity to wildlife from ponded water. Facilities would be included in each unit to pump brine from the Brine Sink to the treatment unit to increase the salinity of the water to 10,000 mg/L, if needed. Drains would be constructed under the irrigated area and drainage water would be conveyed to the Brine Sink. Construction of the irrigation system would require excavations up to 8 feet deep for trenches throughout the exposed playa. Salt bush, or similar vegetation, would be planted every 5 feet apart in rows that would be separated by 10 feet.

Brine Sink

The Brine Sink would provide the repository necessary to store excess salts, water discharged from the Saline Habitat Complex, Marine Sea, and Air Quality Management areas, and excess inflows. The elevation would fluctuate seasonally based upon the patterns of these tributary flows.

During project-level analyses, partitioning of the Brine Sink could be considered to provide another area with salinities of less than 200,000 mg/L that could support invertebrates and provide additional habitat on the sea bed.

Early Start Habitat

The Preferred Alternative would include up to 2,000 acres of shallow saline habitat for use by birds after the Salton Sea salinity becomes too high to sustain some species of fish. This habitat would be created prior to construction of full-scale habitat components, and is referred to as Early Start Habitat. Early Start Habitat was assumed to be located at elevations between -228 and -232 feet msl and could either be a permanent or temporary feature to be eliminated or assimilated as other components are constructed.

For the purposes of the Preferred Alternative, it was assumed that the Early Start Habitat area would be located along the southern shoreline because the flat slope of the sea bed would provide a large area for shallow water cells. The area is currently used by many birds. Most agricultural drains in this area are pumped into the Salton Sea and could provide a stable source of inflows into the Early Start Habitat. Saline water from the Salton Sea would be pumped into the cells to be mixed with freshwater from the drains to provide salinity between 20,000 and 60,000 mg/L.

The area would be divided into cells with Berms excavated from sea bed materials. Average water depths within each cell would be less than four feet, although deep holes located away from the Berms may extend to 15-foot depths. Specific design and testing criteria would be developed in a project-level analysis.

Area for Geothermal Development

Imperial County has one of the larger known geothermal resource areas in the world, including lands near the southern shoreline of the Salton Sea. Several geothermal generation facilities have been constructed on the upland side of the shoreline. Field investigations have indicated that additional generation facilities could be successfully constructed in currently inundated areas of the sea bed after the water recedes.

One of the areas that may include significant geothermal resources is located between the New and Alamo rivers along the southern shoreline. A portion of this area is located within the Sonny Bono Salton Sea National Wildlife Refuge, and most of the area is used extensively by many species of birds. Placement of Saline Habitat Complex and geothermal development in this area could require very specific mitigation measures to avoid conflicts with geothermal facilities, including power transmission lines and other facilities.

Geothermal development will be extremely important in California and other southwestern states as part of a mosaic of energy sources to meet increasing energy demands. Therefore, the Preferred Alternative includes an area between the New and Alamo rivers without Saline Habitat Complex to reduce potential conflicts between geothermal development and habitat criteria. The geothermal development area would avoid the Sonny Bono Salton Sea National Wildlife Refuge lands. The Preferred Alternative includes Air Quality Management actions for the geothermal development area; however, specific Air Quality Management methods may be different for the industrial land uses.

Most of the drains that flow into the Salton Sea between the New and Alamo rivers are currently pumped into the Salton Sea. Use of these pumps does not allow desert pupfish in the drains to swim into the Salton Sea. Therefore, there would not be a need to provide continuity for desert pupfish populations in the drains between the rivers. However, use of a pupfish channel to connect desert pupfish populations in the drains could be evaluated in a project-level analysis.

Land Ownership Assumptions

The Preferred Alternative assumes that easements or deeds would be obtained for the entire sea bed below elevation -228 feet msl to allow construction and operations and maintenance activities. Costs of acquisition of easements and deeds are not included in the PEIR cost estimates.

If other land uses extend into the sea bed, the Preferred Alternative would need to be modified in project-level analyses. For example, if exposed lands are converted to cultivated agriculture to an elevation of -235 feet msl, either the components would need to be constructed at lower elevations or displacement dikes would be required to protect the agricultural land.

Implementing Entities Assumptions

The Preferred Alternative has been defined and evaluated as if one entity or group of entities implemented the program in a uniform manner. However, it would be possible for several entities to implement facilities under separate programs with some level of coordination. For example, facilities located in the northern and southern area of the sea bed could be implemented by separate entities with coordinated operations for conveyance of inflows. As another example, separate entities could implement components with different functions, such as conveyance, Air Quality Management, Marine Seas, and/or Saline Habitat Complex.

Construction Materials Assumptions

Design criteria for the Barrier would require extensive geotechnical investigations. Most of the existing geotechnical foundation information was collected near the mid-sea location and may not be applicable to final Barrier locations. Once geotechnical data are collected, the Barrier design concept would be refined.

Changes in cross sections or materials could significantly change rockfill quantities, excavation quantities, and costs. Similarly, foundation treatment, if required, could change costs and construction methods.

For purposes of the PEIR, development of new rock sources or transportation facilities are not considered part of the Preferred Alternative. The Preferred Alternative assumption is that the Barrier design would use rock or boulders between 1 to 5 feet in diameter for the majority of the structure for stability. This rock size was not found to be available in large quantities at existing quarries during the preparation of this PEIR. However, the Preferred Alternative assumption is that this rock would be provided from a permitted quarry and transported to within 10 miles of the shoreline by methods other than trucks.

