CHAPTER 2

Edits to the Draft Programmatic Environmental Impact Report

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EDITS TO THE DRAFT PROGRAMMATIC ENVIRONMENTAL IMPACT REPORT

The following corrections and/or clarifications have been made to the Draft PEIR text. These include minor corrections to improve writing clarity, grammar, typographical errors, and consistency; corrections or clarifications in accordance with specific responses to comments, as described in Chapters 4 through 9; or staff-initiated text changes to incorporate information in the PEIR as discussed with the Salton Sea Advisory Committee and the public. The text revisions are organized by the chapter, section, and page number that appear in the Draft PEIR. Deletions are indicated by "cross-out" text (~~Deleted text~~) and new text is indicated by underlined text (underlined). Text, table, and figure revisions are itemized below.

Changes were made in the following chapters and appendices:

- Table of Contents;
- Executive Summary
- Chapters 1 through 7, 9 through 21, 23, 25, and 28; and
- Appendices D through H.

Table of Contents

Chapter 3; page v:

List of Figures; page xxix:

Executive Summary

The Salton Sea, second paragraph; page ES-4:

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~~California, Lake Cahuilla would gradually disappear through evaporation 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.

Alternative 4 - Concentric Lakes, first paragraph; page ES-17:

Alternative 4 was defined by the Imperial Group, which is a coalition of Imperial Valley farmers. This alternative is comprised of four separate lakes that provide habitat similar to Saline Habitat Complex without individual cells, with design salinity of 20,000 to

60,000 mg/L. Brine Sink~~,~~ and desert pupfish connectivity~~, and air quality management~~ components are included.

Alternative 6 - North Sea Combined, fourth paragraph; page ES-19:

The primary benefit of this alternative would be to provide habitat that would support marine sport fish as well as tilapia, invertebrates, and a wide variety of birds. Water along the southern shoreline would minimize changes to the microclimate in the agricultural lands. This alternative also would provide habitat and water ~~along the shoreline~~ along the western and northern shorelines. Alternative 6 could also provide opportunities for fishing, use of motorized and non-motorized boats, water skiing, bird watching, hiking, hunting, swimming, camping, and day use activities.

Figure ES-1, Estimated Construction Schedule for Alternatives 1 through 8; page ES-23:

Revised figure is on the following page.

Table ES-1, table head; pages ES-31 and ES-32:

Table ES-1
Comparison of Infrastructure Features in Alternatives

Component	Alternatives									
	No Action Alternative - CEQA Conditions	No Action Alternative - Variability Conditions	Alternative 1 Saline ~~Complex~~ Habitat I Complex	Alternative 2 Saline Habitat Complex II	Alternative 3 Concentric Rings	Alternative 4 Concentric Lakes	Alternative 5 North Sea	Alternative 6 North Sea Combined	Alternative 7 Combined North and South Lakes	Alternative 8 South Sea Combined

Chapter 1

The Future of the Salton Sea without Restoration, third paragraph; page 1-7:

Tilapia serve as the primary forage species for piscivorous (fish-eating) birds at the Salton Sea. Tilapia may be present until salinity exceeds 60,000 mg/L ~~(which could occur as early as 2021)~~. Tilapia could likely continue to persist in lower salinity areas where the rivers, creeks, and drains enter the smaller Salton Sea. How long fish would persist in these areas would depend on the size of the areas and whether wind events would cause enough mixing to increase salinity to levels above fish tolerance.

Chapter 2

Import Water from the Gulf of California, second paragraph; page 2-9:

As described above for the previous Whole Sea concept, the amount of imported water would need to be adequate to replace the evaporated water and the saltwater removed to maintain salinity. To provide a Whole Sea with a stable salinity and to maintain a stable water surface elevation of -230 feet msl, about 3,400,000 acre-feet/year would need to be imported and 2,730,000 acre-feet/year would need to be removed. The amount of imported water would be based upon the salinity of the Gulf of California and the Whole Sea when the conveyance facilities become operational. The facilities probably would not be designed, permitted, and constructed before 2020. At that time, the salinity of the Whole Sea would be 76,000 mg/L. The Gulf of California salinity ranges from 37,000 to 39,000 mg/L. Because the Gulf of California water salinity is relatively high, the projected salinity of the Whole Sea would be 44,000 mg/L in 2078. This salinity is greater than marine water salinity and would not support the defined habitat objectives described in previous sections of this chapter. These flows are almost 4~~0~~ times higher than flows described above for importation of Colorado River because more water with salinity of 37,000 to 39,000 mg/L would be required to dilute the Whole Sea salinity than Colorado River water with salinity of 500 to 1,500 mg/L

Locations of the Partial Sea, paragraph after the bulleted list; page 2-23:

The Barrier and Perimeter Dike locations in these configurations were developed to provide a high reliability that the water surface elevation and salinity objectives would be achieved ~~in at least 80 percent of the years in~~ during the 2018 to 2078 period with a conservative range of projected inflows under the No Action Alternative-Variability Conditions. The statistical analysis used to determine the design inflow criteria is described in Appendix H-2. Due to the high level of reliability, the Barrier locations would be located several miles from the mid-Sea location. Therefore, with respect to the North Sea and the South Sea configurations, water would not be adjacent to the majority of the communities along the western and eastern shorelines.

Application of Screening Criteria to Range of Configurations, final paragraph; page 2-26:

Construction and operations and maintenance of facilities located in Mexico would require extensive agreements between the United States and Mexico. Many of the previous studies have evaluated importing water from and exporting water to the Gulf of California in conjunction with establishment of an extension of the Gulf of California to either Laguna Salada or Mexicali, as described above. If such a connection was constructed with approvals from ~~governments~~ agencies in Mexico, it may be possible to extend the facilities to provide water into the United States. However, there would remain an issue of reliability if those facilities were not maintained for the purpose of providing water to the Whole Sea..

Chapter 3

Figure 3-1, Estimated Construction Schedule for Alternatives 1 through 8; page 3-7:

Revised figure is on the following pages.

Table 3-2, table head; pages 3-51 and 3-52:

Table 3-2
Comparison of Infrastructure Features in Alternatives

Component	Alternatives									
	No Action Alternative - CEQA Conditions	No Action Alternative - Variability Conditions	Alternative 1 Saline ~~Complex~~ Habitat I Complex	Alternative 2 Saline Habitat Complex II	Alternative 3 Concentric Rings	Alternative 4 Concentric Lakes	Alternative 5 North Sea	Alternative 6 North Sea Combined	Alternative 7 Combined North and South Lakes	Alternative 8 South Sea Combined

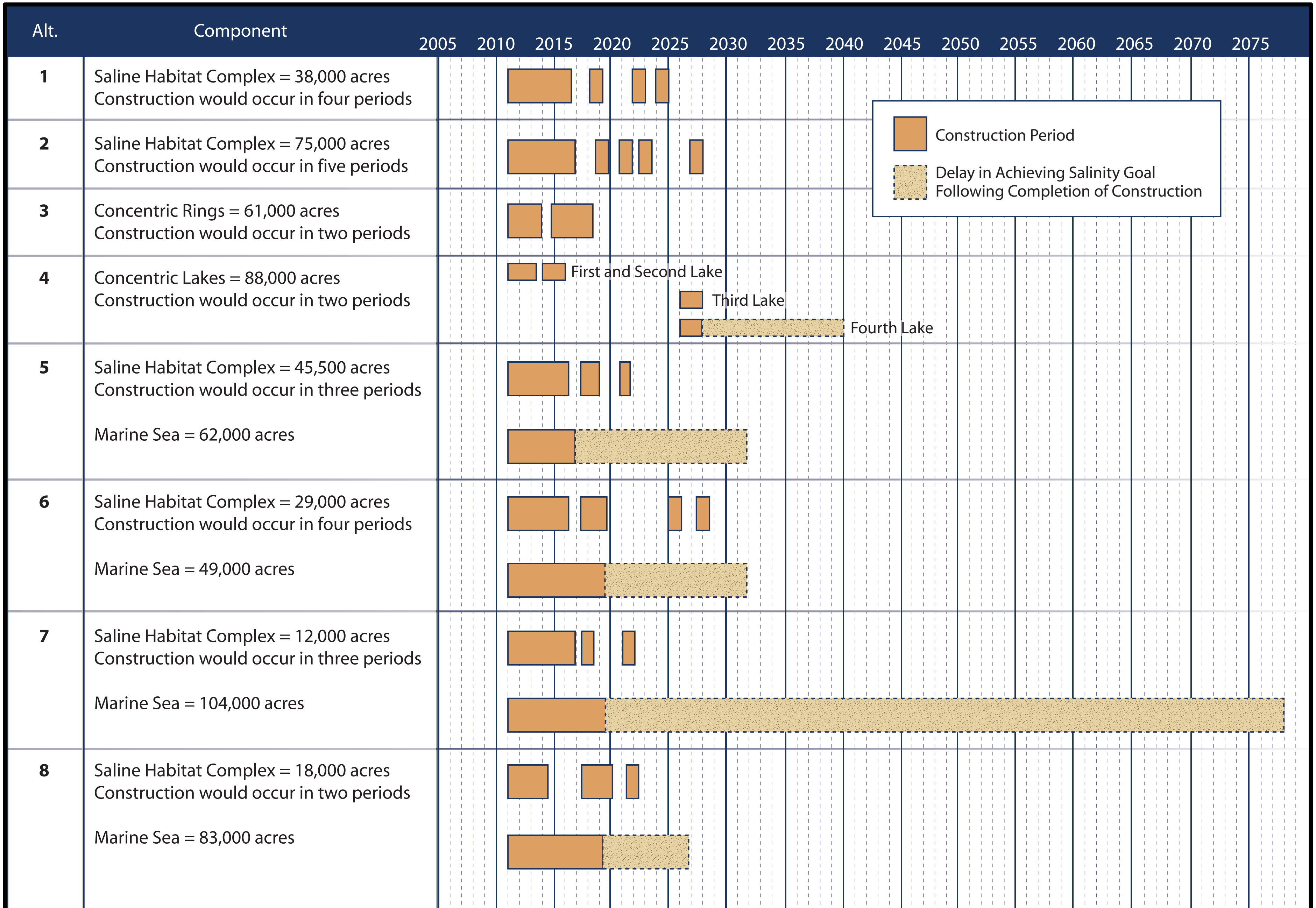


FIGURE ES-1
ESTIMATED CONSTRUCTION SCHEDULE FOR ALTERNATIVES 1 THROUGH 8

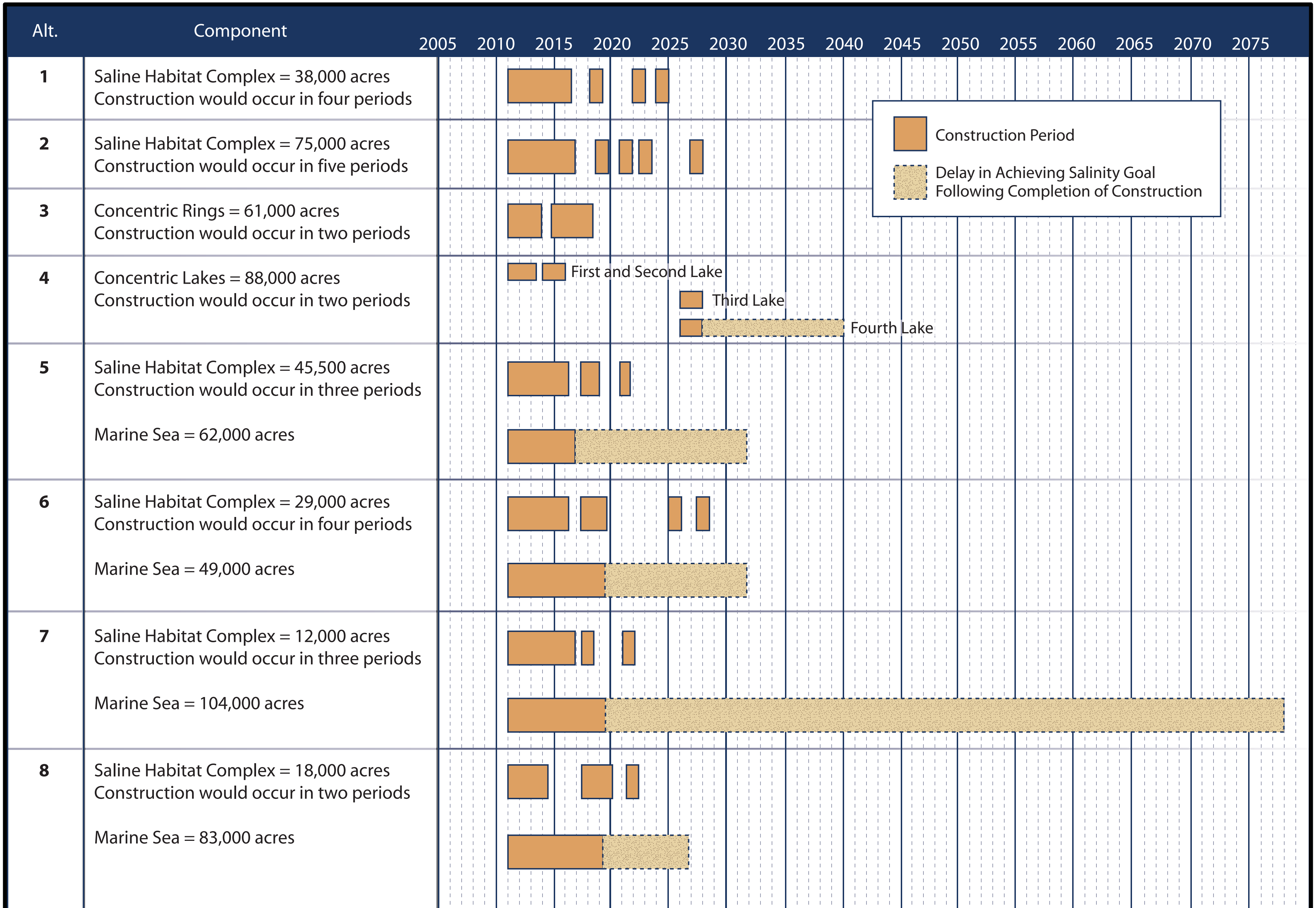


FIGURE 3-1
ESTIMATED CONSTRUCTION SCHEDULE FOR ALTERNATIVES 1 THROUGH 8

ES112005003SAC Figure_3-1.ai

Table 3-3, Note; page 3-54:

Add the following note:

> Due to rounding of elevation values to the nearest foot, different acreage values are shown for the same elevation values.

Air Quality Management, first paragraph; page 3-56:

> Implementation of the QSA and the related IID Water Conservation and Transfer Project would result in the additional exposure of playa. The area estimated in hydrologic modeling, as described in Appendix H2, is located at elevations between -235 and -248 feet msl. The specific area would be determined through observation as the area exposed prior to cessation of (c)(2) water in 2017. To mitigate the potential air quality impacts from this area, the IID Water Conservation and Transfer Project Mitigation Monitoring and Reporting Plan included the following four-step air quality mitigation and monitoring plan:

Evaluation of Transfers Allowed Under the Quantification Settlement Agreement, section heading; page 3-79:

~~EVALUATION OF~~ TRANSFERS ALLOWED UNDER THE QUANTIFICATION SETTLEMENT AGREEMENT

Table 3-13; page 3-80:

Table 3-13
Schedule for Delivery of Potential Transfer Water under the Quantification Settlement Agreement

Year	(c)(2) Water[a] (acre-feet)	(c)(1) Water[b] (acre-feet)	Total (acre-feet)
2003	5,000	0	5,000
2004	10,000	0	10,000
2005	15,000	0	15,000
2006	20,000	0	20,000
2007	25,000	0	25,000
2008	25,000	20,000	45,000
2009	30,000	40,000	70,000
2010	35,000	60,000	95,000
2011	40,000	80,000	120,000
2012	45,000	100,000	145,000
2013	70,000	100,000	170,000
2014	90,000	100,000	190,000
2015	110,000	100,000	210,000
2016	130,000	100,000	230,000
2017	150,000	100,000	250,000

~~Notes:~~
~~[a] Water to be provided to the Salton Sea through fallowing~~
~~[b] Water to be provided to the Salton Sea through efficiency methods~~

Transfers Allowed under the Quantification Settlement Agreement, second paragraph; page 3-81:

Under Alternatives 1 and 2, transfer of (c)(2) or (c)(1) water could be beneficial because areas for Saline Habitat Complex would be exposed earlier than without the water transfers. However, these benefits would only occur if the environmental documentation, design efforts, and easement or land acquisitions could be completed prior to 2016 2014 when construction of the Saline Habitat Complex would be initiated without the water transfer.

Table 3-15, table head; pages 3-86 through 3-98:

Table 3-15
Summary of Impacts and Benefits

Alternative	Basis of Comparison	Changes by Phasea[a]				Next Steps
		I	II	III	IV	

Chapter 4

Colorado River-Tijuana Aqueduct Enlargement, first paragraph; page 4-12:

The Colorado River-Tijuana Aqueduct (know as the ARCT for its Spanish acronym) was built in 1975 and conveys water from the Colorado River to the cities of Tecate and Tijuana to the west. In order to satisfy the growing demand in these water short regions, the capacity of the aqueduct is being increased from 141 to 187 cubic feet/second (cfs) (COSAE, 2005). Design was initiated in the summer of 2005. The source of water to be conveyed through the enlarged aqueduct has not yet been contracted, but the National Water Commission State of Baja California of Mexico has indicated that the supply will be developed through transfers from agricultural users in the Mexicali Valley, recovery of seepage losses, reclamation of wastewater, and/or through improved efficiency in the use of water (CEA, 2005).

Imperial Irrigation District Water Conservation and Transfer Project, first paragraph; page 4-13:

The IID Water Conservation and Transfer Project is up to a 75-year water conservation program by IID to conserve up to 300,000 acre-feet/year of Colorado River water and transfer the water to SDCWA, CVWD, and/or Metropolitan Water District of Southern California (Metropolitan). The terms of the project are set forth in the Agreement for Transfer of Conserved Water (commonly referred to as the IID/SDCWA Transfer Agreement) initially executed by IID and SDCWA in 1998, and in various subsequently amended agreements associated with the QSA (see discussion below).