The Preferred Alternative includes gravel roads on top of all Barriers and Berms and approximately every mile in both north-south and east-west directions across the exposed playa. Therefore, an extensive amount of gravel would be required for the Preferred Alternative.

Implementation Schedule

Implementation of the Preferred Alternative would be accomplished in four periods:

- Period I: Five Year Plan/Pre-construction - 2008 to 2013;
- Period II: Major Construction - 2014 to 2025;
- Period III: Construction Completion - 2026 to 2035; and
- Period IV: Operations and Maintenance - 2036 to 2078.

Activities that would occur in each of these periods are summarized below.

Period I: Five Year Plan/Pre-construction - 2008 to 2014

It is anticipated that the California Legislature would select the Preferred Alternative, provide authorization for the next periods, and appropriate funds by late 2007. Following these actions, it is anticipated that the implementing entity(ies) would initiate a Five Year Plan including project-level analyses. Many issues could not be fully evaluated in the programmatic analysis due to lack of data or the need to select specific locations for facilities. Therefore, the Five Year Plan would focus on implementation of the Early Start Habitat, collection of additional biological and physical data, site-specific analyses of facilities, and design of facilities.

Demonstration Project and Early Start Habitat

The U.S. Department of the Interior, Geological Survey (USGS), is currently conducting a Salton Sea Shallow Water Habitat Pilot Project. This project includes several shallow ponds containing small islands within an approximately 100 acre area. The ponds do not incorporate deep holes or snags.

DFG is currently developing a Demonstration Project near the southeastern shoreline of the Salton Sea. This demonstration project would include ponds with deep holes, islands, and snags. Information from the Demonstration Project could be used to develop the final design criteria for the Saline Habitat Complex. Prior to construction of the Demonstration Project, environmental documentation and design documents would be prepared and permits would be acquired.

There is concern that water quality in the Salton Sea will degrade prior to and during construction of the Preferred Alternative and that fish and birds that forage on fish could be lost. Therefore, an Early Start Habitat of up to 2,000 acres of Saline Habitat Complex emphasizing cell configurations that will support fish would be constructed. This would provide both habitat during construction and allow further full-scale pilot evaluation of this habitat prior to final design.

Prior to construction of the Early Start Habitat, an evaluation of potential sites would be conducted. If necessary, several sites may be identified for site-specific field investigations. Geotechnical analyses, topographic and bathymetric surveys, and sediment and water quality analyses would also be completed. Removal of sediment with high concentrations of contaminants may be considered to protect water quality and habitat values. These evaluations could require 12 to 18 months to define seasonal variations.

Following these analyses, preliminary design would be initiated for the Berms and conveyance facilities to divert inflows into the Early Start Habitat ponds, manage salinity in the ponds, and divert water from the ponds without adverse impacts to fish in the Early Start Habitat ponds or desert pupfish. Concurrently, an environmental document would be prepared. This process could require about 6 months.

Final design would be completed and permits would be obtained from federal, state, and local agencies. The final design could include several types of Berms, such as the use of Geotube® Berms or other facilities which could change construction schedule assumptions. The final design and permitting processes could require up to 12 months. After permits are approved, construction could occur in less than 6 months. Based upon this estimated timeline, the Early Start Habitat would be fully implemented by 2011.

Biological Investigations in the First Five Years

In addition to the field investigations and monitoring associated with the Early Start Habitat, existing biological monitoring in the Salton Sea would be expanded. Additional monitoring of breeding and roosting sites, invertebrates, and fish and bird populations may be conducted. Pilot studies would be conducted to investigate temperature and salinity tolerances for various fish species and methods to reduce impacts on fish and birds during construction of the Preferred Alternative.

Inflows, Water Quality, and Sediment Quality Investigations in the First Five Years

The PEIR analysis was based upon available inflow data collected through 2004. However, inflows have changed significantly since 2004 and will continue to change. For example, up to 200,000 acre-feet of flows in the New River from Mexico may be eliminated. Changes in farming practices due to new regulatory requirements may either reduce flows or change flow patterns into the Salton Sea. Therefore, additional data should be evaluated using hydrologic and hydraulic models to improve the reliability of inflow projections.

An extensive sediment and water quality monitoring program for nutrients, selenium, ammonia, hydrogen sulfide, and hazardous constituents would be conducted to define characteristics and seasonal and annual variations at locations of the Saline Habitat Complex, Marine Sea, and exposed playa. Water quality analyses in the Salton Sea also should include evaluation of the potential for release of hydrogen sulfide and ammonia based upon water and sediment chemistry. These data would be used to further develop analytical models to project characteristics during construction and operations and maintenance. These efforts would be coordinated with other monitoring programs established by regulatory agencies. Based upon these data and associated modeling, locations of habitat facilities may be modified from those identified for the Preferred Alternative.

Air Quality Investigations in the First Five Years

The air quality actions would be integrated with the efforts by other agencies in the Imperial and Coachella valleys. Additional air quality monitoring stations (up to 20 stations) would be installed to improve the understanding of wind patterns and background constituent concentrations along the entire Salton Sea shoreline and surrounding valley area. Monitoring stations also could be established close to the ground to define the effect of the Salton Sea on the microclimate on adjacent lands.

As the Salton Sea recedes, the exposed playa would be tested for chemical constituents and emissivity. It is feasible that exposed playa characteristics would vary with geography and elevation. Investigations would be conducted to determine the amount of salt and dust accumulated on nearby crops and the potential impacts on the crops.