Imperial Irrigation District Water Conservation and Transfer Project, fourth through sixth paragraphs on page 4-13 and first and second paragraphs on page 4-14:

In July 2002, Reclamation initiated an Endangered Species Act (ESA) compliance process by submitting a Biological Assessment to the U.S. Department of the Interior, Fish and Wildlife Service (Service) and requesting consultation pursuant to Section 7 of the federal ESA (Reclamation, 2002b). The Service issued a Biological Opinion in December 2002 (Service, 2002), which describes the voluntary conservation proposed by Reclamation, the conservation agreements to be entered into by Reclamation and the

California water agencies, and their effects on federally listed species and designated critical habitat. The Biological Opinion requires the establishment of at least two major roost sites along the California coast to offset the potential take of California brown pelicans at the Salton Sea as a result of a reduction in fish abundance.

In addition to the conservation measures proposed by Reclamation, the Biological Opinion describes a 15-Year Minimization Plan required by the SWRCB Board Order 2002-13 to minimize the impacts on salinity and inflows to the Salton Sea. The 15-Year Minimization Plan requires a reduction in the volume of conserved water transferred to SDCWA for the first 15 years of the project.

~~Impacts of the project are related to the reduction of inflow from agricultural runoff into the Salton Sea, which accelerates the rate that salinity of the Salton Sea would increase. The Salton Sea fishery has historically supported several piscivorous (fish-eating) birds, some of which are listed as threatened or endangered species under federal and State Endangered Species Acts. During the first 15 years of the project, (c)(2) water would be delivered to the Salton Sea to reduce the increase in salinity and the reduction in elevation, as described in Chapter 1 (IID and Reclamation, 2003c).~~

Approval of the IID Water Conservation and Transfer Project by the State Water Resources Control Board (SWRCB) resulted in Revised ~~Board~~ Order WRO 2002-0013, issued on December 20, 2002, which requires IID to implement all of the measures in the EIR/EIS and the Habitat Conservation Plan (HCP) (SWRCB, 2002). In addition, IID must implement all of the measures in the California Endangered Species Act Permit (2081.1 permit) for the project. Key components of the project include:

- Measures to address increasing salinity in the Salton Sea which include 15 years of mitigation water to the Salton Sea as part of the Salton Sea Habitat Conservation Strategy, which is generally referred to as (c)(2) water in this PEIR;
- Measures for conserving selected species including desert pupfish and burrowing owl;
- Measures for conserving selected species associated with tamarisk scrub, IID drains, and desert areas along IID canals; ~~and~~
- Development and implementation of an Air Quality Mitigation and Monitoring Plan, including providing for dust control on areas of the Sea Bed that are exposed due to this project ~~and located below -235 feet msl.~~; and
- A subsequent Natural Community Conservation Plan is to be completed by IID by 2006.

~~In July 2002, Reclamation initiated an Endangered Species Act (ESA) compliance process by submitting a Biological Assessment to the U.S. Department of the Interior, Fish and Wildlife Service (Service) and requesting consultation pursuant to Section 7 of the federal ESA (Reclamation, 2002b). The Service issued a Biological Opinion in December 2002 (Service, 2002), which describes the voluntary conservation proposed by Reclamation, the conservation agreements to be entered into by Reclamation and the California water agencies, and their effects on federally listed species and designated critical habitat. The Biological Opinion requires the establishment of at least two major roost sites along the California coast to offset the potential take of California brown pelicans at the Salton Sea as a result of a reduction in fish abundance.~~

~~In addition to the conservation measures proposed by Reclamation, the Biological Opinion describes a 15-Year Minimization Plan required by the SWRCB Board Order~~

~~2002-13 to minimize the impacts on salinity and inflows to the Salton Sea. The 15-Year Minimization Plan requires a reduction in the volume of conserved water transferred to SDCWA for the first 15 years of the project. A subsequent Natural Community Conservation Plan is to be completed by IID by 2006.~~

IID prepared the *Amended and REstated Addendum to the EIR/EIS for the IID Water Conservation and Transfer Project* in September 2003 to provide an environmental assessment of changes made to the Transfer Project and its mitigation measures in September 2003 (IID 2003c). The changes assessed in the Addendum included revisions to the QSA terms and water delivery schedule, refinements to the Salton Sea related measures in the HCP, and changes to reflect legislation adopted in 2002 and 2003. The addendum modified and supplemented the IID Water Conservation and Transfer Project Final EIR/EIS and was approved by IID in October 2003.

Impacts of the project are related to the reduction of inflow from agricultural runoff into the Salton Sea, which accelerates the rate that salinity of the Salton Sea would increase. The Salton Sea fishery has historically supported several piscivorous (fish-eating) birds, some of which are listed as threatened or endangered species under federal and State Endangered Species Acts. During the first 15 years of the project, (c)(2) water would be delivered to the Salton Sea to reduce the increase in salinity and the reduction in elevation, as described in Chapter 1 (IID and Reclamation, 2003c).

Relationship to the Salton Sea Ecosystem Restoration, first paragraph; page 4-15:

The Imperial County General Plan directs the location and ~~to some extent, the~~ amount of land use changes in the county. These land use changes may affect the Salton Sea and are considered in the No Action Alternative-CEQA Conditions and No Action Alternative-Variability Conditions.

Quantification Settlement Agreement, third paragraph; pages 4-15 and 4-16:

In a major step toward achieving this goal, the Colorado River Board of California developed the California's draft Colorado River Water Use Plan (CRBC, 2000). Incorporating many of the concepts of the Water Use Plan, three of the major Colorado River water users in California (CVWD, IID, and Metropolitan) negotiated the QSA, which established a framework of water conservation actions and transfers between the participating agencies, CVWD, IID, and Metropolitan, for a period of up to 75 years. The QSA provides an important mechanism for California to reduce diversions of Colorado River water to the 4.4 million acre-foot normal year apportionment.

Salton Sea Unit 6, CE Obsidian Energy LLC, first paragraph; page 4-17:

Salton Sea Unit 6 is planned to be a ~~185~~ 215 megawatt geothermal power plant consisting of a geothermal Resource Production Facility, a merchant class geothermal-powered Power Generation Facility, and associated facilities. Unit 6 will be located adjacent to the southern shore of the Salton Sea in Imperial County. The Salton Sea Unit 6 Project is owned by CE Obsidian Energy LLC and will be operated by an affiliate of CE Obsidian Energy. The transmission lines are owned and operated by IID. Unit 6 will supply capacity and energy to California's electricity market. IID has contracted for 85 percent of the plants output for a period of 20 years following the completion of the plant. The remaining energy will either be sold to the California Independent System Operator or contracted to third parties via IID. The California Energy Commission approved Unit 6 in 2003 and approved modifications to the plant and an increase in capacity in 2005. The power plant project is in the Salton Sea Known Geothermal Resource Area, which extends from about Bombay Beach to Calipatria. Additional information on the Salton Sea Known Geothermal Resource Area is provided in Chapter 21.

Total Maximum Daily Load Implementation, final paragraph; page 4-18:

Currently, TMDLs have been adopted by the CRBRWQCB and approved by the USEPA for siltation/sedimentation in the New and Alamo rivers and Imperial Valley drains, ~~pending approval by the U.S. Environmental Protection Agency (USEPA),~~ and for pathogens in the New River, as described in Chapter 6. A Trash TMDL for the New River was adopted by the CRBRWQCB and is in the process of being approved by the SWRCB and the USEPA. The CRBRWQCB is considering TMDLs for nutrients, ~~and~~ selenium, salinity, dissolved oxygen, bacteria, and pesticides as related to the Salton Sea and the major tributaries.

Chapter 5

Water Rights, final paragraph; page 5-2:

Metropolitan Water District of Southern California (Metropolitan), as stated in their applications to the SWRCB, has applied to divert ~~uncontrolled tailwater or~~ agricultural ~~return~~ drain flows on the New and Alamo rivers. The initial owner of the water is IID. The application for water on the New River is to divert 700 cfs with a limit of 433,400 acre-feet/year. The application for water on the Alamo River and unnamed tributaries is to divert 800 cfs with a limit of 475,000 acre-feet/year. The SWRCB requires an applicant to complete an analysis of availability of unappropriated water that addresses methods to prevent harm to other legal users of the water or to the environment, including considerations for water released by upstream water users to maintain habitat along the water course, and compliance with the Water Quality Control Plan prepared by the Colorado River Basin Regional Water Quality Control Board (CRBRWQCB). ~~Water~~ A water right~~s~~ issued by the SWRCB for ~~return flows or treated wastewater~~agricultural drain flows generally includes a statement that does not guarantee that the flows would be constant or necessarily continue into the future. Following the completion of an application, the SWRCB would initiate preparation of environmental documentation and issue a public notice for a 60-day review period during which protests can be filed. Following responses to protests, if any, supplemental information may be required of the applicant prior to completion and release of the draft environmental documentation for public review. The SWRCB would hold a hearing to consider comments and protests prior to completion of final documentation. Following resolution of comments and protests, if any, the final environmental documentation would be completed and a water rights permit would be issued. ~~The~~ Metropolitan's applications ~~is~~ are currently being reviewed by the SWRCB.

Federal Regulations, first paragraph; page 5-5:

The Federal Water Pollution Control Act Amendments of 1972, also known as the Clean Water Act, established the institutional structure for the U.S. Environmental Protection Agency (USEPA) to regulate discharges of pollutants into the waters of the United States, establish water quality standards, conduct planning studies, and provide funding for specific grant projects. The Clean Water Act has been amended by Congress several times since 1972. USEPA has provided most states with the authority to administer many of the provisions of the Clean Water Act. In California, the SWRCB has been designated by USEPA to develop and enforce water quality objectives and implementation plans.

The SWRCB has delegated the specific responsibilities for the development and enforcement actions to the CRBRWQCB.

Inflows from Mexico, first and second paragraphs; page 5-9:

Water used in the Mexicali Valley comes from two primary sources, the Colorado River and groundwater. Under Article 10(a) of the *Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande—Treaty between the United States of America and Mexico* (Treaty) dated February 3, 1944, Mexico is entitled to 1,500,000 acre-feet/year of Colorado River water. Under Article 10(b) of the Treaty, Mexico may schedule up to an additional 200,000 acre-feet when "there exists a surplus of waters of the Colorado River in excess of the amount necessary to ~~satisfy~~ supply uses in the United States." Mexico diverts the vast majority of its Colorado River water at Morelos Dam, located on the Colorado River near the northern United States-Mexico border crossing of the Colorado River. Historically, ~~the United States has delivered flows in excess of the Treaty obligations to Mexico due to water not diverted in the United States and flood waters~~ upstream of Morelos Dam, the main river channel carries water that is delivered to Mexico pursuant to the 1944 Water Treaty, along with occasional high flows.

Agricultural return flows and municipal and industrial wastewater effluent ~~flow~~ from Mexico that flow to the New and Alamo rivers and become part of the Salton Sea inflows.

Inflows from Mexico, subsection *Alamo River*, first paragraph; page 5-10:

The Alamo River originates in the Mexicali Valley and flows north into the United States. Flows at the United States-Mexico border are primarily the result of drainage from irrigated agricultural in the Mexicali Valley. Pursuant to an agreement between the United States and Mexico, a weir was constructed in 1997 at the Alamo River in Mexico, about 100 feet upstream of the United States-Mexico border with the intent of preventing dry weather flows from Mexico from flowing into the Alamo River into the United States. Although the weir is currently in place, lack of operation and maintenance of drainage channels upstream has caused the water to continue to flow into the United States (CRBRWQCB, 2001). Alamo River flows at the United States-Mexico border have been estimated by IID (2003a), but details regarding the methods and sources are not included in those documents. The United States Section of the International Boundary and Water Commission (USIBWC) reports that flows from 1949 to 1992 were estimated based on historical daily measurements of gage height at the Cipolleti weir and rating curves developed from monthly current meter measurements. From 1992 to the present, continuous gage height recordings and daily discharge measurements are available from IID (USIBWC, 2002). The values provided by IID have been adopted for use in this analysis. Average flow in the Alamo River at the United States-Mexico border is 1,646 acre-feet/year with a minimum and maximum of 324 and 2,274 acre-feet/year, respectively.

Inflows from the Imperial Valley, second paragraph; page 5-10:

The IID water supply is diverted from the Colorado River near Imperial Dam and conveyed in the 82-mile long All-American Canal. Several canals convey water from the All-American Canal including the Coachella Canal that diverts water to CVWD. Between 1986 and 1999, 2,400,000 to 3,100,000 acre-feet/year was diverted for use by IID through the All-American Canal.

Imperial Valley Drains, sixth paragraph; page 5-13:

~~Except in fields with tailwater recovery systems, tailwater is not available for~~Tailwater may be used for on-farm use ~~and is~~ or discharged into either the drainage system or rivers within the IID water service area.

Inflows and Climate Assumptions for No Action Alternative-CEQA Conditions, first paragraph; page 5-22:

The projected inflows were developed based upon historical inflows to the Salton Sea and adjusted for actions included in the No Action Alternative-CEQA Conditions. The actions considered in the No Action Alternative-CEQA Conditions are described in Chapter 3. The actions ~~that could affect~~ considered in the inflows analysis ~~to~~ for the Salton Sea include:

Inflows and Climate Assumptions for No Action Alternative-Variability Conditions, fourth paragraph; page 5-26:

Inflows from Coachella Valley beyond those represented in the No Action Alternative-CEQA Conditions were modified for the No Action Alternative-Variability Conditions based upon potential delayed implementation or modifications of the Coachella Valley Water Management Plan and reduced agricultural return flows due to reduced Colorado River salinity. Inflows from the ~~Imperial~~ Coachella Valley under the No Action Alternative-Variability Conditions could be 94,000 acre-feet/year and 98,000 acre-feet/year for the 2003 to 2078 and 2018 to 2078 periods, respectively, based on the mean of all traces generated in the Monte Carlo analysis.

Chapter 6

Federal Regulations, fourth paragraph; page 6-1:

Section 404 of the Clean Water Act requires that an entity obtain permits before discharging dredge or fill material into navigable waters, their tributaries, and associated wetlands. Activities regulated by 404 permits include, but are not limited to, dredging, bridge construction, flood control actions, and some fishing operations. The U.S. Army Corps of Engineers administers the Section 404 permit program in the study area.

Federal Regulations, sixth paragraph and Table 6-1; page 6-2:

The California Environmental Protection Agency, SWRCB, and CRBRWQCB have identified water bodies within the Salton Sea watershed that do not comply with applicable water quality standards. The Salton Sea and all of the principal inflow sources are listed as impaired water bodies. Sedimentation/Siltation TMDLs for the New and Alamo rivers and the Imperial Valley drains and Pathogen TMDL for the New River were adopted by the CRBRWQCB and approved by the SWRCB and USEPA. ~~The Sedimentation/Siltation~~ A Trash TMDL for ~~Imperial Valley drains~~ the New River has been adopted by the CRBRWQCB and is being reviewed by the SWRCB ~~and USEPA~~. Other TMDLs are in the development and review processes, as shown in Table 6-1.

Table 6-1
Impaired Water Bodies Within Salton Sea Watershed

Water Body	Pollutant of Concern	Type of Concern			TMDL Completion Date
		Irrigation Flows	Imported Salts	Other	
Coachella Valley Stormwater Channel (Whitewater River)	Bacteria	Source Unknown			Draft Published in April 2006
Alamo River	Pesticides	X			201~~1~~9
	Selenium	X	X		201~~0~~9
	Sedimentation/Siltation	X			~~Adopted~~ Approved by USEPA on June 28, 2002
Imperial Valley Drains	Pesticides	X			201~~1~~9
	Selenium	X	X		20~~08~~19
	Sedimentation/Siltation	X			~~Draft Published~~ Approved by USEPA on September 30, 2005
New River	Nutrients	X		X	20~~1~~09
	Pesticides	X		X	201~~1~~9
	Sedimentation/Siltation	X			~~Adopted~~ Approved by USEPA on August 28, 2002
	Dissolved Oxygen			X	200~~6~~8
	Trash			X	~~Draft Published~~ Adopted by Regional Board on June 21, 2006 and is under SWRCB consideration
	Chloroform			X	20~~11~~08
	Toluene			X	20~~11~~08
	p-Cymene			X	200~~9~~8
	1,2,4-trimethylbenzene			X	200~~9~~8
	m,p,-Xylene			X	2008
	o-Xylenes			X	2008
	p-DCB			X	20~~10~~08
	Pathogens			X	~~Adopted~~ Approved by USEPA on August 4, 2002
Salton Sea	Nutrients	X		X	~~Draft Published~~ 2009
	Salt	X	X		~~Not Identified~~ 2019
	Selenium	X	X		201~~0~~9

CRBRWQCB, 2006

Salinity, first paragraph; page 6-8:

Average salinity in the Salton Sea is currently estimated at about 48,000 mg/L, but varies depending on location. Lower salinity frequently occurs near the tributaries and near the shoreline of the Salton Sea due to dilution by inflows. Higher salinity generally occurs in the center of the Salton Sea. The primary source of salts in the Salton Sea watershed is from imported Colorado River water. These salts are applied to fields with irrigation water and are carried off by tailwater or tilewater into surface drains. The annual salt load delivered to the Salton Sea is about 3,500,000 to 4,000,000 tons. Beginning in the mid-1980s to early 1990s, precipitation of significant quantities of salts (primarily gypsum and calcite) began and has been estimated to be about 1,500,000 tons/year. This salt precipitation value is at the high end of the range of previous independent estimates (Amrhein et. al. 2001) and is similar to that of Tostrud (1997). The primary constituents associated with salinity in the Salton Sea are sodium, calcium, chloride, and sulfate.

Temperature, new first paragraph; page 6-17:

Water temperature has extremely important biological, chemical, and physical effects in aquatic systems. Water temperature determines the types of species that can occur in a body of water, and affects the level of biological activity, with greater biological activity and more rapid growth at increasing water temperature, within the tolerance limits of an organism. Aquatic organisms have a preferred water temperature range in which they can survive and reproduce optimally. Water temperature also influences water chemistry, with rates of chemical reactions generally increasing with increasing temperature. Temperature regulates the solubility of gases and minerals, with the solubility of important gases, such as oxygen, decreasing and the solubility of most minerals increasing with increasing temperature. Temperature also affects the physical characteristics of lakes, with the most important effect related to thermal stratification. Gradual heating during the spring and summer results in warm surface water overlying colder water at the bottom of the lake. Temperature stratification limits exchange of oxygen between the surface and bottom layers, which, in highly productive systems, generally results in development of hydrogen sulfide and ammonia in the lower water layer from the decomposition of organic materials that settle from the upper layer. Cooler air temperatures during the fall result in the gradual breakdown of thermal stratification, with eventual mixing of the water column.

Application of Significance Criteria, all three ticks under the first bulleted item; pages 6-26 and 6-27:

– **Salinity:** The CRBRWQCB Water Quality Control Plan identifies a salinity objective of 35,000 mg/L for the Salton Sea to support fish and wildlife, unless it can be demonstrated that a different level of salinity is optimal for the sustenance of the Sea's wild and aquatic life. This document discusses several considerations to be taken in order to implement this salinity water quality objective and states that it will be difficult to meet this objective in the Salton Sea. The Imperial County General Plan includes a provision to maintain the salinity in the Salton Sea at 40,000 mg/L or less to support habitat and recreation uses, as described in Chapter 11.

– ~~Selenium:~~ **Selenium:** The CRBRWQCB Water Quality Control Plan identifies a selenium objective of 5 µg/L (0.005 mg/L) based on a four-day average and 20 µg/L (0.~~0~~02 mg/L) on a one-hour average as measured in the Salton Sea. As previously described, the existing waterborne concentrations in the Salton Sea are less than 2 µg/L (0.002 mg/L). Because there are no specific actions that would decrease selenium concentrations in the inflows during the study period, it is anticipated that the inflow selenium loads would not change unless tile drainage flows, and related selenium loads, decline due to water conservation. Determination of the risk of selenium toxicity in the alternatives was evaluated considering selenium concentrations and exposure pathways related to sediment, surface water inflows, biota, and soil in each of the major components, as described in Appendix F. This analysis recognizes that selenium concentrations in water could be greater than 5 µg/L (0.005 mg/L) in some components especially in areas with soils characterized by high selenium concentrations. The impact assessment associated with meeting a selenium objective is presented in Chapters 8 and 14 and not in this chapter.

– ~~Phosphorus:~~ **Phosphorus:** The CRBRWQCB Draft Nutrient TMDL for the Salton Sea identifies an average annual phosphorus target of 35 µg/L (0.035 mg/L) as measured in the Salton Sea. As previously described, the existing average waterborne total phosphorus concentration in the Salton Sea is about 69 µg/L (0.069 mg/L). The following analysis compares phosphorus in all of the alternatives to the Draft TMDL target for the Marine Sea, however, this target may not be applicable to the shallow water bodies.

Alternative 1 - Saline Habitat Complex I, third paragraph; page 6-33:

Although, ~~C~~construction of the Saline Habitat Complex cells would occur in areas after the water recedes, construction activities near the Brine Sink may result in a ~~temporarily~~ temporary increase in suspended sediment and nutrient cycling in waters near active construction. Resuspended bottom sediments would release previously deposited nutrients, particularly phosphorus, and temporarily stimulate local algae production and reduce water quality conditions. This would be a short term effect during construction and, possibly could be avoided, if construction is delayed until the water has receded sufficiently to allow construction vehicle access without affecting the Brine Sink. However, construction during Phase I would affect tilapia and pupfish.

Chapter 7

First paragraph; page 7-1:

This chapter describes the groundwater resources in the study area and potential changes that could occur due to implementation of the alternatives. Some of the recharge and groundwater outflow and inflow values to the Salton Sea presented in Chapter 7 are discussed in more detail in Appendix H-2. Groundwater could be affected due to changes in surface water elevations in the Salton Sea or excavation activities during construction.

Regulatory Requirements, first paragraph; page 7-1:

The State regulates groundwater quality~~,~~; however, groundwater management is primarily carried out by local agencies. The Colorado River Basin Regional Water Quality Control Board (CRBRWQCB) Water Quality Control Plan defines municipal, industrial, and agricultural beneficial uses for groundwater resources in the Imperial and Coachella valleys (CRBRWQCB, 2002a). The Water Quality Control Plan includes the following goals and management principals for protection of groundwater:

Chocolate Valley Basin, second paragraph; page 7-6:

Major water-bearing deposits include unconsolidated younger Quaternary alluvial deposits and the underlying unconsolidated to semi-consolidated older Tertiary to Quaternary alluvial deposits. Depth of the fill is at least 400 feet. The San Andreas Fault crosses the northern and western portions of the basin and may impede groundwater movement. Groundwater generally moves southwest beneath Salton Creek and discharges to the Salton Sea (DWR, 2003). Recharge to the basin is primarily from infiltration and runoff from adjacent mountains. Groundwater level monitoring has been inconsistent and has generally only occurred at the far western portion of the basin. Groundwater quality is characterized by high concentrations of fluoride, boron, and total dissolved solids. Due to limited availability and high salinity, groundwater is not used for domestic, municipal, or agricultural purposes in this basin.

Chapter 9

Seiches, first paragraph; page 9-17:

Seiches are large waves in lakes produced by either wind or seismic activity. Although there are no documented occurrences of seiches at the Salton Sea, due to the shallowness of the Salton Sea and the seismic activity in the area, there is the potential for a seiche to occur (Salton Sea AuthorityURS, 2004).

Significance Criteria, first paragraph; page 9-21:

The following significance criteria were based on Appendix G of the CEQA Guidelines and air quality regulatory agency guidance and used to determine if changes as compared to Existing Conditions and the No Action Alternative would:

Chapter 10

Existing Conditions, first paragraph; page 10-7:

The Existing Conditions described in the PEIR are based on data available through 2005, because complete data for 2006 are not yet available. The pollutants of greatest concern in the Salton Sea Air Basin are ozone and the ozone precursors, nitrogen oxides (NO_x) and volatile organic compounds (VOCs), primarily from vehicle and equipment exhaust, and particulate matter (PM_{10} and $PM_{2.5}$) from soil disturbance and wind erosion (fugitive dust). Agricultural operations and transport of pollutants from Mexico also contribute to air quality issues in the area.

Table 10-2; page 10-8:

Table 10-2
Meteorological Data for the Imperial/Coachella Valley Region (2005)

Station		Temperature (°F)			Relative Humidity (%)			Rain (inches)	Wind (mph)	
CIMIS Number	Name	Max	Min	Avg	Max	Min	Avg		Avg	Max
41	Calipatria/Mulberry	117.1	25.4	70.8	100	0	53.0	13.89	4.55	28.1
68	Seeley	116.9	28.5	73.4	100	6	50.8	4.15	5.08	25.3
87	Meloland	116.2	31.6	72.6	97	9	49.3	3.02	5.19	25.1
118	Cathedral City	112.3	37.4	71.7	100	8	47.5	0.0	6.07	24.9
127	Salton Sea West	112.7	37.4	75.5	100	0	44.3	NA	5.63	26
128	Salton Sea East	116.5	30.5	73.3	100	9	62.1	NA	5.78	32.9
135	Blythe NE	115.8	33.3	72.9	99	6	46.8	0	3.20	14.1
136	Oasis	116.7	38.1	74.3	100	7	49.8	5.64	4.50	24
141	Mecca	112.5	30.2	71.9	100	0	54.3	0	4.50	16.1
151	Ripley	115.8	33.3	72.9	99	6	46.79	0	3.20	14.1
162	Indio	120.3	35.8	74.6	95	4	36.7	NA	6.88	22
175	Palo Verde II	112.8	20.5	69.1	100	10	56.8	3.06	4.34	20.3
176	La Quinta	115.8	33.3	72.9	99	6	46.8	0	3.20	14.1
186	UC San Luise	115.8	33.3	72.9	99	6	46.8	0	3.20	14.1

Source: California Irrigation Management Information System (CIMIS) meteorological stations overseen in the Imperial/Coachella Valley region by DWR, http://wwwcimis.water.ca.gov/cimis/.

Note: Period of Record – January 2005 through December 2005.

Avg = average
Max = maximum
Min = minimum
NA = not available

Table 10-3; page 10-17:

Table 10-3
Ozone Data Summary for Monitoring Stations in Imperial and Riverside Counties, 1998-2005

Year	Number of Days Standard Exceeded			Ozone Concentrations in ppm				
				1-hour			8-hour	
	State 1-hour	Federal 1-hour	Federal 8-hour	Maximum	3-Year 4th High	EPDC	Maximum	3-Year Average 4th High
CAAQS	—	—	—	—	—	—	0.090	—
NAAQS	—	—	—	—	0.120	—	—	0.080
Imperial County								
2005	11	0	10	0.122	0.121	0.~~097~~115	0.0~~84~~97	0.~~115~~084
2004	6	0	0	0.109	0.118	0.~~083~~119	0.08~~5~~3	0.~~119~~085
2003	19	2	8	0.144	0.127	0.~~092~~125	0.0~~87~~92	0.~~125~~087
2002	19	0	9	0.122	0.116	0.~~098~~121	0.0~~86~~98	0.~~121~~086
2001	13	2	2	0.135	0.142	0.~~086~~123	~~NA~~0.086	~~0.123~~NA
2000	NA	NA	NA	NA	NA	NA	NA	NA
1999	24	10	7	0.145	0.142	0.1~~07~~29	0.~~092~~107	0.~~129~~092
1998	12	1	8	0.13	0.13	0.1~~00~~35	0.~~092~~100	0.~~135~~092
Riverside County								
2005	41	4	35	0.139	0.13	0.11~~6~~4	0.1~~04~~16	0.1~~3~~04
2004	36	1	32	0.125	0.131	0.1~~06~~31	0.10~~4~~6	0.1~~31~~04
2003	54	4	43	0.141	0.133	0.1~~1~~35	0.1~~08~~1	0.1~~35~~08
2002	49	2	46	0.136	0.132	0.1~~2~~134	0.1~~05~~24	0.1~~34~~05
2001	53	6	39	0.137	0.128	0.1~~1~~30	0.113	0.1~~3~~00
2000	40	0	28	0.124	0.133	0.1~~04~~38	0.~~099~~104	0.~~138~~099
1999	27	1	20	0.126	0.143	0.~~10743~~	0.107	0.1~~43~~00
1998	40	8	30	0.173	0.155	0.1~~36~~53	0.1~~07~~36	0.1~~53~~07

Source: ARB, 2006b.
Note:
Data for Imperial County is the maximum value from the El Centro, Niland, and Westmorland monitoring stations.
Data for Riverside County is the maximum value for the Indio and Palm Springs monitoring stations.
EPDC = expected peak day concentration
NA = data not available

Table 10-4; page 10-18:

Table 10-4
PM_{10} Data Summary for Monitoring Stations in Imperial and Riverside Counties, 1998-2005

Year	Estimated Days Above 24-hour Standard		PM_{10} Concentration in µg/m^3						
	Federal > 150 µg/m^3	State > 50 µg/m^3	Annual Average		3-Year Average		High 24-Hr Average		EPDC
			Nat'l	State	Nat'l	State	Nat'l	State	
Imperial County									
2005	NA	NA	NA	NA	NA	74	77	75	NA
2004	NA	NA	NA	NA	56	74	201	195	NA
2003	19.1	188.4	74.7	73.8	63	74	840	848	524.5
2002	18.3	124.8	57.3	57.5	56	57	297	301	393.3
2001	6.6	81.3	57.5	42.7	52	54	647	634	291.2
2000	13.2	129.8	54.1	53.6	44	54	250	249	174.1
1999	0	122.5	44.0	44.3	44	44	130	126	NA
1998	0	60.3	38.~~7~~1	38.7	45	39	90	87	NA
Riverside County (Salton Sea Air Basin portion)									
2005	NA	NA	NA	NA	NA	NA	106	NA	206.1
2004	2.9	74.1	40.2	40.6	50	56	161	161	236
2003	9.1	158.2	56.7	56.1	57	56	309	302	315.4
2002	9	174.1	53.8	53.9	56	54	276	276	308.5
2001	17.6	170.6	59.5	59	56	59	604	604	308.4
2000	8.6	183.2	55.2	55.4	52	55	201	201	171.8
1999	0	19.3	52.7	~~NA~~28.9	52	48	119	119	174.3
1998	3.3	146.2	48.1	48.4	53	55	158	158	205.9

Source: ARB (California Almanac of Emissions and Air Quality) www.arb.ca.gov

Notes:

Data for Imperial County is the maximum value from the El Centro, Niland, Westmorland, and Brawley monitoring stations.
Data for Riverside County is the maximum value for the Indio and Palm Springs monitoring stations.
µg/m^3 = micrograms/cubic meter
EPDC = expected peak daily concentration
NA = data not available from California Air Resources Board

Carbon Monoxide, Nitrites (as NO_2), and Sulfites (as SO_2); page 10-19:

Carbon Monoxide, ~~Nitrites~~ Nitrogen Oxides (as NO_2), and ~~Sulfites~~ Sulfur Oxides (as SO_2)

Table 10-5; page 10-19:

Table 10-5
Ambient SO_2, NO_2, and CO Concentrations in Imperial and Riverside Counties, 1998-2005

Year	Concentrations in ppm						
	SO_2		NO_2		CO		
	Maximum 24-hour	Maximum Annual Average	Maximum 1-hour	AAM	Maximum 8-hour	Days > State 8-Hour Standard	Days > National 8-hour Standard
CAAQS[a]	0.04	—	0.25	—	9	—	—
NAAQS[b]	0.14	0.03	—	0.053	9	—	—
Imperial County							
2005	0.002	NA	0.065	0.011	NA	NA	NA
2004	0.003	NA	0.067	0.013	NA	NA	NA
2003	0.001	NA	0.071	0.012	2.38	0	0
2002	0.001	NA	0.096	NA	2.93	0	0
2001	0.002	0.001	0.082	NA	7.14	0	0
2000	0.009	0.002	NA	NA	NA	0	0
1999	0.018	0.002	NA	NA	NA	0	0
1998	0.019	0.003	NA	NA	3.5	0	0
Riverside County (Salton Sea Air Basin)							
2005	NA	NA	0.059	0.011	0.65	0	0
2004	NA	NA	0.066	0.013	0.8	0	0
2003	NA	NA	0.067	0.016	1.29	0	0
2002	NA	NA	0.068	0.016	1.14	0	0
2001	NA	NA	0.081	0.017	1.6	0	0
2000	NA	NA	0.064	0.016	1.59	0	0
1999	NA	NA	0.068	0.018	1.75	0	0
1998	NA	NA	0.07	0.016	1.66	0	0

Source: ARB (California Almanac of Emissions and Air Quality) www.arb.ca.gov

[a] CAAQS are not to be exceeded.

[b] NAAQS are not to be exceeded more than once per year (except for annual standards).

AAM = annual arithmetic mean

NA = not available from California Air Resources Board

ppm = parts per million

Summary of Assumptions, new paragraph after bulleted items at bottom of page 10-35:

Inclusion of these emission sources in the impact analysis would result in higher emissions for each Alternative.

Table 10-14, Assumptions Common to All Alternatives, list item 4; page 10-36:

4. For construction of components, the impact analysis assumed that the transport distance for rock and gravel by truck would be 10 miles one way on paved roads from a quarry or staging site. Placement of rock and gravel by truck assumed an additional 5 miles of travel one way on unpaved roads to a placement location at the construction site. If these travel distances are increased in project-level analyses, emissions associated with transport and placement of construction materials would increase proportionally. The trucks transporting rock and gravel were assumed to have a 20-cubic-yard capacity.

Table 10-15; pages 10-39 45:

Table 10-15
Summary of Benefit and Impact Assessments to Climate and Air Quality

Alternative	Basis of Comparison	Changes by Phase				Comments	Next Steps
		I	II	III	IV		
Criterion: Construction fugitive dust (PM_{10}) emissions exceed local significance thresholds of 150 pounds/day (daily threshold) or 70 tons/year (annual threshold).							
No Action Alternative	Existing Conditions	L	L	L	L	Construction PM10 emissions well below thresholds in Peak Construction Year (Phase I).	Project-level analyses would need to do more detailed emissions estimation, impact analysis, and mitigation planning.
	No Action Alternative	NA	NA	NA	NA		
Alternative 1	Existing Conditions	S	~~N~~O	~~N~~O	~~N~~O	Greater impacts than under No Action Alternative and Existing Conditions. Emissions exceed thresholds in Peak Construction Year, even with aggressive dust control (watering) schedule. Annual construction PM10 emissions more than 5 times greater than No Action Alternative.	Same as No Action Alternative.
	No Action Alternative	S	~~N~~O	~~N~~O	~~N~~O		
Alternative 2	Existing Conditions	S	~~N~~O	~~N~~O	~~N~~O	Greater impacts than under No Action Alternative and Existing Conditions. Emissions exceed thresholds in Peak Construction Year, even with aggressive dust control (watering) schedule. Annual construction PM10 emissions more than 10 times greater than No Action Alternative.	Same as No Action Alternative.
	No Action Alternative	S	~~N~~O	~~N~~O	~~N~~O		
Alternative 3	Existing Conditions	S	~~N~~O	~~N~~O	~~N~~O	Greater impacts than under No Action Alternative and Existing Conditions. Emissions exceed thresholds in Peak Construction Year, even with aggressive dust control (watering) schedule. Annual construction PM10 emissions more than 20 times greater than No Action Alternative.	Same as No Action Alternative.
	No Action Alternative	S	~~N~~O	~~N~~O	~~N~~O		
Alternative 4	Existing Conditions	S	O~~N~~	O~~N~~	O~~N~~	Greater impacts than under No Action Alternative and Existing Conditions. Emissions below thresholds in Peak Construction Year. However, if summed with diesel PM10 emissions, would exceed daily threshold. Annual construction PM10 emissions more than 5 times greater than No Action Alternative.	Same as No Action Alternative.
	No Action Alternative	S	O~~N~~	O~~N~~	O~~N~~		