Geotechnical Investigations and Surveys in the First Five Years

Geotechnical investigations and topographic and bathymetric surveys would be conducted over the entire sea bed with specific focus at the identified locations of Barriers, Berms, canals, and Air Quality Management facilities. Based upon the results of these investigations, structural design criteria and construction material requirements would be defined, including needs for excavated soils in the sea bed and imported rock and gravel. As part of this effort, detailed analyses of rock and gravel quarries would be conducted to identify sources of rock of appropriate sizes and chemical composition to withstand high salinity conditions. Pilot studies for Barrier and Berm designs could be completed in portions of the Salton Sea or in the Early Start Habitat area. If adequate construction materials are not available, the final designs would need to be modified.

Several previous studies, as described in the PEIR, identified the potential for unexploded ordinances and hazardous materials in the sea bed. Site-specific investigations would be completed.

Construction Methods and Materials Investigations Within the First Five Years

The PEIR analysis is based upon conventional construction methods and construction materials. However, due to concerns about global warming, new equipment and technologies are being developed. Therefore, an evaluation of available and potentially innovative construction techniques that minimize vehicle and industrial emissions and greenhouse gases would be conducted. In addition, pilot studies would be performed to identify materials and methods that could withstand the high salinity conditions and minimize operations and maintenance activities. Many of these pilot studies would be conducted as part of the Early Start Habitat efforts described above.

Coordination with Torres Martinez Tribe

The Torres Martinez Reservation is located along the northern shoreline and extends into the Salton Sea. The Torres Martinez Tribe is currently preparing a new General Plan and associated documents. During this period, significant coordination efforts would be conducted to integrate the new plans with the Preferred Alternative. Site access agreements also would be negotiated to allow construction and operations and maintenance of the Preferred Alternative on tribal lands.

Access and Utility Agreements

Access agreements, either land deeds or easements, would be required for currently inundated land under the Salton Sea between the -228 foot and -230 foot msl contours for access facilities, Sedimentation/Distribution Basins, and corridors for roads and electrical distribution facilities. Specific locations for geothermal generation facility exclusion areas would be evaluated. Utility agreements would be negotiated with IID for electrical service, communications services, and potable water service for operations and maintenance buildings.

Project-Level Environmental Documentation and Final Design

Information collected during the investigations described above would be compiled into a preliminary design report that would consider a range of locations, sizes, and construction methods for facilities in the Preferred Alternative. Environmental documentation would be completed concurrently with preparation of the preliminary design report. The environmental documentation would further evaluate benefits and

impacts of specific facilities during construction and operations and maintenance, as well as identify mitigation measures to reduce the effects of impacts.

Following the adoption of the environmental documentation, final design would be completed and plans and specifications would be prepared for bidding.

Bidding Period

It is anticipated that due to the unique nature of the design, construction methods, and site conditions, the bidding period and bid-checking period could require up to 12 months prior to initiation of construction. It is anticipated that multiple bid packages would be prepared. Therefore, portions of the construction could occur prior to other portions.

Schedule for the Five Year Plan/Pre-construction Period

A preliminary schedule for the Five Year Plan is presented as Figure 5. However, this schedule would be developed specifically by the implementing entity(ies). This period also includes a Bidding Period of up to 12 months. All six years are shown on Figure 5.

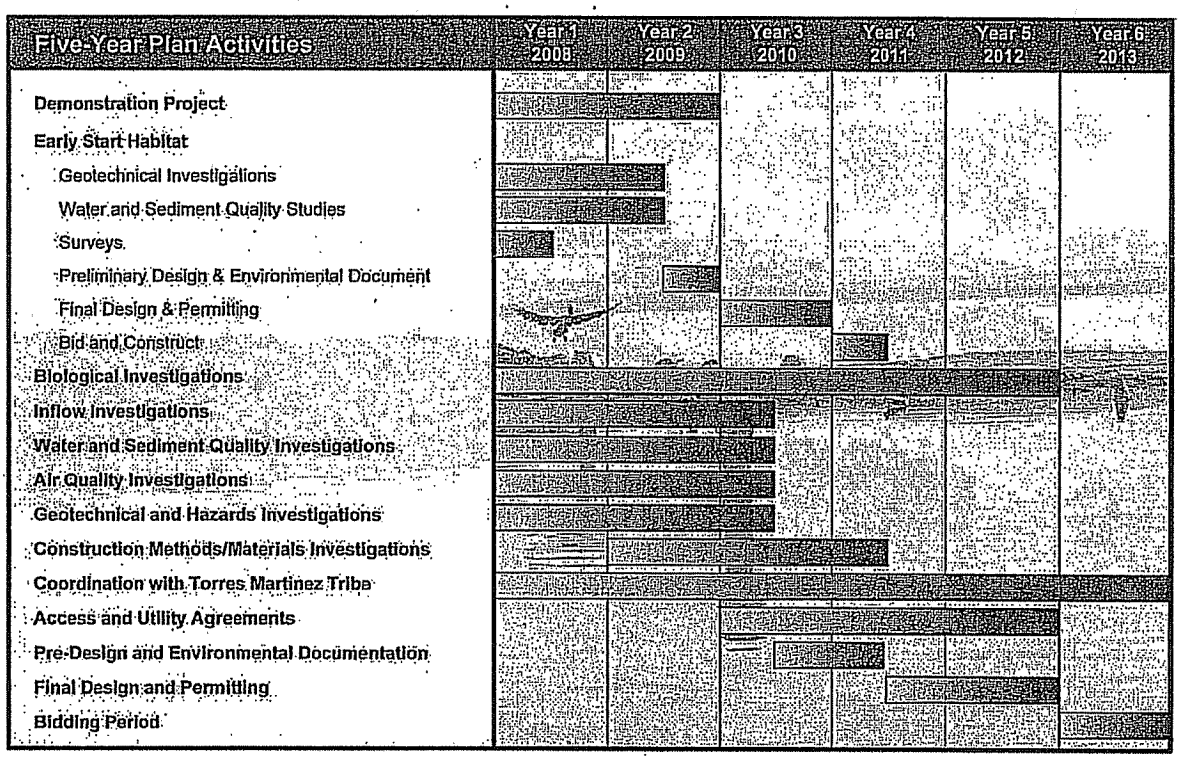


FIGURE 5
FIVE YEAR PLAN/PRE-CONSTRUCTION PERIOD PRELIMINARY SCHEDULE

Period II: Major Construction - 2014 to 2025

Construction phasing of the Preferred Alternative would be determined by water elevations in the Salton Sea. Under concepts evaluated in the PEIR, construction of the Berms for Saline Habitat Complex could not occur until the water recedes in the area where the Berm would be constructed. Construction of the Barrier may be more appropriately completed while the water in the Brine sink (residual Salton Sea) is deep enough to support barges.

Initial construction activities would most likely include Sedimentation/Distribution Basins, Air Quality Management Canals along the shoreline, harbors or other construction staging areas, trestles or other delivery systems for constructing the Barriers. The Air Quality Management Canals also would convey water to the Marine Sea from the New and Alamo rivers. The construction period for the Barrier would be limited by design criteria, availability of construction materials each year, and the ability to transport construction materials to the Salton Sea without causing major traffic impacts in the area. The construction period for the Barrier in the Preferred Alternative is projected to extend from 2014 until early 2022. Based upon the inflow projections, the Marine Sea salinity would be over 80,000 mg/L and the surface water elevation would be -248 feet msl at the time the Barrier would be closed. Marine Sea salinity would be less than 40,000 mg/L and the surface water elevation would be at -230 feet msl within 15 months of the completion of the Barrier.

As the water recedes, Saline Habitat Complex Berms would be constructed. Based upon the Preferred Alternative layout and the associated inflow projections, Berms located at -236 feet msl could be constructed after 2018 after the surface water elevation recedes to -238 feet msl. This area would be the Shoreline Waterway and would be used to distribute water to other portions of the Saline Habitat Complex and provide connectivity for the desert pupfish. The next Berms would be located at -242 and -248 feet msl and could be constructed in 2022 and 2024, respectively. Salinity goals in the Saline Habitat Complex could be achieved within months following completion of the Berms.

Air Quality Management facilities would be constructed on the sea bed in the geothermal exclusion area in this Major Construction Period, if needed. Initially, the exposed playa would be monitored and pilot studies would be conducted to determine the most cost-effective method to control particulate emissions.

Operations and maintenance activities would begin towards the end of this period and include periodic inspections for facility conditions and safety; repairing or replenishing Berms for seepage, erosion, and settlement; repairing roads with rock addition; repairing water conveyance facilities in the Saline Habitat Complex, and Air Quality Management Canals and facilities; dredging of Saline Habitat Complex holes to maintain depths; vegetation and vector control; and repairing and replacing of conveyance pumps.

Construction phasing for all of the projected facilities in the Preferred Alternative is summarized in Table 1.

Table 1
Construction of Preferred Alternative Characteristics in Each Period
(In Million Dollars, 2006 Dollars)

Items	Five Year Plan/ Pre-Construction Period	Major Construction Period		Construction Completion Period		Total at 2078
	2008-2013	2014-2020	2020-2025	2025-2030	2030-2035	
Early Start Habitat	2,000 acres	No Change	No Change	No Change	No Change	2,000 acres
Saline Habitat Complex	None	7,000 acres	25,000 acres	20,000 acres	10,000 acres	62,000 acres
Marine Sea	None	Barrier under construction	Barrier completed to form 45,000-acre Marine Sea	No Change	No Change	45,000 acres
Water Conveyance	None	Two 200-acre Sedimentation/ Distribution Basins Air Quality Management and Salt Water Canals	Additional Salt Water Canals	Additional Air Quality Management Canals Additional Salt Water Canals	Additional Salt Water Canals	Two 200-acre Sedimentation/ Distribution Basins 75 miles of Air Quality Management Canals Salt Water Canals
Exposed Playa	8,000 acres	20,000 acres	32,000 acres	32,000 acres (no change)	106,000 acres	106,000 acres
Air Quality Management Actions (including irrigated vegetation, brine stabilization, and monitoring non-emissive areas)	Conduct monitoring and testing as playa dries	Conduct monitoring and testing as playa dries	Construct Air Quality Management on up to 70% of Exposed Playa (17,000 acres)	Construct Air Quality on up to 70% of Exposed Playa Management (15,000 acres)	Construct Air Quality Management on up to 70% of Exposed Playa (74,000 acres)	Construct Air Quality Management on up to 70% of Exposed Playa (106,000 acres)
Brine Sink	222,000 acres 55,000 mg/L salinity	200,000 acres 77,000 mg/L salinity	132,000 acres 166,000 mg/L salinity	109,000 acres More than 200,000 mg/L salinity	17,000 acres More than 200,000 mg/L salinity	17,000 acres More than 200,000 mg/L salinity

Period III: Construction Completion - 2026 to 2035

After 2025, inflows are projected to recede rapidly due to changes in irrigation practices and elimination of inflows from Mexico. Saline Habitat Complex Berms would continue to be constructed. The Berms at -254, -260, and -266 feet msl would be constructed in 2026, 2028, and 2033, respectively, as shown in Table 1.