Table 10-15
Summary of Benefit and Impact Assessments to Climate and Air Quality

Alternative	**Basis of Comparison**	**Changes by Phase**				**Comments**	**Next Steps**
		I	**II**	**III**	**IV**		
Alternative 5	Existing Conditions	S	O ~~N~~	O~~N~~	O~~N~~	Greater impacts than under No Action Alternative and Existing Conditions. Emissions exceed thresholds in Peak Construction Year, even with aggressive dust control (watering) schedule. Annual construction PM10 emissions more than 30 times greater than No Action Alternative.	Same as No Action Alternative.
	No Action Alternative	S	O~~N~~	O~~N~~	O~~N~~		
Alternative 6	Existing Conditions	S	O ~~N~~	O~~N~~	O~~N~~	Greater impacts than under No Action Alternative and Existing Conditions. Emissions greatly exceed thresholds in Peak Construction Year, even with aggressive dust control (watering) schedule. Annual construction PM_{10} emissions more than 150 times greater than No Action Alternative.	Same as No Action Alternative.
	No Action Alternative	S	O~~N~~	O~~N~~	O~~N~~		
Alternative 7	Existing Conditions	S	O ~~N~~	O~~N~~	O~~N~~	Greater impacts than under No Action Alternative and Existing Conditions. Emissions greatly exceed thresholds in Peak Construction Year, even with aggressive dust control (watering) schedule. Annual construction PM_{10} emissions more than 200 times greater than No Action Alternative.	Same as No Action Alternative.
	No Action Alternative	S	O~~N~~	O~~N~~	O~~N~~		
Alternative 8	Existing Conditions	S	O ~~N~~	O~~N~~	O~~N~~	Greater impacts than under No Action Alternative and Existing Conditions. Emissions greatly exceed thresholds in Peak Construction Year, even with aggressive dust control (watering) schedule. Annual construction PM_{10} emissions more than 150 times greater than No Action Alternative.	Same as No Action Alternative.
	No Action Alternative	S	O~~N~~	O~~N~~	O~~N~~		
Criterion: Hazardous air pollutants (HAPs) in fugitive dust (PM_{10}) emissions associated with construction expose sensitive receptors to substantial pollutant concentrations.							
No Action Alternative	Existing Conditions	S	S	S	S	The No Action Alternative would result in fugitive dust emissions during construction. Analytical results indicate potentially significant levels of constituents of concern in the sediment and soil samples taken at the Salton Sea. Additional study recommended, as described in Appendix E, Attachment E4.	Project-level analyses would need to do more detailed emissions estimation, exposure and health impact analysis, and mitigation planning. Control of fugitive dust would reduce human exposures.
	No Action Alternative	NA	NA	NA	NA		

Table 10-15
Summary of Benefit and Impact Assessments to Climate and Air Quality

Alternative	Basis of Comparison	Changes by Phase I	II	III	IV	Comments	Next Steps
Alternatives 1 - 8	Existing Conditions	S	O~~N~~	O~~N~~	O~~N~~	All alternatives result in fugitive dust emissions during construction. Analytical results indicate potentially significant levels of constituents of concern in the sediment and soil samples taken at the Salton Sea. Additional study recommended - see Appendix E, Attachment E4.	Same as No Action Alternative.
	No Action Alternative	U	U	U	U		
Criterion: Construction exhaust (NO_x) emissions exceed local significance thresholds of 100 pounds/day or 50 tons/year.							
No Action Alternative	Existing Conditions	L	L	L	L	Construction NOx emissions well below thresholds in Peak Construction Year (Phase I).	Project-level analyses would need to do more detailed emissions estimation, impact analysis, and mitigation planning.
	No Action Alternative	NA	NA	NA	NA		
Alternative 1	Existing Conditions	L	L	L	L	Greater impacts than under No Action Alternative and Existing Conditions. Emissions below thresholds in Peak Construction Year. Annual construction NOx emissions about 2 times greater than No Action Alternative.	Same as No Action Alternative.
	No Action Alternative	L	L	L	L		
Alternative 2	Existing Conditions	S	O~~N~~	O~~N~~	O~~N~~	Greater impacts than under No Action Alternative and Existing Conditions. Emissions exceed daily thresholds in Peak Construction Year. Annual construction NOx emissions about 4 times greater than No Action Alternative.	Same as No Action Alternative.
	No Action Alternative	S	O~~N~~	O~~N~~	O~~N~~		
Alternatives 3, 5, and 7	Existing Conditions	S	O~~N~~	O~~N~~	O~~N~~	Greater impacts than under No Action Alternative and Existing Conditions. Emissions greatly exceed thresholds in Peak Construction Year. Annual construction NOx emissions more than 100 times greater than No Action Alternative.	Same as No Action Alternative.
	No Action Alternative	S	O~~N~~	O~~N~~	O~~N~~		
Alternative 4	Existing Conditions	S	O~~N~~	O~~N~~	O~~N~~	Greater impacts than under No Action Alternative and Existing Conditions. Emissions exceed thresholds in Peak Construction Year. Annual construction NOx emissions more than 20 times greater than No Action Alternative.	Same as No Action Alternative.
	No Action Alternative	S	O~~N~~	O~~N~~	O~~N~~		
Alternatives 6 and 8	Existing Conditions	S	O~~N~~	O~~N~~	O~~N~~	Greater impacts than under No Action Alternative and Existing Conditions. Emissions greatly exceed thresholds in Peak Construction Year. Annual construction NOx emissions more than 200 times greater than No Action Alternative.	Same as No Action Alternative.
	No Action Alternative	S	O~~N~~	O~~N~~	O~~N~~		

Table 10-15
Summary of Benefit and Impact Assessments to Climate and Air Quality

Alternative	Basis of Comparison	Changes by Phase I	II	III	IV	Comments	Next Steps
Criterion: Diesel PM_{10} emissions associated with construction expose sensitive receptors to substantial pollutant concentrations.							
No Action Alternative	Existing Conditions	S	S	S	S	The No Action Alternative would result in diesel PM10 emissions during construction. The State lists particulate emissions from diesel-fueled engines as air toxics with carcinogenic impacts in exposed human populations. Additional study recommended - see Appendix E, Attachment E4.	Project-level analyses would need to do more detailed emissions estimation, exposure and health impact analysis, and mitigation planning.
	No Action Alternative	NA	NA	NA	NA		
Alternatives 1 - 8	Existing Conditions	S	O~~N~~	O~~N~~	O~~N~~	All alternatives result in diesel PM10 emissions during construction. The State lists particulate emissions from diesel-fueled engines as air toxics with carcinogenic impacts in exposed human populations. Additional study recommended - see Appendix E, Attachment E4.	Same as No Action Alternative.
	No Action Alternative	S	O~~N~~	O~~N~~	O~~N~~		
Criterion: Operations and maintenance related fugitive dust (PM_{10}) emissions exceed local significance thresholds of 150 pounds/day or 70 tons/year.							
No Action Alternative	Existing Conditions	L	L	L	L	Operations PM10 emissions well below thresholds in all phases, including the Peak Operations Year.	Project-level analyses would need to do more detailed emissions estimation, impact analysis, and mitigation planning.
	No Action Alternative	NA	NA	NA	NA		
Alternative 1	Existing Conditions	L	L	L	L	Greater impacts than under No Action Alternative and Existing Conditions. Emissions well below thresholds in all phases, including the Peak Operations Year. Annual operations PM10 emissions more than 5 times greater than No Action Alternative.	Same as No Action Alternative.
	No Action Alternative	L	L	L	L		
Alternative 2	Existing Conditions	L	L	L	L	Greater impacts than under No Action Alternative and Existing Conditions. Emissions below thresholds in all phases, including the Peak Operations Year. Annual operations PM10 emissions more than 10 times greater than No Action Alternative.	Same as No Action Alternative.
	No Action Alternative	L	L	L	L		
Alternative 3	Existing Conditions	L	O~~N~~	O~~N~~	S	Greater impacts than under No Action Alternative and Existing Conditions. Emissions under thresholds in Phase I, but exceed daily thresholds in Peak Operations Year. Annual operations PM10 emissions more than 20 times greater than No Action Alternative.	Same as No Action Alternative.
	No Action Alternative	L	O~~N~~	O~~N~~	S		

Table 10-15
Summary of Benefit and Impact Assessments to Climate and Air Quality

Alternative	Basis of Comparison	Changes by Phase				Comments	Next Steps
		I	II	III	IV		
Alternative 4	Existing Conditions	L	L	L	L	Greater impacts than under No Action Alternative and Existing Conditions. Emissions well below thresholds in all phases, including the Peak Operations Year because long term Air Quality Management actions are not included in this alternative.	Same as No Action Alternative.
	No Action Alternative	L	L	L	L		
Alternative 5	Existing Conditions	L	o	o	S	Greater impacts than under No Action Alternative and Existing Conditions. Emissions under thresholds in Phase I, but exceed daily thresholds in Peak Operations Year. Annual operations PM10 emissions more than 30 times greater than No Action Alternative.	Same as No Action Alternative.
	No Action Alternative	L	o	o	S		
Alternatives 6 and 8	Existing Conditions	S	S	S	S	Greater impacts than under No Action Alternative and Existing Conditions. Emissions exceed thresholds in all phases, including the Peak Operations Year. Annual operations PM10 emissions more than 150 times greater than No Action Alternative.	Same as No Action Alternative.
	No Action Alternative	S	S	S	S		
Alternative 7	Existing Conditions	S	S	S	S	Greater impacts than under No Action Alternative and Existing Conditions. Emissions exceed thresholds in all phases, including the Peak Operations Year based upon the type of Air Quality Management methods used in this alternative. Annual operations PM10 emissions more than 200 times greater than No Action Alternative.	Same as No Action Alternative.
	No Action Alternative	S	S	S	S		
Criterion: Operations and maintenance related exhaust (NO_x) emissions exceed local significance thresholds of 55 pounds/day or 50 tons/year.							
No Action Alternative	Existing Conditions	L	L	L	L	Operations NOx emissions well below thresholds in all phases, including the Peak Operations Year (Phase IV).	Project-level analyses would need to do more detailed emissions estimation, impact analysis, and mitigation planning.
	No Action Alternative	NA	NA	NA	NA		
Alternative 1	Existing Conditions	L	L	L	L	Greater impacts than under No Action Alternative and Existing Conditions. Emissions well below thresholds in all phases, including the Peak Operations Year. Annual operations NOx emissions similar to, but slightly higher than, No Action Alternative.	Same as No Action Alternative.
	No Action Alternative	L	L	L	L		

Table 10-15
Summary of Benefit and Impact Assessments to Climate and Air Quality

Alternative	Basis of Comparison	Changes by Phase I	II	III	IV	Comments	Next Steps
Alternative 2	Existing Conditions	L	L	L	L	Greater impacts than under No Action Alternative and Existing Conditions. Emissions well below thresholds in all phases, including the Peak Operations Year. Annual operations NOx emissions more than 3 times greater than No Action Alternative.	Same as No Action Alternative.
	No Action Alternative	L	L	L	L		
Alternative 3	Existing Conditions	S	O	O	S	Greater impacts than under No Action Alternative and Existing Conditions. Emissions exceed daily threshold in Phase I, and exceed both thresholds in Peak Operations Year. Annual operations NOx emissions more than 100 times greater than No Action Alternative.	Same as No Action Alternative.
	No Action Alternative	S	O	O	S		
Alternative 4	Existing Conditions	L	O	O	S	Greater impacts than under No Action Alternative and Existing Conditions. Emissions under thresholds in Phase I, but exceed daily thresholds in Peak Operations Year. Annual operations NOx emissions more than 15 times greater than No Action Alternative.	Same as No Action Alternative.
	No Action Alternative	L	O	O	S		
Alternatives 5 and 7	Existing Conditions	S	S	S	S	Greater impacts than under No Action Alternative and Existing Conditions. Emissions exceed thresholds in all phases, including the Peak Operations Year. Annual operations NOx emissions more than 100 times greater than No Action Alternative.	Same as No Action Alternative.
	No Action Alternative	S	S	S	S		
Alternatives 6 and 8	Existing Conditions	S	S	S	S	Greater impacts than under No Action Alternative and Existing Conditions. Emissions exceed thresholds in all phases, including the Peak Operations Year. Annual operations NOx emissions more than 200 times greater than No Action Alternative.	Same as No Action Alternative.
	No Action Alternative	S	S	S	S		
Criterion: Fugitive dust (~~PM_{10}~~PM_{10}) emissions associated with exposed playa, after air quality management and control measures, exceed local significance thresholds of 150 pounds/day or 70 tons/year.							
No Action Alternative	Existing Conditions	L	L	L	L	Playa PM10 emissions well below thresholds in Phase I, but over thresholds in Phases III and I~~v~~V. Did not analyze Phase II.	Project-level analyses would need to do more detailed emissions studies and estimation, control measure identification, impact analysis, and mitigation planning.
	No Action Alternative	NA	NA	NA	NA		

Table 10-15
Summary of Benefit and Impact Assessments to Climate and Air Quality

Alternative	Basis of Comparison	Changes by Phase				Comments	Next Steps
		I	II	III	IV		
Alternatives 1 and 2	Existing Conditions	S	S	S	S	Greater impacts than under No Action Alternative and Existing Conditions. Emissions exceed thresholds in all phases, even with assumption of aggressive Air Quality Management and control measures. In Phase I, annual playa PM_{10} emissions up to 5 times greater than No Action Alternative. In Phase IV, annual emissions similar to, but greater than, No Action Alternative.	Same as No Action Alternative.
	No Action Alternative	S	S	S	S		
Alternative 3	Existing Conditions	S	S	S	S	Greater impacts than under No Action Alternative and Existing Conditions. Emissions exceed daily threshold in Phase I, and exceed both thresholds in Phase IV, even with assumption of aggressive Air Quality Management and control measures. In both phases, annual playa PM_{10} emissions up to 2 times greater than No Action Alternative.	Same as No Action Alternative.
	No Action Alternative	S	S	S	S		
Alternative 4	Existing Conditions	S	S	S	S	Greater impacts than under No Action Alternative and Existing Conditions. Emissions exceed thresholds in all phases, and greatly exceed thresholds in Phase IV, due to the lack of aggressive Air Quality Management and control measures. In both phases, annual playa PM_{10} emissions more than 25 times greater than No Action Alternative.	Same as No Action Alternative.
	No Action Alternative	S	S	S	S		
Alternatives 5 and 6	Existing Conditions	S	S	S	S	Greater impacts than under No Action Alternative and Existing Conditions. Emissions exceed thresholds in all phases, even with assumption of aggressive Air Quality Management and control measures. In Phase I, annual playa PM_{10} emissions more than 5 times greater than No Action Alternative. In Phase IV, annual emissions more than 2 times greater than No Action Alternative.	Same as No Action Alternative.
	No Action Alternative	S	S	S	S		

Table 10-15
Summary of Benefit and Impact Assessments to Climate and Air Quality

Alternative	Basis of Comparison	Changes by Phase				Comments	Next Steps
		I	II	III	IV		
Alternative 7	Existing Conditions	S	S	S	S	Greater impacts than under No Action Alternative and Existing Conditions. Emissions exceed thresholds in all phases, and greatly exceed thresholds in Phase IV, even with assumption of limited Air Quality Management and control measures. In Phase I, annual playa PM_{10} emissions more than 90 times greater than No Action Alternative. In Phase IV, annual emissions more than 15 times greater than No Action Alternative.	Same as No Action Alternative.
	No Action Alternative	S	S	S	S		
Alternative 8	Existing Conditions	S	S	S	S	Greater impacts than under No Action Alternative and Existing Conditions. Emissions exceed daily threshold in Phase I, and exceed both thresholds in Phase IV, even with assumption of aggressive Air Quality Management and control measures. In Phase I, annual playa PM_{10} emissions more than 3 times greater than No Action Alternative. In Phase IV, annual emissions similar to, but greater than, No Action Alternative.	Same as No Action Alternative.
	No Action Alternative	S	S	S	S		
Criterion: Hazardous air pollutants (HAPs) in fugitive dust (PM_{10}) emissions associated with playa expose sensitive receptors to substantial pollutant concentrations.							
No Action Alternative	Existing Conditions	S	S	S	S	The No Action Alternative is predicted to result in fugitive dust emissions from Exposed Playa areas, even after aggressive Air Quality Management and control measures are implemented. Analytical results indicate potentially significant levels of constituents of concern in the sediment and soil samples taken at the Salton Sea.	Project-level analyses would need to do more detailed emissions estimation, exposure and health impact analysis, and mitigation planning. Control of fugitive dust would reduce human exposures.
	No Action Alternative	NA	NA	NA	NA		
Alternatives 1 - 8	Existing Conditions	S	S	S	S	All alternatives are predicted to result in fugitive dust emissions from Exposed Playa areas, even after aggressive Air Quality Management and control measures are implemented. Analytical results indicate potentially significant levels of constituents of concern in the sediment and soil samples taken at the Salton Sea.	Same as No Action Alternative.
	No Action Alternative	S	S	S	S		

Table 10-15
Summary of Benefit and Impact Assessments to Climate and Air Quality

Alternative	Basis of Comparison	Changes by Phase				Comments	Next Steps
		I	II	III	IV		
Criterion: Net Emissions increase of nonattainment pollutants exceed General Conformity *de minimis* thresholds of 70 tons/year (PM_{10}) and 50 tons/year (NO_x).							
No Action Alternative	Existing Conditions	NA	NA	NA	NA	Not Applicable.	Not Applicable.
	No Action Alternative	NA	NA	NA	NA		
Alternative 1	Existing Conditions	S	L	L	L	Greater impacts than under No Action Alternative and Existing Conditions. NO_x emissions below the threshold in Peak Construction Year and Peak Operations Year. PM_{10} emissions above threshold in Peak Construction Year, but slightly below the threshold in the Peak Operations Year.	Project-level analyses would need to do more detailed emissions estimation, impact analysis, and mitigation planning.
	No Action Alternative	S	L	L	L		
Alternative 2	Existing Conditions	S	**O**	**O**	S	Greater impacts than under No Action Alternative and Existing Conditions. NO_x emissions below the threshold in Peak Construction Year and Peak Operations Year. PM_{10} emissions above threshold in Peak Construction Year and the Peak Operations Year, even with aggressive dust control measures.	Same as Alternative 1.
	No Action Alternative	S	**O**	**O**	S		
Alternative 3	Existing Conditions	S	**O**	**O**	S	Greater impacts than under No Action Alternative and Existing Conditions. NO_x emissions exceed thresholds in Peak Construction Year, even with requirements for low emission equipment. PM_{10} emissions exceed threshold even with aggressive dust control. Exceedances of thresholds are not as great in Peak Operations Year.	Same as Alternative 1.
	No Action Alternative	S	**O**	**O**	S		
Alternative 4	Existing Conditions	S	**O**	**O**	S	Greater impacts than under No Action Alternative and Existing Conditions. NO_x emissions above the threshold in Peak Construction Year and below in the Peak Operations Year. PM_{10} emissions above threshold in Peak Construction Year and greatly exceed the threshold in the Peak Operations Year, primarily due to the lack of designated Air Quality Management for Exposed Playa.	Same as Alternative 1.
	No Action Alternative	S	**O**	**O**	S		