The exposed playa would be monitored and pilot studies would be conducted to determine the most cost-effective method to control particulate emissions. Air Quality Management Canals on the sea bed would be constructed as the water recedes below -260 feet msl. It is anticipated that the playa would be fully exposed by 2035. However, construction may continue after 2035 as results from the emission monitoring programs and pilot studies are completed. The PEIR assumes that the Air Quality Management facilities are completely constructed by 2035.

Operations and maintenance activities would continue as described for the Major Construction Period. In addition, operations and maintenance activities would begin for the Air Quality Management and Marine Sea facilities. These activities would include periodic inspections for facility conditions and safety; repairing or replenishing Barriers as well as Berms for seepage, erosion, and settlement; continued repairing of roads with rock addition; repairing water conveyance facilities in the Saline Habitat Complex, Air Quality Management Canals and facilities, and Marine Sea outlets; continued dredging of Saline Habitat Complex holes; continued vegetation and vector control; repairing and replacing of conveyance pumps and Air Quality Management pumps, filters, and treatment facilities; and replacement of chemicals used in Air Quality Management facilities. It is anticipated that the Air Quality Management drip irrigation system will require daily maintenance to reduce fouling and plugging. Security patrols also would occur on a daily basis.

Period IV: Operations and Maintenance - 2036 to 2078

Operations and maintenance activities would continue as described above throughout this period and beyond. It is anticipated that the inflow conditions assumed for the Preferred Alternative would continue after 2078. Although the IID Water Conservation and Transfer Program is only authorized until 2078 (assuming renewal in 2048), most of the inflow reductions projected for the Salton Sea are not related to the water transfer and would not change by 2078. If the water transfer is not renewed in 2078, the additional inflows may be used to expand the Saline Habitat Complex following additional evaluations or convert a portion of the Brine Sink to useable habitat.

Estimated Construction Cost

Based upon assumptions described in the PEIR, cost estimates for construction and operations and maintenance at build-out were developed for the Preferred Alternative, as shown in Table 2.

Table 2
Estimated Capital and Operations and Maintenance Costs For Preferred Alternative
(In Million Dollars, 2006 Dollars)

Items	Capital Cost	Annual Operations and Maintenance Cost at Build-out
Barriers	$3,991	$27
Saline Habitat Complex (including Early Start Habitat)	$758	$10
Water Conveyance	$168	$6
Air Quality Management	$891	$99
Subtotal	$5,808	$142
Additional Miscellaneous Items at 5% of Subtotal Above	$290	—
Total Construction Cost	$6,098	—
Contingencies at 30% of Total Construction Cost	$1,830	—
Subtotal	$7,928	—
Engineering, Administration, and Legal at 12% of Subtotal Above	$951	—
Total Capital Costs	**$8,879**	**$142**

Note: Costs do not include cost of Demonstration Project, permits, land or easement acquisition, or interest on borrowing funds.

GOVERNANCE PLAN

There are multiple federal, state, and local agencies that have responsibility for actions that will occur at the Salton Sea with or without the restoration program. Recently, several groups of agencies as well as individual interest groups have been involved in the development of plans that involve different levels of restoration at the Salton Sea.

The Preferred Alternative includes facilities that could be developed, owned, and operated by one entity or several entities with a steering group to integrate the facilities. However, many of the facilities are integrated, such as the need for unified conveyance facilities to provide water to Saline Habitat Complex, Marine Sea, and Air Quality Management areas.

The Preferred Alternative would require significant capital and operations and maintenance funds that may not be available from any one source. Therefore, many agencies may be involved in the shared decision-making and funding of the Preferred Alternative.

There are many different types of organizations that may be considered, including integration of several agencies into a steering committee through voluntary actions or legislative mandates. However, a legal entity, like a conservancy, may be required to acquire and allocate funds, hire staff, and receive permits and approvals. Committees of agencies and interest groups may be developed which can serve as an advisory group or be required by authorization of the entity to be a voting group.

The entity or steering group must be open to the public to allow opportunities for participation and information transfer as the Preferred Alternative is developed in an adaptive management manner. In addition, clear goals and objectives, schedule for activities, and specific budgets would be required to allow for a determination of accountability. The entity(ies) should be able to work together to avoid duplication and efficiently conduct the Preferred Alternative activities. One way to accomplish this is to align the activities with existing agency authorizations because the agency would be most familiar with the requirements of the activities and have available staff to address ordinary and extraordinary situations that will occur in adaptive management situations.

Types of entities that may be considered include conservancies created by the state Legislature or voter initiative that could be governed by both public agencies and private groups or individuals, joint agency agreements with specific division of authorities, joint powers authorities created by the state Legislature or voter initiative as a separate agency with members from other agencies, or specified partnerships between public agencies and private groups or non-profit foundations. Participation of the state or federal agencies in these types of entities as a lead agency or voting member that would have financial or operational responsibilities would require action by the appropriate legislatures.

CONCLUSION

This Preferred Alternative, as required by legislation, provides a vision for the restoration of the Salton Sea ecosystem. The 75-year planning horizon for the life of the project makes it unlikely that the Preferred Alternative will be constructed exactly as described here. Rather, the Preferred Alternative represents a starting point for a Salton Sea restoration plan that is adaptable, flexible, sustainable, and functions under a wide variety of conditions that may arise over the course of the next 75 years. While this Preferred Alternative does not necessarily provide all parties with their desired outcome, the Resources Agency Secretary believes this vision provides a sound starting point from which restoration of this important ecosystem can commence.

FUNDING PLAN

Under the Fish and Game Code, the restoration study prepared by the Secretary for Resources must include a proposed funding plan to implement the preferred alternative. The proposed funding plan must include a determination of the moneys that are, or may be, available.

This section summarizes major funding sources that could be utilized for construction and operations and maintenance of the Preferred Alternative. Possible funding includes the following sources identified in the legislation:

- Salton Sea Restoration Fund;
- State water and environmental bond monies;
- Federal authorizations and appropriations;
- Salton Sea Infrastructure Financing District;
- Local assessments; and
- User or other fees.

In addition, public-private partnerships may also be considered. These potential funding sources are described below.

The funding plan does not include a cost allocation because this would require a quantitative allocation of benefits. The programmatic analysis was general in nature. Therefore, a quantitative benefit analysis could not be done at this time.

SALTON SEA RESTORATION FUND

The Salton Sea Restoration Fund includes money from the following actions:

- Total of $30,000,000 paid by CVWD, IID, and SDCWA, as required by Fish and Game Code Section 2081.7;
- Not less than $20/acre-foot of water received by Metropolitan for all special surplus water under the reinstatement of access to water under the U.S. Department of the Interior Interim Surplus Guidelines for operations of the Lower Colorado River in accordance with Fish and Game Code Section 2081.7;
- Up to 10 percent of the monies received by IID for additional water transfers. The fee does not apply to transfers addressed in the QSA or water transfers pursuant to a Defensive Transfer Agreement as defined in the Agreement for Acquisition of Conserved Water between IID and Metropolitan, in accordance with Water Code Section 1013;
- Money from sale of water in accordance with Fish and Game Code Section 2081.7 (c)(1) and (c)(2) (known as (c)(1) and (c)(2) water); and
- Proposition 84 (Clean Water, Parks and Coastal Protection Bond of 2006 that was passed by California voters on November 7, 2006) authorized $5.4 billion in state general obligation bonds to fund a variety of water projects including $47 million for Salton Sea restoration.

Money deposited in the Salton Sea Restoration Fund will be administered by the Director of DFG and expended, upon appropriation by the Legislature, for the following purposes in accordance with Fish and Game Code Section 2932:

- Environmental and engineering studies related to the restoration of the Salton Sea and protection of fish and wildlife dependent upon the Salton Sea;

- Implementation of conservation measures necessary to protect the fish and wildlife species dependent upon the Salton Sea, including adaptive management measures, and limited to the Salton Sea and lower Colorado River ecosystems, including the Colorado River Delta;
- Implementation of the Preferred Alternative for Salton Sea restoration; and
- Administrative, technical, and public outreach costs related to the development and selection of the Preferred Alternative for Salton Sea restoration.

In addition, monies deposited in the restoration fund shall not be expended for mitigation except for mitigation undertaken by the State of California (Fish and Game Code Section 2932.5).

Fish and Game Code Section 2081.7(c)(2) allows the transfer of a portion of the water conserved by IID that is being conveyed into the Salton Sea until the year 2017 to mitigate adverse impacts caused by the transfer of water from IID to SDCWA. Fish and Game Code Section 2081.7(c)(1) allows for the transfer of a separate 800,000 acre-feet of conserved water from IID. Water under (c)(1) and (c)(2) would be transferred from IID to DWR for subsequent sale to Metropolitan at a price not less than $250/acre-foot in 2003 dollars and adjusted for inflation. IID would be reimbursed at $175/acre-foot in 2003 dollars and adjusted for inflation for the (c)(1) water, but there would be no reimbursement for the (c)(2) water. However, no (c)(2) water could be transferred unless the action would be consistent with the Preferred Alternative. DWR would be responsible for mitigating any environmental impacts related to the transfer of (c)(1) water and for environmental impacts due to changes in Salton Sea salinity related to the transfer of (c)(2) water. As described in the Draft PEIR, transfer of either the (c)(1) or (c)(2) water would increase salinity and the rate of playa exposure more rapidly than is currently projected for any of the alternatives, including the No Action Alternative. Mitigation would be needed to protect the Salton Sea habitat and to provide Air Quality Management for the exposed playa. It would be technically difficult to mitigate these impacts with decreased inflows due to the loss of the transferred water, and to construct mitigation measures that would be successful prior to construction of the components of the Preferred Alternative. Therefore, at this time, it has been determined that the transfer of (c)(1) and (c)(2) water would not be compatible with the Preferred Alternative and that these potential funds would not be available for the Salton Sea Restoration Fund.

STATE WATER AND ENVIRONMENTAL BOND FUNDS

Currently, funds are provided for the Salton Sea Restoration Program under Propositions 50 and 84. Proposition 50, known as the Water Security, Clean Drinking Water, Coastal and Beach Protection Act of 2002 was passed by California voters on November 5, 2002. Proposition 50 authorized $3.44 billion in state general obligation bonds to fund a variety of water projects including up to $50 million for Colorado River programs such as the Salton Sea Restoration Program. The funds for Salton Sea restoration are implemented through the Wildlife Conservation Board. Most of these funds have been allocated and should not be considered a significant future funding source. Proposition 84 funds have been described previously.

Future state funding for state lands or responsibilities could be provided as line item funding through state agencies. State funds also could be provided to local agencies as a grant or loan for all or a portion of the studies, design, or construction. State funding related to operations and maintenance would probably be limited to facilities located on state lands or lands and facilities that are the responsibility of the state government.