Table 10-15
Summary of Benefit and Impact Assessments to Climate and Air Quality

Alternative	Basis of Comparison	Changes by Phase I	II	III	IV	Comments	Next Steps
Alternative 5	Existing Conditions	S	O	O	S	Greater impacts than under No Action Alternative and Existing Conditions. NO_x emissions greatly exceed thresholds in Peak Construction Year, even with requirements for low emission equipment. PM_{10} emissions exceed threshold even with aggressive dust control. Exceedances of thresholds are not as great in Peak Operations Year.	Same as Alternative 1.
	No Action Alternative	S	O	O	S		
Alternatives 6 and 8	Existing Conditions	S	O	O	S	Greater impacts than under No Action Alternative and Existing Conditions. NO_x and PM_{10} emissions greatly exceed thresholds in Peak Construction Year, even with requirements for low emission equipment and aggressive dust control. Exceedances of thresholds are not as great in Peak Operations Year.	Same as Alternative 1.
	No Action Alternative	S	O	O	S		
Alternative 7	Existing Conditions	S	O	O	S	Greater impacts than under No Action Alternative and Existing Conditions. NO_x and PM_{10} emissions greatly exceed thresholds in Peak Construction Year, even with requirements for low emission equipment and aggressive dust control. Exceedances of thresholds are not as great in Peak Operations Year, but PM_{10} emissions still greatly exceed the threshold.	Same as Alternative 1.
	No Action Alternative	S	O	O	S		
Criterion: Net emissions increase of nonattainment pollutants exceed General Conformity *de minimis* thresholds of 70 tons/year (PM_{10}) and 50 tons/year (NO_x).							
No Action Alternative	Existing Conditions	S	S	S	S	Odorous emissions, such as hydrogen sulfide and ammonia, may occur. In early phases, impacts similar to Existing Conditions. In later phases, after fish are no longer present, impacts may be less than under Existing Conditions.	Project-level analyses would need to do more detailed emissions estimation, exposure and health impact analysis, and mitigation planning.
	No Action Alternative	NA	NA	NA	NA		
Alternatives 1 - 4	Existing Conditions	S	B	B	B	Impacts associated with Brine Sink similar to those associated with the No Action Alternative. Impacts associated with shallower water bodies would be less than those associated with the No Action Alternative and Existing Conditions.	Same as No Action Alternative.
	No Action Alternative	S	B	B	B		

Table 10-15
Summary of Benefit and Impact Assessments to Climate and Air Quality

Alternative	Basis of Comparison	Changes by Phase				Comments	Next Steps
		I	II	III	IV		
Alternatives 5 - 8	Existing Conditions	S	S	S	S	Impacts associated with Brine Sink similar to those associated with the No Action Alternative. Impacts associated with deeper water bodies would be similar or greater than those associated with the No Action Alternative and Existing Conditions.	Same as No Action Alternative.
	No Action Alternative	S	S	S	S		
Criterion: Changes substantially modify the existing microclimate characteristics adjacent to the Salton Sea.							
No Action Alternative	Existing Conditions	S	S	S	S	The No Action Alternative is predicted to result in potentially significant changes in microclimate of shoreline areas where water levels are predicted to recede. Larger scale climatic impacts are not predicted to occur as a result of the alternatives.	Project-level analyses would need to do more detailed microclimatic impact analysis and mitigation planning.
	No Action Alternative	NA	NA	NA	NA		
Alternatives 1 - 8	Existing Conditions	S	S	S	S	All alternatives are predicted to result in potentially significant changes in microclimate of shoreline areas where water levels are predicted to recede, with lesser impacts on shoreline areas that will remain adjacent to water bodies. Larger scale climatic impacts are not predicted to occur as a result of the alternatives.	Same as No Action Alternative.
	No Action Alternative	U	U	U	U		

Legend for Types of Benefits or Impacts in Each Phase:
S = Significant Impact
O = No Impact
L = Less Than Significant
B = Beneficial Impact
NA = Not Analyzed and U= Unknown

Chapter 11

West Shores/Salton City, fifth paragraph; page 11-10:

~~The proposed Habitat 2000 development includes 1,720 acres of land between Salton Sea Beach and Vista Del Mar (County of Imperial, 2000) This development includes proposed construction of medium and high density residential units (not to exceed 10,000 units) with retail shops, hotel and spa, health care facility, golf course, lakes, and marinas with build out in about 15 years after initiation. The specific schedule for development was not finalized during preparation of this PEIR.~~

Table 11-4, Criterion: Conversion of agricultural land; page 11-38:

Criterion: Conversion of agricultural land.							
No Action Alternative	Existing Conditions	L	L	L	L	Up to 200 acres of Farmlands of Local Importance near the Whitewater River, 200 acres of Farmlands of Statewide Importance near the New River, and 200 acres of ~~farmland designated as~~ Other Lands near the Alamo River could be converted to Sedimentation/Distribution Basins.	To the extent possible, Sedimentation/Distribution Basins should be located away from agricultural lands.
	No Action Alternative	NA	NA	NA	NA		
Alternatives 1 and 2	Existing Conditions	L	L	L	L	Same as No Action Alternative.	Same as No Action Alternative.
	No Action Alternative	O	O	O	O		
Alternatives 3, 4, 5, and 8	Existing Conditions	L	L	L	L	Up to 200 acres of Farmlands of Statewide Importance near the New River, and 200 acres of ~~farmland designated as~~ Other Lands near the Alamo River could be converted to Sedimentation/Distribution Basins.	Same as No Action Alternative.
	No Action Alternative	B	B	B	B		
Alternatives 6 and 7	Existing Conditions	L	L	L	L	Up to 200 acres of ~~farmland designated as~~ Other Lands near the Alamo River could be converted to Sedimentation/Distribution Basins.	Same as No Action Alternative.
	No Action Alternative	B	B	B	B		

Chapter 12

Historical Perspective, first paragraph; page 12-1:

For the past 100 years, the economic base of Imperial County traditionally has been agriculture with communities of small to moderate size. The Coachella Valley in the south~~eastern~~-central portion of Riverside County also has an agricultural base however urban development has been increasing over the past 20 years, as discussed below.

Significance Criteria, first paragraph; page 12-14:

The following significance criteria were based on Appendix G of the CEQA Guidelines ~~and air quality regulatory agency guidance~~ and used to determine if changes as compared to Existing Conditions and the No Action Alternative would:

Chapter 13

Imperial County, first paragraph; page 13-3:

Imperial County is a popular recreational area for water and desert-based activities. Recreational facilities within the County include the Sunbeam Lake County Park, Weist Lake County Park, Heber Dunes State Vehicular Recreation Area, the Sonny Bono Salton Sea National Wildlife Refuge, Imperial Wildlife Area, and the southern portion of the Salton Sea SRA. Recreational activities in the irrigation canals in Imperial County is not allowed. However, individuals do fish in various irrigation canals for species such as channel catfish, bass, and sunfish (IID and Reclamation, 1994).

Sunbeam Lake County Park is located near Seeley and includes facilities for boating, fishing, and picnicking.

Imperial County, fourth paragraph; page 13-3:

Hunting for upland and waterfowl species occurs at the Imperial Wildlife Area, Sonny Bono Salton Sea National Wildlife Refuge, and on approximately 10,040 acres of private lands including duck clubs (IID, 2007).

Salton Sea State Recreation Area; page 13-4:

The Salton Sea SRA has been operated by the California State Parks (CSP) since 1955 and is located along 15 miles of the northeastern shoreline of the Salton Sea. During the late 1970s, water levels increased and flooded about 50 percent of the SRA. The campgrounds, Varner Harbor, and associated facilities were reestablished outside of the flooded area. The Salton Sea SRA provides opportunities for campers, boaters, swimmers, waterskiers, and anglers. There is boat launching facilities at Varner Harbor near the park headquarters. However, the boat launching facility was closed in 2006 while the necessary permits to dredge the harbor channel were obtained. Total visitor use of the Salton Sea SRA has been recorded since 1972. Prior to official records, Salton Sea SRA staff estimate that the highest seasonal use occurred at the Salton Sea during 1961-1962, with about 660,000 visitors. Visitor use at the SRA from 1995 to 2005 is shown on Table 13-1.

Salton Sea State Recreation Area; page 13-4:

The Salton Sea SRA has been operated by the California State Parks (CSP) since 1955

Figure 13-1, Recreation Resources in the Vicinity of the Salton Sea; page 3-5:

Revised figure is on the following page.

Prior to Environmental Impacts, page 13-7:

~~ENVIRONMENTAL IMPACTS~~

~~Analysis Methodology~~

~~This section addresses both the impacts to existing recreation resources and the potential for the development of future recreational opportunities for each alternative. Impacts to existing recreation resources are evaluated based on the changes to the size, function, or access to existing recreation resources under each of the alternatives.~~

Recreation and Economics Opportunities Survey

In February 2004, the Salton Sea Authority appointed an Outdoor Recreation Advisory Task Force (ORATF) to evaluate the recreational potential of a restored Salton Sea. As part of the Recreation and Economic Opportunities Assessment for the Salton Sea (Salton Sea Authority, 2005), a survey was developed and distributed to ORATF members, mailing lists of stakeholders, and to the general public. Two public meetings were held in April 2005 to solicit comments from the general public and stakeholders. The results were used to develop an overall list of recreation opportunities that could be considered in the future for the Salton Sea, as presented in Table 13-3 (Salton Sea Authority, 2005).

Table 13-3
Results of the Recreation and Economic Opportunities Survey

Prioritization Based on the Survey	Recreational Opportunity	Prioritization Based on the Survey	Recreational Opportunity
1	Birdwatching/Photography	11	Swimming/Sunbathing
2	Power boating/ Sailboating	12	Camping-Guest Rentals
3	Photography-general	13	Horseback Riding
4	Hiking	14	Windsurfing
5	Camping-Tents	15	Private Water Craft
6	Freshwater Fishery	16	Hunting
7	Kayaking	17	Resort-Golf
8	Marine Fishery	18	Resort-Gaming
9	Biking	19	Skydiving
10	Camping-Recreational Vehicles	20	Off-highway Vehicle Use

Source: Salton Sea Authority, 2005

The Recreation and Economic Opportunities Survey provided details on the strategies and factors for implementation of each of the identified recreational opportunities. The analysis in this PEIR assesses the compatibility of alternatives for recreational opportunities, in accordance with the objectives described in Chapter 1. The alternatives include many components, as described in Chapter 3. Potential recreational opportunities that could be provided by each component are shown in Table 13-4. The ability of a component to provide recreational opportunities was based on a determination of compatibility between the recreation activity and the projected function of each component. The listing of potential opportunities does not imply that the component is ideally suited for the recreation activity or that the opportunity would be implemented. During project-level analyses, specific proposals for inclusion of recreational opportunities in each component would be evaluated. It is also possible that a component may be used for a recreational opportunity for a specific period of time and then modified due to implementation of other actions. For example, Saline Habitat Complex may provide more intense recreational activities during Phase I when other opportunities are not provided in other areas of the Sea. However, as other components are completed, recreational activities may be provided in different areas.

ENVIRONMENTAL IMPACTS

Analysis Methodology

This section addresses both the impacts to existing recreation resources and the potential for the development of future recreational opportunities for each alternative. Impacts to existing recreation resources are evaluated based on the changes to the size, function, or access to existing recreation resources under each of the alternatives.

Significance Criteria, first paragraph; page 13-8:

The following significance criteria were based on Appendix G of the CEQA Guidelines ~~and air quality regulatory agency guidance~~ and used to determine if changes as compared to Existing Conditions and the No Action Alternative would:

Chapter 14

Significance Criteria, first paragraph; page 14-19:

The following significance criteria were based on Appendix G of the CEQA Guidelines ~~and air quality regulatory agency guidance~~ and used to determine if changes as compared to Existing Conditions and the No Action Alternative would:

Next Steps, sixth paragraph; page 14-27:

To reduce the impact of mosquitoes in the future, continued coordination with the mosquito abatement agencies (Coachella Valley Mosquito and Vector Control District and the Imperial County Department of Health Services) should be conducted throughout the preparation of future project-level analyses. Monitoring programs and worker training to reduce exposure to vectors could also be considered during future project-level analysis and throughout the construction and implementation of the ecosystem restoration project. ~~t~~The Coachella Valley Mosquito and Vector Control District BioControl Facility (Indio, California) currently is researching the application of organisms, such as mosquitofish, desert pupfish, tadpole shrimp, and copepods, for biological control of vectors. The BioControl Program incorporates naturally occurring pathogenic, parasitic, and predatory organisms against vectors into existing integrated pest management and control programs. Information from this research could be useful during project-level analysis.

Chapter 15

Sacred Lands, second paragraph; pages 15-7 and 15-8:

The record search of the Native American Heritage Commission Sacred Lands File indicates the presence of Native American cultural resources within the study area. The locations of the Sacred Lands File sites are confidential. ~~However, the resources are generally located within Section 21 of the Kane Springs quadrangle.~~ The search revealed no additional sacred sites in other locations within the study area. In addition, all contacts provided by the Native American Heritage Commission as individuals with knowledge of potential sacred sites within the study area were contacted by letter and telephone and no additional specific sites were identified.

Significance Criteria, first paragraph; page 15-8:

The following significance criteria were based on Appendix G of the CEQA Guidelines ~~and air quality regulatory agency guidance~~ and used to determine if changes as compared to Existing Conditions and the No Action Alternative would:

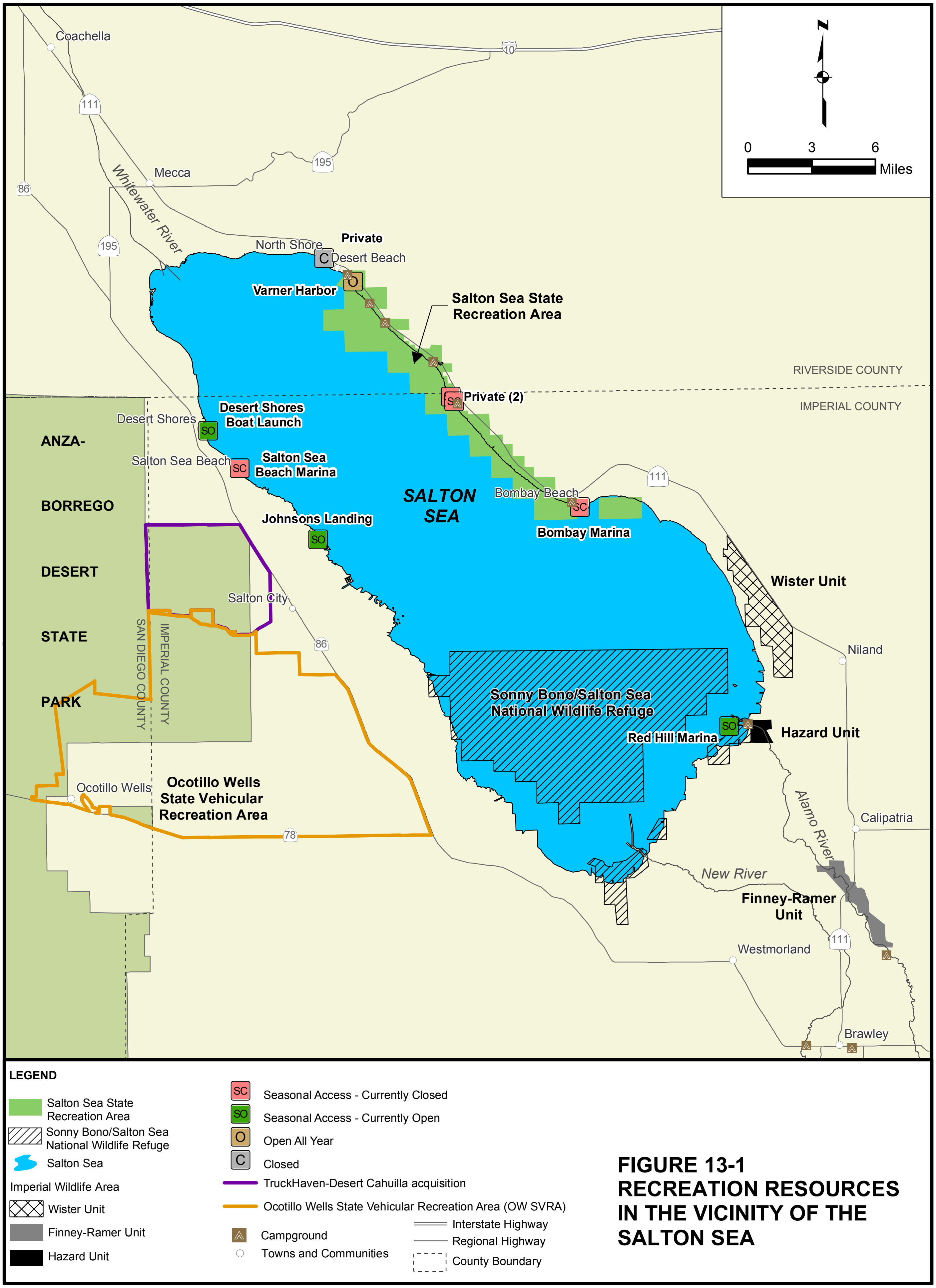


FIGURE 13-1
RECREATION RESOURCES IN THE VICINITY OF THE SALTON SEA

\\GLACIER\SACGIS\SALTON_SEA\GIS\MXDS\PEIR\FIGURE13_1_RECREATION_RESOURCES.MXD FIGURE13-1_REC_RESOURCES.PDF 5/31/2007 08:41:14

Table 15-2, Criterion: Cause substantial adverse change in the significance of a historical or unique archaeological resource or disturb human remains; page 15-10:

Criterion: Cause substantial adverse change in the significance of a historical or unique archaeological resource or disturb human remains.							
No Action Alternative	Existing Conditions	S	S	S	S	Ground disturbing activities could result in the damage and/or disturbance of potentially significant archaeological resources. Water would recede exposing currently submerged resources. Exposure of such resources could lead to unauthorized artifact collection. Such resources also could be subject to wave-induced erosion during operations.	Implement mitigation measures required by implementation of the IID Water Conservation and Transfer Project ~~from -235 to -248 feet msl.~~ ~~No mitigation measures would be included between the shoreline and -235 feet msl and between -248 feet msl and the Brine Sink~~.
	No Action Alternative	NA	NA	NA	NA		

No Action Alternative, seventh paragraph; page 15-11:

The No Action Alternative would result in adverse impacts as compared to Existing Conditions that would be partially mitigated as a result of the IID Water Conservation and Transfer Project mitigation measures~~. The area between the shoreline and -235 feet mean sea level (msl) and below -248 feet msl that would be exposed under the No Action Alternative could result in significant and adverse impacts to cultural resources~~ as compared to Existing Conditions.