FEDERAL AUTHORIZATIONS AND APPROPRIATIONS

Current federal funding of water and environmental projects are significantly lower than two decades ago. However, there has been an increased interest in substantially increasing funding from the federal government, including the use of "line item" funding of specific projects within federal agency budgets.

Environmental restoration programs have been implemented through the U.S. Department of the Interior (Bureau of Reclamation, Fish and Wildlife Service, Bureau of Indian Affairs, and Geological Survey), U.S. Department of the Army, Corps of Engineers, and U.S. Environmental Protection Agency. Most recently, studies have been conducted by the Department of the Interior using line item funding for specific Salton Sea projects. The Department of the Interior is involved in the Salton Sea restoration because a large portion of the inundated lands in the sea bed are owned by the Department of the Interior. These lands include the Sonny Bono Salton Sea National Wildlife Refuge that is owned and operated by the U.S. Fish and Wildlife Service, and trust assets of the Torres Martinez Tribe Reservation and Land Allotment lands that are the responsibility of the Bureau of Indian Affairs. Future funds could be provided to these agencies through line item funding for the Salton Sea Ecosystem Restoration Program.

Currently, Congress is considering the Water Resources Development Act of 2007 that would authorize the Secretary of the Army to implement specified projects for navigation, environmental restoration, ecosystem restoration, hurricane and storm damage reduction, and flood damage reduction. Several members of Congress have proposed funding for Salton Sea studies similar to those described above for the Five Year Plan. The funds would require a state or local agency to provide a portion of the total cost.

Future federal funding for federal lands or responsibilities could be provided as line item funding through federal agencies. Federal funds also could be provided to local agencies as a grant or loan for all or a portion of the studies, design, or construction. Federal funding related to operations and maintenance would probably be limited to facilities located on federal lands or lands and facilities that are the responsibility of the federal government, such as tribal lands.

Another federal funding source may be the Border Environmental Cooperation Commission (BECC), an organization created by the governments of the United States and Mexico in accordance with the North American Free Trade Agreement. BECC is authorized to assist with conservation, protection, and enhancement of the environment through the development and certification of environmental infrastructure projects that incorporate innovative sustainability and public participation concepts in the United States within 62 miles of the United States-Mexico border. After BECC certifies a project for assistance, the North American Development Bank or other sources may be able to provide funding.

Federal construction and research grant programs frequently are authorized by Congress. These programs change frequently; however, recent examples include:

- Community Based Habitat Restoration Project Grant by National Oceanic Atmospheric Administration;
- Environmental Biology Research Grant by National Science Foundation;
- Ecological Biology Research Grant by National Science Foundation; and
- Ecosystem Science Research Grant by National Science Foundation;

SALTON SEA INFRASTRUCTURE FINANCING DISTRICT

The Salton Sea Authority was formed in 1993 as a public agency under a joint powers agreement between Imperial and Riverside counties, IID, and CVWD to facilitate preservation and restoration of the Salton Sea as an ecological and recreational resource and a repository for agricultural drain water. In 1999, special legislation was enacted to amend the California Infrastructure Financing District Act to authorize

the Salton Sea Authority to form an infrastructure-financing district to collect tax increment revenue to fund restoration projects. An Infrastructure Financing District (IFD) can be used to fund construction of regional public works facilities. To form an IFD, an entity must develop an infrastructure plan and distribute the plan to every landowner, consult with other local governments, and hold a public hearing. Non-school local agencies within the boundaries of the district would be requested to contribute its property tax increment revenue to the IFD. Following approval by the participating local agencies, the voters within the proposed boundaries would be required to approve the formation of the IFD (two-thirds approval), establish appropriations limits (majority approval), and issue bonds to fund the public works project (two-thirds approval).

The Salton Sea Authority has identified a preliminary geographical area around the Salton Sea to become the IFD. It is understood that this geographical area may be modified in the future. The Salton Sea Authority conducted a study in 2003 to consider the establishment of an Infrastructure Financing District. The study also considered establishment of a redevelopment project area. Subsequent studies completed by the Salton Sea Authority indicated that there may be a need for further legislation to allow the use of the Infrastructure Financing District to collect funds for operations and maintenance.

LOCAL ASSESSMENTS AND USER FEES

Local agencies frequently use general obligation and revenue bonds, reserve funds, and special assessments to fund capital projects. Bonds are used to spread out payments over a long-time period and are repaid through user fees or special assessments. Reserve funds are used to fund construction without incurring debt. User fees, special assessments, and special taxes frequently are used to fund operations and maintenance and repay debt service.

General Obligation Bonds

General Obligation (GO) bonds are issued by an agency to fund capital projects of the jurisdiction. GO bonds are secured by the general taxing power of the local jurisdiction. If planned revenues, which are usually characterized as property taxes but in some jurisdictions are income and sales taxes, fall short of the amount needed to meet bond payments, the jurisdiction may raise taxes to generate needed revenue. The major difficulty in issuing GO bonds is that they need to be approved by a two-thirds majority of the voters.

Revenue Bonds

Revenue bonds are secured solely by a pledge of revenues by the users of a facility as authorized by a local agency. There is no obligation on the part of the agency to levy assessments for the payment of the revenue bond service; however, frequently, agencies will reduce risk and improve the potential for selling the bonds by guaranteeing the bonds with a property tax assessment. Revenue bonds also require a reserve fund, normally created from the proceeds of the bond sale in excess of construction fund requirements. The reserve is maintained for the entire life of the bond to meet annual principal and interest requirements in case operating revenues are insufficient for bond service in any given year.