Alternative 1, third paragraph; page 15-11:

In Phases I through IV, impacts associated with exposure would be similar to those described under the No Action Alternative. ~~It is assumed that IID would implement the mitigation measures as described under the No Action Alternative between -235 to -248 feet msl. Portions of the Sea Bed that would have been exposed under the No Action Alternative would be covered by other components.~~

Next Steps, first paragraph; page 15-13:

During project-level analysis, the preferred alternative would be subject to additional CEQA analysis. Actions involving federal or Tribal lands would be subject to federal oversight following Section 106 of the NHPA, ~~and~~ implementing regulations under 36 CFR 800, as amended, the Archaeological Resources Protection Act, and any other applicable state and federal laws. Mitigation measures such as the following would be considered during the project-level analysis:

Next Steps, new final paragraph; page 15-14:

During the additional CEQA analysis, the Implementing Agency should work with the Torres Martinez Desert Cahuilla Indians to determine an appropriate process for documenting and mitigating impacts to cultural resources found on lands owned by the Tribe.

Chapter 16

Table 16-1; page 16-4:

Table 16-1
Generalized Sedimentary Units Mapped in the Study Area by Jennings (1967) and Rogers (1965) and the Assigned Paleontological Sensitivity

Map Unit	Name	Paleontologic Sensitivity (provisional)	Remarks
Qs	Dune sand	Low	Regional relationships suggest that surficial eolian sediments within the study area are middle Holocene and younger (the last 6,000 years), with the possibility of older strata beneath aggradational sand sheets on the east side of the Salton Sea. Older and larger dune systems, such as the Algodones (Imperial) Sand Dunes, are well outside the study area.
Qal	Alluvium	Low	Includes both Late Pleistocene and Holocene subaerially deposited bajada sediments; within the study area, generally finer-grained sediments of the distal portions of alluvial fans are found. Generally of low sensitivity.
Ql	Quaternary lake deposits in the axial portion of the valley southeast of the Salton Sea (Imperial Valley area)	Low to Moderate	Low sensitivity in the axial valleys (Imperial and Coachella) of the Salton Trough where, despite extensive excavations in support of agricultural pursuits, there are no recorded paleontological sites from this region. This is consistent with geophysical data that indicate rapid subsidence. Elsewhere, on the east and west margins of the Sea, of moderate sensitivity. At depth, these may be equivalent with the Pleistocene Brawley Formation.
Qal – Qal	Undifferentiated alluvium and lacustrine sediments in the Salton Trough	Low to ~~High~~Moderate	As noted above, in the axial portions of the Salton Trough these sediments are of low sensitivity, but elsewhere may include strata of high paleontological sensitivity.
Qc	Pleistocene non-marine	Moderate to High	Pleistocene fanglomerates and other non-marine clastic sediments, including lacustrine, have yielded fossils in this region.
Tl – Ql	Tertiary and Quaternary(?) lake deposits	High	Includes outcrops of the Plio-Pleistocene Barrego Formation; lacustrine mudstones elevated above younger Quaternary sediments. To the east in the Bat Caves Buttes area, includes Palm Springs Group and overlying Borrego Formation sediments (Jefferson, 2005).

Note: Does not include igneous rocks or geologic units outside the study area

Brawley Formation and Ocotillo Conglomerate, second paragraph; pages 16-7 and 16-8:

To the west of State Highway 86, the Brawley Formation is up to 2,000 feet thick and grades into the Ocotillo Conglomerate (Dorsey, 2005). Freshwater molluscan fauna and ~~Ranchlabrean~~ faunal elements~~,~~ such as mammoth (*Mammuthus*), North American horse (*Equus*), and camel (*Camelops*), are recorded for the Brawley Formation. It should be noted that even though the Ocotillo Conglomerate is composed of chiefly coarse-grained clasts, it is fossiliferous despite the implied high-energy depositional regime. A majority of the proboscidian (mammoths, mastodonts, and their relatives) remains from the Anza-Borrego Desert State Park area are from the Irvingtonian-age Ocotillo Formation (McDaniel and Jefferson, 2003).

Significance Criteria, first paragraph; page 16-10:

The following significance criteria were based on Appendix G of the CEQA Guidelines ~~and air quality regulatory agency guidance~~ and used to determine if changes as compared to Existing Conditions and the No Action Alternative would..

Table 16-3, Criterion: Physical damage to a scientifically useful fossil or unearthing of fossils and removal without appropriate scientific recordation; page 16-12:

Criterion: Physical damage to a scientifically useful fossil or unearthing of fossils and removal without appropriate scientific recordation.							
No Action Alternative	Existing Conditions	S	S	S	S	Ground disturbing activities could result in the damage and/or disturbance of potentially significant ~~archaeological~~ paleontological resources. Water would recede exposing currently submerged resources. Exposure of such resources could lead to unauthorized ~~artifact~~ fossil collection. Such resources also could be subject to wave-induced erosion during operations.	Implement mitigation measures required by implementation of the IID Water Conservation and Transfer Project ~~from -235 to -248 feet msl.~~ Prior to construction, a Paleontological Resources Monitoring and Recovery Plan should be developed and implemented.
	No Action Alternative	NA	NA	NA	NA		

No Action Alternative, second paragraph; page 16-13:

The No Action Alternative would result in adverse impacts as compared to Existing Conditions due to the disturbance of 35,800 acres of land in the Sea Bed and along the shoreline, and about 5,050,000 cubic yards of Sea Bed material would be excavated or dredged. The impacts would be partially mitigated as a result of the IID Water Conservation and Transfer Project mitigation measures ~~between -235 and -248 feet msl. The area between the shoreline and -235 feet msl and below -248 feet msl that would be exposed under the No Action Alternative would not be subject to mitigation measures by IID~~.

Alternative 1, second paragraph; page 16-13:

Impacts associated with ground disturbing activities would be similar to those described under No Action Alternative. Under Alternative 1, about 136,700 of acres of land would be disturbed in the Sea Bed and along the shoreline, and about 77,140,000 cubic yards of Sea Bed material would be excavated or dredged. ~~It is assumed that IID would implement the mitigation measures as described under the No Action Alternative between -235 to -248 feet msl in portions of the Sea Bed not covered by other components.~~

Alternative 2, second paragraph; page 16-13:

Impacts associated with ground disturbing activities would be similar to those described under No Action Alternative. Under Alternative 2, about 206,400 of acres of land would be disturbed in the Sea Bed and along the shoreline, and about 136,530,000 cubic yards of Sea Bed material would be excavated or dredged. ~~It is assumed that IID would implement the mitigation measures as described under the No Action Alternative between -235 to -248 feet msl in portions of the Sea Bed not covered by other components.~~

Alternative 3, second paragraph; page 16-13:

Impacts associated with ground disturbing activities would be similar to those described under No Action Alternative. Under Alternative 3, about 155,450 of acres of land would be disturbed in the Sea Bed and along the shoreline, and about 18,810,000 cubic yards of Sea Bed material would be excavated or dredged. ~~It is assumed that IID would implement the mitigation measures as described under the No Action Alternative between -235 to -248 feet msl in portions of the Sea Bed not covered by other components.~~

Alternative 4, second paragraph; page 16-14:

Impacts associated with ground disturbing activities would be similar to those described under No Action Alternative. Under Alternative 4, about 96,950 of acres of land would be disturbed in the Sea Bed and along the shoreline, and about 154,215,000 cubic yards of Sea Bed material would be excavated or dredged. ~~It is assumed that IID would implement the mitigation measures as described under the No Action Alternative between -235 to -248 feet msl in portions of the Sea Bed not covered by other components.~~

Alternative 5, second paragraph; page 16-14:

Impacts associated with ground disturbing activities would be similar to those described under No Action Alternative. Under Alternative 5, about 230,450 of acres of land would be disturbed in the Sea Bed and along the shoreline, and about 86,770,000 cubic yards of Sea Bed material would be excavated or dredged. ~~It is assumed that IID would implement the mitigation measures as described under the No Action Alternative between -235 to -248 feet msl in portions of the Sea Bed not covered by other components.~~

Alternative 6, second paragraph; page 16-14:

Impacts associated with ground disturbing activities would be similar to those described under No Action Alternative. Under Alternative 6, about 224,250 of acres of land would be disturbed in the Sea Bed and along the shoreline, and about 66,970,000 cubic yards of Sea Bed material would be excavated or dredged. ~~It is assumed that IID would implement the mitigation measures as described under the No Action Alternative between -235 to -248 feet msl in portions of the Sea Bed not covered by other components.~~

Alternative 7, second paragraph; pages 16-14 and 16-15:

Impacts associated with ground disturbing activities would be similar to those described under No Action Alternative. Under Alternative 7, about 131,950 of acres of land would be disturbed in the Sea Bed and along the shoreline, and about 33,522,000 cubic yards of Sea Bed material would be excavated or dredged. ~~It is assumed that IID would implement the mitigation measures as described under the No Action Alternative between -235 to -248 feet msl in portions of the Sea Bed not covered by other components.~~

Alternative 8, second paragraph; page 16-15:

Impacts associated with ground disturbing activities would be similar to those described under No Action Alternative. Under Alternative 8, about 209,550 of acres of land would be disturbed in the Sea Bed and along the shoreline, and about 47,230,000 cubic yards of Sea Bed material would be excavated or dredged. ~~It is assumed that IID would implement the mitigation measures as described under the No Action Alternative between -235 to -248 feet msl in portions of the Sea Bed not covered by other components.~~

Next Steps, first paragraph; page 16-15:

During the project-level analysis, a Paleontological Resources Monitoring and Recovery Plan (PRMRP) should be developed and implemented for all actions. The PRMRP should include protocols for paleontological resources monitoring in those areas where sediment with moderate to high paleontological sensitivity would be affected by construction related excavations, including sediments with a range of sensitivity that includes moderate or high paleontological sensitivity. The PRMRP also should set forth the following procedures:

Chapter 17

Significance Criteria, first paragraph; page 17-9:

The following significance criteria were based on Appendix G of the CEQA Guidelines ~~and air quality regulatory agency guidance~~ and used to determine if changes as compared to Existing Conditions and the No Action Alternative would:

Chapter 18

Figure 18-10, View to the North from Observation Tower at Sonny Bono Salton Sea National Wildlife Refuge; page 18-21:

Revised figure is on the following page.

Significance Criteria, first paragraph; page 18-31:

The following significance criteria were based on Appendix G of the CEQA Guidelines ~~and air quality regulatory agency guidance~~ and used to determine if changes as compared to Existing Conditions and the No Action Alternative would:

Chapter 19

Water Supply and Treatment, fourth paragraph; page 19-4:

The Golden State Water Company provides water to Calipatria and Niland, and the Seeley County Water District provides water to Seeley. Both water purveyors purchase their water from IID. The Golden State Water Company ~~and~~ takes delivery through the East Highline Canal and the Seeley County Water District takes delivery through the Central Main Canal. The City of Coachella Water Department and Indio Water Authority provide water to Coachella and Indio, respectively. Both cities rely on groundwater, which is chlorinated and does not require further treatment. Both agencies participate in a replenishment plan with CVWD, which is intended to reduce groundwater overdraft in the Coachella Valley (Lee, 2005; Merrell, 2005).

Chapter 20

Airports, first paragraph; page 20-5:

Local airports that provide passenger service near the Salton Sea include the Imperial County Airport in Imperial ~~and~~, Palm Springs International Airport, and the Calexico International Airport in Calexico. The Holtville Airport is closed indefinitely. Regional airports include San Diego International Airport and Ontario International Airport, which are not included in the study area, as described above. Smaller general aviation airports are located in the communities surrounding the Salton Sea. Information regarding the types of air traffic experienced at each of the local airports and the average number of daily aircraft operations is summarized in Table 20-3.

Next Steps, first paragraph; page 20-21:

During the project-level analysis, a traffic study would be conducted to identify methods to minimize impacts during all phases. In addition, a Pavement Study and Traffic Management Plan would also be appropriate. These studies should be conducted with the local traffic management agencies. The following measures could be used to reduce impacts on roadways:

Chapter 21

Geothermal Power, first paragraph; page 21-6:

Imperial County has one of the larger geothermal resources in the world. There are ~~seven~~ nine known geothermal resource areas (KGRAs) in Imperial County: the Salton Sea, South Brawley, East Brawley, North Brawley, Westmoreland, Heber, East Mesa, Dunes, and Glamis, as shown in Figure 21-2. A KGRA is an area in which the geology, nearby discoveries, competitive interests, or other indicators would, in the opinion of the Secretary of the Interior, engender a belief in those who are experienced in the subject matter that the prospects for extraction of geothermal steam or associated geothermal resources are good enough to warrant expenditures of money for that purpose (30 U.S.C. 1001). The Salton Sea KGRA includes areas under the Salton Sea and lands upgradient of the Salton Sea from about Bombay Beach to Calipatria. The other KGRAs in Imperial County are located to the southeast of the Salton Sea and are not likely to be affected by the alternatives; therefore, they are not discussed further.

FIGURE 18-10
VIEW TO THE NORTH FROM OBSERVATION TOWER AT UNIT ONE OF THE SONNY BONO SALTON SEA NATIONAL WILDLIFE REFUGE

Table 21-4, final two rows; page 21-9:

Unit 6	~~185~~ 215.0	Construction not started
Total	~~511.4~~ 541.4	—

Sources: CE Obsidian Energy LLC, 2002; CalEnergy, 2005.

Chapter 23

Drop 2 Reservoir Project, Lower Colorado River Water Storage Project, subsection *Project Description*, first and second paragraphs; page 23-5:

The Drop 2 Reservoir Project would be located on about 6~~2~~15 acres formerly used for the Brock Ranch Experimental Research Station in Imperial County, California (Reclamation, 2005a). The proposed reservoir project is one of a variety of potential actions that may be taken to maximize beneficial use of Colorado River water in the United States. Specific objectives of the project include providing additional operational flexibility in the Lower Colorado River system for the Imperial Irrigation District, Coachella Valley Water District, and other Colorado system users, and providing regulatory storage capacity needed to reduce currently non-storable flows of the Colorado River below Parker Dam.

The proposed reservoir site is north of the All-American Canal and Interstate Highway 8, west of the Coachella Canal, about 30 miles southeast of the City of El Centro, California, and 25 miles west of the City of Yuma, Arizona. The 8,000-acre-foot reservoir would receive water from a connection to the All-American Canal at the Coachella Canal turnout ~~to the east~~, via a ~~5 to 7~~ 6.6-mile-long inlet canal (depending on alignment selected). Water released from the reservoir would be returned to the All-American Canal, via an outlet cannel about ~~3~~2,~~5~~000 feet long.

Drop 2 Reservoir Project, Lower Colorado River Water Storage Project, subsection *Project Environmental Analysis Status and Anticipated Environmental Impacts*, new final paragraph; page 23-5:

A Draft Environmental Assessment was released by Reclamation for the project in November 2006 (Reclamation, 2006).

Chapter 25

Table 25-1, third row; page 25-2:

Colorado River Basin Regional Water Quality Control Board (CRBRWQCB)	Waste Discharge Requirements, Porter-Cologne Water Quality Control Act	Waste Discharge Requirements are required for activities that may discharge waste in a diffuse manner (such as from soil erosion or waste discharges to land), including the discharge of waste from construction operations, and dredge and fill activities.	Activities undertaken by a federal agency are ~~not~~ subject to Waste Discharge Requirements.

Chapter 28

Prior to forty-ninth reference listing; page 28-3:

CEC (California Energy Commission). 2003. Preliminary Staff Assessment, Salton Sea Geothermal Unit #6 Power Project, Application for Certification (02-AFC-2) Imperial County, April 2003.

Fourth through eleventh reference listings; page 28-5:

County of Imperial. 1993a. Planning~~/Building~~ and Development Services Department. Imperial County General Plan,1993, as amended. CD Version.

County of Imperial. 1993b. Planning and Development Services Department. Seismic and Public Safety Element of the County of Imperial General Plan.

County of Imperial. 1994. Planning~~/Building~~ and Development Services Department. Bombay Beach/Hot Mineral Spa Community Area Plan, 1994, as amended through 1999.

County of Imperial. 1997a. Planning and Development Services Department.Noise Element of the County of Imperial General Plan.

County of Imperial. 1997b. Planning and Development Services Department.Visual Element of the County of Imperial General Plan.

County of Imperial. 1999. Planning and Development Services Department.Bombay Beach/Hot Mineral Spa Community Area Plan.

County of Imperial. 2000. Planning~~/Building~~ and Development Services Department. West Shores/Salton City Urban Area Plan.

County of Imperial. 2003. Planning and Development Services Department. ~~General Plan—~~Circulation and Scenic Highways Element of the County of Imperial General Plan.

Bottom two reference listings; page 28-5:

CRBRWQCB (Colorado River Basin Regional Water Quality Control Board). 200~~2~~5a. Water Quality Control Plan, Colorado River Basin-Region 7, includes Amendments Adopted by the Regional Board through ~~November~~ October 200~~2~~5. http://www.waterboards.ca.gov/coloradoriver/documents/RBTPlan.pdf

CRBRWQCB (Colorado River Basin Regional Water Quality Control Board). 2002~~b~~. Pathogen Total Maximum Daily Load for the New River and Implementation Plan. Prepared by Regional Board Staff, Watershed Protection Branch, California Environmental Protection Agency, Regional Water Quality Control Board, Colorado River Basin Region.