Reserve Funds

Under California law, reserve funds can be collected through user fees, special assessments, or incremental property tax. The purpose and schedule for use of the reserve fund must be declared to the public by the local agency. If excess funds are collected as compared to the stated plans, the funds must be returned to the payees. With respect to the Salton Sea, the implementing entity(ies) have not been identified and no reserve funds have been collected. This type of funding may be more appropriate for funding operations and maintenance activities.

Special Assessments

Special assessments also could be established in a similar manner as the Infrastructure Financing District. However, the assessment would be allocated based upon identification of a benefit to the users and an associated cost allocation within a specific geographic boundary. This type of funding may be appropriate for establishing reserve funds for operations and maintenance activities to be conducted by the implementing entity(ies).

One type of funding mechanism with special taxes is a Mello-Roos Community Facilities District to finance streets, wastewater systems, basic infrastructure, police and fire protection, ambulance services, schools, parks, libraries, museums, and other cultural facilities. Formation of a Community Facilities District requires two-thirds majority of all voters in the district. The special tax is based on property characteristics rather than property values.

Other types of assessment districts that can be used for public works projects in California include Landscape and Lighting Districts and Maintenance Districts. These entities are generally used to fund capital improvements. However, they may be used to fund at least a portion of operations and maintenance costs.

User Fees

User fees have been used to repay long-term borrowing used for construction, such as for bonds, and for operations and maintenance. The use of user fees would depend upon the implementing agency and the associated facilities owned and operated by the agency.

One type of user fee that could be assessed within a specific geographic area is a sales or use tax. Taxes could include hotel room tax (transient occupancy tax), car rental tax, fuel sales tax, goods and services tax, and real estate transfer tax.

Fees for use of facilities also could be assessed, including parking fees, boat launch fees, park use fees, or fishing or hunting stamps specifically for Salton Sea use. With the cooperation of the state, special automobile licenses could be sold for Salton Sea restoration with the proceeds being used for restoration activities.

Due to the significant construction and operations and maintenance costs for the Preferred Alternative, user fees may not be adequate to directly fund the construction or operations and maintenance. However, user fees may be used to defer some of the costs.

PUBLIC-PRIVATE PARTNERSHIPS

Partnerships between the public and private sectors in the public works industry range from providing basic services and supplies to the design, construction, operation, and ownership of facilities. The basic reasons that the public sector has historically partnered with the private sector is to realize cost savings, utilize expertise, achieve efficiencies in construction and/or operations and maintenance, and access private capital. Public-private partnership options can be implemented for all or a portion of a public works project and may extend only through construction or through an established time period of the operations. Funds that are provided by the private partner are subsequently repaid by the implementing agency or through the collection of revenues related to the use of the facilities, in a similar manner as repayment of bonds.

Another type of partnership could occur between a non-profit entity and a public agency. Funds could be raised through sales of merchandise, such as clothing with licensed logos for the Salton Sea restoration or stickers for automobile windows. Fund-raising through non-profit foundations could be donated for

construction or special maintenance activities. Donations of services or land also could reduce capital costs and operations and maintenance activities.

CASH FLOW PHASING

Estimated study and design, construction, and operations and maintenance costs have been developed for the Five Year Plan/ Pre-Construction Period, Major Construction Period, Construction Completion Period, and Operations and Maintenance Period, as presented in Table 3. All of these costs are presented in 2006 dollars and do not include the cost of inflation or interest for debt service of borrowing funds, such as the use of bonds by a local agency. These estimates are based upon the facilities presented in the Preferred Alternative and conservative inflow projections described in the PEIR.

Table 3
Cash Flow Estimate For Preferred Alternative
(In Million Dollars, 2006 Dollars)

	Five Year Plan/ Pre-Construction Period	Major Construction Period		Construction Completion Period		Operations and Maintenance Period
Items	2008-2013	2014-2020	2020-2025	2025-2030	2030-2035	2035-2078
Biological, water quality, sediment, inflow, and air quality investigations; and administration prior to 2014	$19.3					
Demonstration Project (biological, water quality, and sediment investigations; environmental documentation, design, permitting)	$6.6					
Early Start Habitat (biological, water quality, and sediment investigations; environmental documentation, design, permitting)	$77.2	—	—	—	—	—
Estimated land acquisition for Early Start Habitat (estimated)	$10.0					
Major Construction Period facilities design (water quality and sediment investigations, environmental documentation, and permitting)	$395.8					
Barriers	—	$5,720.1				
Saline Habitat Complex (not Early Start Habitat)	—	$63.3	$462.5	$382.1	$170.6	—
Water Conveyance[a]	—	$146.9	$10.2	$58.3	$32.2	—
Air Quality Management	—	—	$218.3	$192.6	$950.3	—
Total Costs[b]	**$508.9**	**$5,930.3**	**$691.0**	**$633.0**	**$1,153.1**	—
Annual Operations and Maintenance	**$3.9**	**$4.8**	**$52.2**	**$70.9**	**$141.9**	**$141.9**

Note: Costs do not include cost of permits, land or easement acquisition for Preferred Alternative, or the cost to borrow funds.

[a] Water Conveyance costs includes Sedimentation/Distribution Basins, Air Quality Management Canals, Saltwater Conveyance, Marine Sea Outlet, and roads associated with conveyance facilities.

[b] Capital costs include 5% for unlisted items, 30% for contingences, and 12% for engineering, administration, and legal.