Third reference listing; page 28-6:

CRBRWQCB (Colorado River Basin Regional Water Quality Control Board). 2005b. Draft Salton Sea Nutrient TMDL, Numeric Target.

New final IID (Imperial Irrigation District) reference listing near bottom of page 28-10:

IID (Imperial Irrigation District). 2007. IID Monthly Crop Acreage Report. January 11, 2007.

Appendix D

Table of Contents, third line; page D-iv:

Table D-5; page D-71:

Revised Table on following page.

Marine Sea in Alternatives 5 and 6, subsection *Nutrients*, third paragraph; page D-84:

Ammonia concentrations in the hypolimnion start to increase at the onset of stratification once the dissolved oxygen is depleted. Since this occurs earlier in the Marine Sea under Alternatives 5 and 6 than the Salton Sea under Recent Conditions, ammonia accumulates to higher levels than in the Recent Conditions simulation, as shown in Figures D2-58 and D2-59. Peak concentrations at the bottom of the water column approach 30 mg/L in the Marine Sea under Alternatives 5 and 6, about four times the 7 mg/L predicted in Salton Sea under the Recent Conditions simulation. The delayed timing of the entire water column mixing event (Julian Day 325) coupled with the level to which ammonia has accumulated in the hypolimnetic waters, contribute to anoxia in the entire water column ~~the inability~~ of the Marine Sea prior to recovery from the depressed dissolved oxygen condition later in the year. As shown in Figure D2-59, there is not enough oxygen in the Marine Sea under Alternatives 5 and 6 to completely convert the ammonia to nitrate after the mixing event.

Table D-6; page D-97:

Revised Table on following page.

Table D-5
Water Quality Reporting Metrics for Alternatives Simulations

Parameter	Metric[a]	Target Value	Recent Conditions (similar to Existing Conditions)	No Action Alternative-Variability Conditions			Marine Sea Habitat @ 35,000 mg/L			Shallow Water	
				Phase I (at 2020)	Phase III (at 2040)	Phase IV (at 2078)	Alts. 5 and 6	Alt. 7	Alt. 8	Saline Habitat Complex cells in Alts. 1, 2, 5, 6, 7, and 8 and Concentric Lakes in Alt. 4	Concentric Rings in Alt. 3
Bathymetry	Maximum depth (meters)		15.5	12.5	~~12.5~~62.5	~~12.5~~5.75	14.5	14.75	13.75	2	3
	Average depth (meters)		9.8	7.5	~~7.5~~3.6	~~7.5~~3.3	9.8	10.6	6.4	2	3
	Water surface area (square kilometers)		940.94	838.54	~~838.54~~ 572.8	~~838.54~~ 550.87	199.55	363.2	254.51	~~259.32~~ Not modeled	Not modeled~~259.32~~
	Volume (cubic kilometers)		9.190	6.284	~~6.284~~ 2.072	~~6.284~~ 1.791	1.962	3.854	1.639	Not modeled~~5.183~~	Not modeled~~7.774~~
Salinity assumed for Water Quality Model	Total dissolved solids (mg/L)	35,000	44,000	71,000	197,000	196,000	35,000	35,000	35,000	34,000	35,000
Temperature	Water column annual minimum temperature (°C)		12.4	11.9	10.8	10.7	12.3	12.2	11.3	9.2	9.6
	Water column annual maximum temperature (°C)		32.3	32.6	32.7	33.3	33.3	32.2	32.4	32.6	33.6
	Water column annual mean temperature (°C)		21.9	22.2	~~22.2~~22.0	~~22.2~~22.0	20.4	21.7	20.8	21.5	21.0

Table D-6
Water Quality Reporting Metrics for Alternatives Simulations with 50 Percent Phosphorus Load Reduction

Parameter	Metric[a]	Target Value	Recent Conditions (similar to Existing Conditions)	No Action Alternative-Variability Conditions			Marine Sea Habitat @ 35,000 mg/L			Shallow Water	
				Phase I (at 2020)	Phase III (at 2040)	Phase IV (at 2078)	Alts. 5 and 6	Alt. 7	Alt. 8	Saline Habitat Complex cells in Alts. 1, 2, 5, 6, 7, and 8 and Concentric Lakes in Alt. 4	Concentric Rings in Alt. 3
Bathymetry	Maximum depth (meters)		15.5	12.25	~~12.25~~ 6.25	~~12.25~~ 5.75	14.5	14.75	13.75	2	3
	Average depth (meters)		9.8	7.5	~~7.5~~ 3.6	~~7.5~~ 3.3	9.8	10.6	6.4	2	3
	Water surface area (square kilometers)		940.94	838.54	~~838.54~~ 572.78	~~838.54~~ 550.87	199.55	363.2	254.51	~~259.32~~ not modeled	~~259.32~~ not modeled
	Volume (cubic kilometers)		9.190	6.284	~~6.284~~ 2.072	~~6.284~~ 1.791	1.962	3.854	1.639	~~5.183~~ not modeled	~~7.774~~ not modeled

Appendix E, Attachment E2

Methodology, subsection Exhaust Emissions, second paragraph; insert footnote; page E2-4:

For construction equipment and marine vessels, emissions were calculated by multiplying the quantities (cy/yr) presented in Table E2-1 by derived emission factors (lb/cy), for an emission result of lb/yr.[1] To simplify calculations, an average derived emission factor for large and small dredges was used to calculate emissions. The section below describes how the derived emission factors were obtained. For diesel-fueled trucks, emissions were calculated by dividing the quantities (cy/yr) in Table E2-1 by the assumed truck capacity of 20 cy, multiplying by the number of miles traveled to transport or place materials (assumptions to follow) to get vehicle miles traveled (VMT/yr), and then multiplying the vehicle miles traveled (VMT) by the EMFAC2002 emission factor (lb/VMT), to obtain an emission result in lb/yr. Trucks were assumed to travel 10 miles one-way to transport rock or gravel on paved roads and 5 miles one-way on unpaved roads to place the rock or gravel. The VMT used to calculate exhaust emissions for water trucks was based on a surface area coverage rate of 2.9 acres/hour/truck (SJVAPCD, 2003), a 2-hour watering interval, and the total acres disturbed in constructing habitat complex and roads.

[1]The construction equipment emissions were calculated by multiplying the quantities (cy/yr) by the derived emission factor (lb/cy) by the weighted fraction of material handling capacity. For example, NO_x emissions from large equipment equaled: quantity (cy/yr) × 0.004 (lb/cy) × (125 / (125 + 80 + 45)).

Tables E2-8 through E2-13:

Tables E2-8 through E2-13 were inadvertently omitted from the Draft PEIR. These tables are provided below.

Table E2-8
Peak Construction Year Fugitive Dust (PM_{10}) Emission Calculations

Emission Source	No Action - CEQA	No Action - Variability	1 Saline Habitat Complex I	2 Saline Habitat Complex II	3 Concentric Rings	4 Concentric Lakes (Imperial Group)	5 North Sea	6 North Sea Combined	7 Combined North & South Lakes (SSA)	8 South Sea Combined
Peak Construction Year, Phase I (Existing to 2020), Dry Land Area Disturbed (ac/yr)										
Canals/Basins	1,000	1,000	0	0	0	0	0	0	0	0
Saline Habitat Complex	0	0	2,500	5,000	0	2,500	2,500	2,500	2,500	2,500
Air Quality Water Efficient Vegetation	2,000	2,000	4,000	4,000	4,000	0	4,000	4,000	0	4,000
Roadway Construction	100	100	100	100	100	100	100	100	100	100
Total Travel on Unpaved Roads (VMT/yr)										
Unpaved Roads (Material Placement)	9,333	9,333	131,333	253,750	528,633	104,583	679,050	3,725,117	4,509,983	4,098,483
Worst Year Uncontrolled Fugitive Dust (PM_{10}) Emissions (tons/yr)										
Saline Habitat Complex (Canals for No Action)	13	13	33	66	0	33	33	33	33	33
Air Quality Water Efficient Vegetation	4	4	8	8	8	0	8	8	0	8
Roadway Construction	1.32	1.32	1.32	1.32	1.32	1.32	1.32	1.32	1.32	1.32
Unpaved Roads (Material Placement)	13	13	181	351	730	145	938	5,148	6,232	5,663
Total (tons/yr)	**31**	**31**	**224**	**426**	**740**	**179**	**981**	**5,190**	**6,266**	**5,706**
Worst Year Controlled Fugitive Dust (PM_{10}) Emissions (tons/yr)										
Saline Habitat Complex (Canals for No Action)	3	3	9	17	0	9	9	9	9	9
Air Quality Water Efficient Vegetation	4	4	8	8	8	0	8	8	0	8
Roadway Construction	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34
Unpaved Roads (Material Placement)	6	6	82	158	329	65	422	2,316	2,804	2,549
Total (tons/yr) with Control	**14**	**14**	**99**	**183**	**337**	**74**	**439**	**2,333**	**2,813**	**2,565**

Table E2-9
Fugitive Dust (PM_{10}) Emission Factors and Control Efficiencies

Emission Factors			Fugitive Dust Controls	
Grading Surface[a] (lb/acre/day)	Travel on Unpaved Roads[b] (lb/VMT)	Agricultural Tilling[c] (ton/yr/acre)	Construction[d] (%)	Unpaved Roads[e] (%)
26.4	2.8	0.002	74%	55%

Unpaved Road EF (lb/VMT)[b] **2.8**
Silt Content (%)[f] 8.5
Average Vehicle weight (tons)[g] 23.25

[a] Emission factors calculated from SCAQMD CEQA Handbook 1993, (CEQA Table A9-9).
[b] Emission equation from AP-42 section 13-2 for industrial sites (http://www.epa.gov/ttn/chief/ap42/ch13/final/c13s0202.pdf)
[c] EF based on preparing the land to plant seed grass (type unspecified) with the drop profile of alfalfa (Jan. 2003, ARB 7.4, Table 2a)
[d] Emission reduction based on a 2-hr watering interval for exposed areas due to construction (WRAP Fugitive Dust Handbook, Nov. 2004)
[e] Emission reduction based upon watering twice a day for an industrial unpaved Road (WRAP, Nov. 2004)
[f] Average silt content from AP-42 Section 13.2.2 Table 13.2.2-1 for construction roads
[g] Average vehicle weight is based on typical construction equipment

Table E2-10
Early Start Habitat Fugitive Dust (PM_{10}) Emission Calculations

Emission Source	
	Dry Land Disturbed (acres/yr)[a]
Saline Habitat Complex	2,000
Roadway Construction	100
Unpaved Roads (Material Transport)	131,333
	Uncontrolled PM_{10} Emissions (ton/yr)
Saline Habitat Complex	26
Roadway Construction	1
Unpaved Roads (Material Transport)	181
Total (tons / yr)	**209**
Alternative	1
	Controlled PM_{10} Emissions (ton/yr)
Saline Habitat Complex	7
Roadway Construction	0.34
Unpaved Roads (Material Transport)	82
Total (tons / yr) with Control	**89**

[a] Values based on Alternative 1.

Table E2-11
Fugitive Dust (PM_{10}) Calculation Assumptions

Variable	Assumption
Canals/Basins	Canals would only be constructed for the no action alternative in the peak construction year.
Saline Habitat Complex	There would be no acres of Saline Habitat Complex under construction in the peak year for the No Action Alternative or Alternative 3. For Alternative 2, there would be 5,000 acres of Saline Habitat Complex under construction in the peak year.
Air Quality Water Efficient Vegetation	There would be no acres of WEV for alternative 4 or alternative 7. For the no action alternative, there would be 2,000 acres of WEV under construction in the peak year. It was assumed that no control for fugitive dust, such as watering, would be applied.
Roadway Construction	100 acres under construction in the peak year for all alternatives.
Unpaved Roads (Material Placement)	Vehicle miles traveled based on haul truck capacity of 20 cubic yards and a 5 mile one-way trip on unpaved roads to place materials.
Early Start Habitat	Early start would be completed prior to other construction and activities and levels were assumed to be similar for all alternatives. Emissions were calculated for Alternative 1 and assumed to represent all alternatives with Early Start Program implemented (2,3,5,6 and 8).

Table E2-12
Peak Construction Year Quantities (cubic yards) for Exhaust Emission Calculations

Values for Peak Construction Year	No Action - CEQA	No Action - Variability	1 Saline Habitat Complex I	2 Saline Habitat Complex II	3 Concentric Rings	4 Concentric Lakes (Imperial Group)	5 North Sea	6 North Sea Combined	7 Combined North & South Lakes (SSA)	8 South Sea Combined
Rock cy/yr transported by truck	0	0	152,000	311,500	6,476,000	375,000	8,235,000	15,323,000	10,947,500	16,467,000
Rock cy/yr placed by barge	0	0	0	0	5,828,400	337,500	7,254,000	9,402,600	6,139,600	9,998,000
Rock cy/yr placed by truck	0	0	152,000	311,500	647,600	37,500	981,000	5,920,400	4,807,900	6,469,000
Gravel cy/yr transported by truck	18,667	18,667	110,667	196,000	1,881,667	171,667	1,375,500	2,617,833	4,685,667	3,027,167
Gravel cy/yr placed by barge	0	0	0	0	1,472,000	0	998,400	1,088,000	473,600	1,299,200
Gravel cy/yr placed by truck	18,667	18,667	110,667	196,000	409,667	171,667	377,100	1,529,833	4,212,067	1,727,967
Sediment cy/yr dredged	0	0	0	0	3,450,000	6,193,125	1,950,000	4,180,000	0	4,920,000
Soil/clay cy/yr graded	2,525,000	2,525,000	3,594,000	6,593,000	0	5,000,000	3,755,000	2,545,500	1,530,600	1,500,000
Soil cy/yr disturbed for AQ WEV	807,000	807,000	807,000	807,000	807,000	0	807,000	807,000	0	807,000

Table E2-13
Land Based Equipment Exhaust Emission Calculations

Equipment Type	Emissions (ton/yr)		Emissions (lb/day)	
	NO_x	Diesel PM_{10}	NO_x	Diesel PM_{10}
Alternative 1: Saline Habitat Complex I				
Large Size Construction Equipment	3.7	0.049	27.9	0.4
Medium Size Construction Equipment	1.9	0.025	14.0	0.2
Small Size Construction Equipment	1.5	0.020	11.1	0.1
Tugboat/barge	0	0	0	0
Dredge	0	0	0	0
Haul Truck - Rock	2.2	0.05	16.8	0.38
Haul Truck - Gravel	1.6	0.04	12.2	0.35
Water Truck	0.6	0.012	4.2	0.09
Total	**11**	**0.19**	**86**	**1.5**
Miscellaneous (add 10%)	1	0.02	9	0.2
Grand Total	**13**	**0.21**	**95**	**1.7**
Alternative 2: Saline Habitat Complex II				
Large Size Construction Equipment	6.8	0.09	51.2	0.7
Medium Size Construction Equipment	3.4	0.05	25.7	0.3
Small Size Construction Equipment	2.0	0.03	15.2	0.2
Tugboat/barge	0	0	0	0
Dredge	0	0	0	0
Haul Truck - Rock	4.5	0.10	34.3	0.78
Haul Truck - Gravel	2.8	0.06	21.5	0.49
Water Truck	1.1	0.025	8.2	0.19
Total	**21**	**0.35**	**156**	**2.7**
Miscellaneous (add 10%)	2	0.04	16	0.3
Grand Total	**23**	**0.39**	**172**	**2.9**
Alternative 3: Concentric Rings				
Large Size Construction Equipment	0	0	0	0
Medium Size Construction Equipment	0	0	0	0
Small Size Construction Equipment	0.81	0.011	6.2	0.08
Tugboat/barge	706	41	5,345	307
Dredge	40	2.28	300	17
Haul Truck - Rock	66	1	361	8
Haul Truck - Gravel	20	0	112	3
Water Truck	0.021	0.000	0.2	0.00
Total	**832**	**45**	**6,125**	**335**
Miscellaneous (add 10%)	83.2	4.48	613	33.5
Grand Total	**915**	**49**	**6,738**	**369**

Table E2-13
Land Based Equipment Exhaust Emission Calculations

Equipment Type	Emissions (ton/yr)		Emissions (lb/day)	
	NO_x	Diesel PM_{10}	NO_x	Diesel PM_{10}
Alternative 4: Concentric Lakes (Imperial Group)				
Large Size Construction Equipment	5	0	39	1
Medium Size Construction Equipment	3	0	20	0
Small Size Construction Equipment	0.9	0.01	6.9	0.1
Tugboat/barge	33	2	247	14
Dredge	71	4	539	31
Haul Truck - Rock	3.8	0.1	20.7	0.5
Haul Truck - Gravel	2	0	0	4
Water Truck	0.553	0.000	4.2	0.00
Total	**119**	**6**	**877**	**50**
Miscellaneous (add 10%)	12	1	88	5
Grand Total	**131**	**7**	**964**	**55**
Alternative 5: North Sea				
Large Size Construction Equipment	3.8	0.05	29.1	0.4
Medium Size Construction Equipment	1.9	0.03	14.6	0.2
Small Size Construction Equipment	1.5	0.02	11.3	0.2
Tugboat/barge	798	46	6043	347
Dredge	22	1	170	10
Haul Truck - Rock	84.6	1.9	468	10.6
Haul Truck - Gravel	15.2	0.3	87	2.0
Water Truck	0.6	0.012	4.2	0.09
Total	**928**	**49**	**6,827**	**370**
Miscellaneous (add 10%)	93	5	683	37
Grand Total	**1,020**	**54**	**7,509**	**407**
Alternative 6: North Sea Combined				
Large Size Construction Equipment	2.6	0.03	19.8	0.3
Medium Size Construction Equipment	1.3	0.02	9.9	0.1
Small Size Construction Equipment	1.3	0.02	9.6	0.1
Tugboat/barge	1,014	58	7,681	441
Dredge	48	3	364	21
Haul Truck - Rock	177	4.0	975	22.0
Haul Truck - Gravel	32.8	0.7	183	4
Water Truck	0.6	0.012	4.2	0.09
Total	**1,278**	**66**	**9,246**	**489**
Miscellaneous (add 10%)	128	7	925	49
Grand Total	**1,405**	**72**	**10,171**	**538**

Table E2-13
Land Based Equipment Exhaust Emission Calculations

Equipment Type	Emissions (ton/yr)		Emissions (lb/day)	
	NO_x	Diesel PM_{10}	NO_x	Diesel PM_{10}
Alternative 7: Combined North and South Lakes (SSA)				
Large Size Construction Equipment	1.57	0	12	0
Medium Size Construction Equipment	0.79	0	6	0
Small Size Construction Equipment	0.28	0.00	2.10	0.03
Tugboat/barge	639	37	4,842	278
Dredge	0	0	0	0
Haul Truck - Rock	129	3	711	16
Haul Truck - Gravel	66	1	362	8
Water Truck	0.6	0.012	4.2	0.09
Total	**838**	**41**	**5,939**	**303**
Miscellaneous (add 10%)	83.76	4.12	594	30.29
Grand Total	**921**	**45**	**6,533**	**333**
Alternative 8: South Sea Combined				
Large Size Construction Equipment	1.5	0.02	11.6	0.2
Medium Size Construction Equipment	0.8	0.01	5.9	0.1
Small Size Construction Equipment	1.1	0.01	8.2	0.1
Tugboat/barge	1092	63	8,272	475
Dredge	57	3	428	25
Haul Truck - Rock	191	4.3	1049	24
Haul Truck - Gravel	37.7	0.9	209	5
Water Truck	0.6	0.012	4.2	0.09
Total	**1,381**	**71**	**9,988**	**529**
Miscellaneous (add 10%)	138	7	999	53
Grand Total	**1,519**	**78**	**10,987**	**582**
No Action - CEQA				
Large Size Construction Equipment	3	0.0345	20	0.26
Medium Size Construction Equipment	1	0.0173	10	0.13
Small Size Construction Equipment	1.3	0.0169	9.6	0.1
Tugboat/barge	0	0	0	0
Dredge	0	0	0	0
Haul Truck - Rock	0	0	0	0
Haul Truck - Gravel	0.27	0.0061	2.3	0.053
Water Truck	0.234	0.0053	1.8	0.04
Total	**6**	**0.08**	**43**	**0.61**
Miscellaneous (add 10%)	1	0.01	4	0.06
Grand Total	**6.2**	**0.09**	**47.5**	**0.67**

Table E2-13
Land Based Equipment Exhaust Emission Calculations

Equipment Type	Emissions (ton/yr)		Emissions (lb/day)	
	NO_x	Diesel PM_{10}	NO_x	Diesel PM_{10}
No Action - Variability				
Large Size Construction Equipment	3	0.034	20	0.26
Medium Size Construction Equipment	1	0.017	10	0.13
Small Size Construction Equipment	1.3	0.017	9.6	0.1
Tugboat/barge	0	0	0	0
Dredge	0	0	0	0
Haul Truck - Rock	0	0	0	0
Haul Truck - Gravel	0.27	0.006	2.3	0.053
Water Truck	0.234	0.0053	1.8	0.04
Total	**6**	**0.08**	**43**	**0.61**
Miscellaneous (add 10%)	1	0.01	4	0.06
Grand Total	**6.2**	**0.09**	**47.5**	**0.67**

Appendix E, Attachment E3

Determined Areas of Exposed Playa, second paragraph; page E3-8:

Based on GIS mapping data, the total area of the Salton Sea was measured and is shown in Table E3-4. A breakdown of the acreages was performed based on the hypothetical division of the Salton Sea into northern and southern portions. The meteorological data for the Niland data were used to estimate emissions for the area of the Salton Sea south of the UTM northing coordinate of 3690572 meters. The data from the Niland station indicate wind speeds exceeded ~~35~~ 30 mph at times during 2002 and the predominant wind direction was from the west. As stated in the previous subsection, no emissions were predicted for the northern portions of the Salton Sea represented by the Indio meteorological station.

Table E3-5, Summary of North, South, and Total Exposed Playa Areas by Alternative (Acres); page E3-13:

Based on GIS mapping data, the total area of the Salton Sea was measured and is shown

Alternatives	Phase I (Existing-2020) North Sea South Sea Total Sea	Phase II (2020-2030) North Sea South Sea Total Sea	Phase III (2030-2040) North Sea South Sea Total Sea	Phase IV (2040-2078) North Sea South Sea Total Sea	Comments
Alternative 1 – Saline Habitat Complex I	12,000 18,000 ~~83,000~~ 30,000	—	—	33,200 49,800 83,000	Assumes 40 percent of the total exposed area is in the north portion and 60 percent in the south portion of the Salton Sea.

Appendix E, Attachment E9

Table E9-1, fifth row; page E9-1

Gypsum	$CaSO_4 \cdot 2H_2O$	Calcium sulfate d~~e~~ihydrate

Appendix F

Lakes and Rings, second paragraph; page F-12:

The Lake habitat type would have varying salinity (ranging from 20,000 to ~~80,000~~60,000 mg/L) and depth depending on the location of the lake. The Ring habitat type would have salinities ranging from 20,000 to 40,000 mg/L.

Appendix G

Fish Consumption Rates, second paragraph; page G-15:

For the Existing Conditions, adult recreational anglers could consume from 13 to more than 30 meals per month of fish from different habitats within the Salton Sea without exceeding the maximum consumption rates based on selenium exposures. Children who consume more than about 4 meals per month may be exposed to health risks above target levels. For the No Action Alternative, maximum consumption rates range from about 9 to more than 100 meals per month for an adult and from 2 to more than 30 meals per month for a child. These large ranges in safe consumption rates are due to the high variability among the individual habitat types in the whole-body fish tissue EPCs, which are, in turn, proportional to the sediment EPCs that were determined based on projected selenium loadings and apportionment from the respective sources to a given habitat. For example, under the No Action Alternative – Variability Conditions, both the sediment and whole-body fish EPCs for the Alamo and Whitewater river estuaries vary by more than one order of magnitude (Table G-9), which accounts for the differences in the maximum consumption rates (109 versus 9, respectively) for these two habitats. Maximum fish consumption rates for the alternatives typically were greater than 15 meals per month for an adult, with the exception of the slightly lower rates associated with the Marine Sea habitats of Alternatives 5, 6, and ~~6~~7 (10 ~~and~~ to 13 meals per month~~, respectively~~).

Table G-9; pages G-16 and G-17:

Table G-9
Maximum Safe Fish Consumption Rates Based on Selenium Exposure Point Concentrations (EPC) For Salton Sea Restoration Alternatives and Habitats

Alternative/Habitat	Fillet Tissue Concentration – Selenium (mg/kg ww)	Maximum Fish Consumption Rate – Adult (g/week)	Maximum Fish Consumption Rate – Child (g/week)	Maximum Meals per Month – Adult	Maximum Meals per Month – Child
Existing Conditions					
Salton Sea – Open Water	2.11	1,161	249	22.2	6.3
Salton Sea – Shoreline and Shallow Water	1.99	1,231	264	23.6	6.7
Estuary – Alamo River	3.4	721	154	13.8	3.9
Estuary – New River	2.91	842	180	16.1	4.6
Estuary – Whitewater River	1.25	1,960	420	37.5	10.6
Freshwater Marsh	1.38	1,775	380	34.0	9.6
No Action Alternative – CEQA Conditions					
Estuary – Alamo River	0.36	6,806	1,458	130.3	36.8
Estuary – New River	0.72	3,403	729	65.1	18.4
Estuary – Whitewater River	3.07	798	171	15.3	4.3
No Action Alternative – Variability Conditions					
Estuary – Alamo River	0.43	5,698	1,221	109.1	30.8
Estuary – New River	1.02	2,402	515	46.0	13.0
Estuary – Whitewater River	5.25	467	100	8.9	2.5
Alternative 1 – Saline Habitat Complex I					
Saline Habitat Complex-South	1.11	2,207	473	42.3	11.9
Saline Habitat Complex-West	1.34	1,828	392	35.0	9.9
Alternative 2 – Saline Habitat Complex II					
Saline Habitat Complex-North	3.03	809	173	15.5	4.4
Saline Habitat Complex-South	1.19	2,059	441	39.4	11.1
Saline Habitat Complex-West	1.93	1,269	272	24.3	6.9
Alternative 3 – Concentric Rings					
First Ring	2.14	1,145	245	~~35.0~~21.9	6.2
Second Ring	1.98	1,238	265	~~37.9~~23.7	6.7

Table G-9
Maximum Safe Fish Consumption Rates Based on Selenium Exposure Point Concentrations (EPC) For Salton Sea Restoration Alternatives and Habitats

Alternative/Habitat	Fillet Tissue Concentration – Selenium (mg/kg ww)	Maximum Fish Consumption Rate – Adult (g/week)	Maximum Fish Consumption Rate – Child (g/week)	Maximum Meals per Month – Adult	Maximum Meals per Month – Child
Alternative 4 – Concentric Lakes					
First Lake	1.99	1,231	264	~~37.7~~23.6	6.7
Second Lake	1.66	1,476	316	~~45.2~~28.3	8.0
Third Lake	2.57	953	204	~~29.2~~18.2	5.2
Fourth Lake	3.07	798	171	~~24.4~~15.3	4.3
Alternative 5 – North Sea					
Marine Sea	4.69	522	112	10.0	2.8
Saline Habitat Complex	1.23	1,992	427	38.1	10.8
Alternative 6 – North Sea Combined					
Marine Sea	3.70	662	142	12.7	3.6
Saline Habitat Complex	1.13	2,168	465	41.5	11.7
Alternative 7 – Combined North and South Lakes*					
Marine Sea	3.85	636.3	137	~~19.5~~12.2	3.4
Saline Habitat Complex – East	0.70	3,500	750	~~107.1~~67.0	18.9
Saline Habitat Complex – North	2.40	1,021	219	~~31.3~~19.5	5.5
IID Freshwater Reservoir	0.69	3,550	761	~~108.7~~68.0	19.2
Alternative 8 – South Sea Combined					
Marine Sea	1.68	1,458	312	27.9	7.9
Saline Habitat Complex	2.18	1,124	241	21.5	6.1

Notes:
* The habitat designations are as described in Appendix F.
Rates are based on an oral RfD of 0.005 mg/kg-day and body weights of 70 kg and 15 kg for adults and children, respectively.
Maximum meals per month based on meal sizes of 227 grams (8 ounces) for an adult and 172 grams (6 ounces) for a child.
mg/kg ww = milligrams per kilogram wet weight; g/week = grams per week

Waterfowl Consumption Rates, third paragraph; page G-19:

For the Existing Conditions, adults could consume from 23 to more than 60 meals per month of duck muscle from different habitats within the Salton Sea without exceeding the maximum consumption rates based on selenium exposures. Children who consume more than about 10 meals per month may be exposed to health risks above target levels. For the No Action Alternative, maximum consumption rates range from about 14 to more than 100 meals per month for an adult and from 6 to more than 40 meals per month for a child. Similar to safe consumption rates estimated for fish, these large ranges in safe consumption rates for ducks are due to the high variability among the individual habitat types in the duck diet EPCs, which are, in turn, proportional to the sediment EPCs. Maximum duck meal consumption rates for the alternatives typically were greater than 20 meals per month for an adult, with the exception of the slightly lower rates associated with the Marine Sea habitats of Alternatives 5, 6, and ~~6~~7 (16 ~~and~~ to 19 meals per month~~, respectively~~). Maximum safe consumption rates for children ranged from about 6 to more than 30 meals per month for various alternative and habitat combinations

Table G-12; pages G-20 and G-21:

Table G-12
Maximum Safe Duck Consumption Rates Based on Selenium Exposure Point Concentrations (EPC) For Salton Sea Restoration Alternatives and Habitats

Alternative/Habitat	Duck Tissue Concentration – Selenium (mg/kg ww)	Maximum Duck Consumption Rate – Adult (g/week)	Maximum Duck Consumption Rate – Child (g/week)	Maximum Meals per Month – Adult	Maximum Meals per Month – Child
Existing Conditions					
Salton Sea – Shoreline and Shallow Water	2.77	884	190	23.3	10.0
Estuary – Alamo River	2.79	878	188	23.1	9.9
Estuary – New River	1.03	2,379	510	62.6	26.8
Estuary – Whitewater River	2.22	1,104	236	29.1	12.5
Freshwater Marsh	1.54	1,591	341	41.9	18.0
No Action Alternative – CEQA Conditions					
Salton Sea – Shoreline and Shallow Water	1.96	1,250	268	32.9	14.1
Estuary – Alamo River	0.57	4,298	921	113.2	48.5
Estuary – New River	0.90	2,722	583	71.7	30.7
Estuary – Whitewater River	2.83	886	186	22.8	9.8
No Action Alternative – Variability Conditions					
Salton Sea – Shoreline and Shallow Water	2.35	1,043	223	27.5	11.8
Estuary – Alamo River	0.63	3,889	833	102.4	43.9
Estuary – New River	1.17	2,094	449	55.1	23.6
Estuary – Whitewater River	4.51	543	116	14.3	6.1
Alternative 1 – Saline Habitat Complex I					
Saline Habitat Complex – South	1.25	1,960	420	51.6	22.1
Saline Habitat Complex – West	1.44	1,701	365	44.8	19.2
Alternative 2 – Saline Habitat Complex II					
Saline Habitat Complex – North	2.80	875	188	23.0	9.9
Saline Habitat Complex – South	1.32	1,856	398	48.9	20.9
Saline Habitat Complex – West	1.93	1,269	272	33.4	14.3
Alternative 3 – Concentric Rings					
First Ring	2.09	1,173	251	3~~5~~0.9	13.2
Second Ring	1.97	1,244	267	3~~8.1~~2.8	14.0

Table G-12
Maximum Safe Duck Consumption Rates Based on Selenium Exposure Point Concentrations (EPC) For Salton Sea Restoration Alternatives and Habitats

Alternative/Habitat	Duck Tissue Concentration – Selenium (mg/kg ww)	Maximum Duck Consumption Rate – Adult (g/week)	Maximum Duck Consumption Rate – Child (g/week)	Maximum Meals per Month – Adult	Maximum Meals per Month – Child
Alternative 4 – Concentric Lakes					
First Lake	1.98	1,238	265	3~~7.9~~2.6	14.0
Second Lake	1.70	1,441	309	~~44.1~~38.0	16.3
Third Lake	2.43	1,008	216	~~30.9~~26.6	11.4
Fourth Lake	2.83	866	186	2~~6.5~~2.8	9.8
Alternative 5 – North Sea					
Marine Sea	4.08	600	129	15.8	6.8
Saline Habitat Complex	1.35	1,815	389	47.8	20.5
Alternative 6 – North Sea Combined					
Marine Sea	3.32	738	158	19.4	8.3
Saline Habitat Complex	1.26	1,944	417	51.2	21.9
Alternative 7 – Combined North and South Lakes[b]					
Marine Sea	3.44	712	153	~~21~~18.8	8.0
Saline Habitat Complex – East	0.89	2,753	590	~~84.3~~72.5	31.1
Saline Habitat Complex – North	2.30	1,065	228	~~32.6~~28.1	12.0
IID Freshwater Reservoir	0.87	2,816	603	~~86~~74.2	31.8
Alternative 8 – South Sea Combined					
Marine Sea	1.72	1,424	305	37.5	16.1
Saline Habitat Complex	2.13	1,150	246	30.3	13.0

Notes:
[a] All exposure point concentrations are for selenium.
[b] The habitat designations are as described in Appendix F.
Rates are based on an oral RfD of+ 0.005 mg/kg-day and body weights of 70 kg and 15 kg for adults and children, respectively.
Maximum meals per month based on meal sizes of 180 grams (6 ounces) for an adult and 82.5 grams (2.9 ounces) for a child.
mg/kg ww = milligrams per kilogram wet weight; g/week = grams per week

Table G-13, last row; page G-23:

Adult consumption of fish muscle tissue – Project Alternatives #1 – 8 (see Table G-9)	522 to 3,550	10 to ~~10~~68	This evaluation

Appendix H

Following Preparation of the Ecosystem Restoration Study; page H-4:

MOST COST-EFFECTIVE, TECHNICALLY FEASIBLE ALTERNATIVE

Fish and Game Code Section 2081.7 states that the evaluation of alternatives in the Salton Sea Ecosystem Restoration Study shall include "at least one most cost-effective, technically feasible, alternative." This section describes the most cost-effective, technically feasible, alternative and the criteria for selecting this alternative. This information has been included in the ecosystem restoration study pursuant to Fish and Game Code Section 2081.7. For the purpose of this analysis, most the term "most cost-effective" was defined as least cost because quantifying monetary benefits of restoration would be difficult at the current programmatic level of analysis. All of the alternatives are technically feasible.

The State determined based on the evaluation of the eight alternatives that two of the alternatives meet the most cost-effective, technically feasible alternative criteria, Alternative 2 (Saline Habitat Complex II) and Alternative 5 (North Sea). These alternatives were identified from among the other alternatives, all of which meet the program's legislative mandate of providing the maximum feasible attainment of the following objectives: (1) 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; (2) elimination of air quality impacts from the restoration projects; and (3) protection of water quality."

As part of the process to determine the Preferred Alternative, the Salton Sea Advisory Committee's Habitat Working Group determined that the Saline Habitat Complex was the component that provided the most ecosystem benefits. The Saline Habitat Complex provided diversity of fish and wildlife similar to existing conditions. However, a Marine Sea could provide greater diversity of fish and wildlife similar to historical conditions. The Salton Sea Advisory Committee's Air Quality Working Group determined that meeting the legislation's air quality objectives was a high priority.

Based on this information, Alternative 2 was identified as the most cost-effective, technically feasible alternative because it include the largest amount of Saline Habitat Complex. The Saline Habitat Complex would provide levels similar to the diversity of fish and wildlife that currently exist at the Salton Sea. Alternative 2 would achieve this level to a greater extent than Alternative 1. Additionally, Alternative 2 would be the most cost-effective alternative that best meets all of the legislative objectives. Although the construction and operations and maintenance costs of Alternative 4 as analyzed in the Draft PEIR would be less than those of Alternative 2, additional air quality measures would need to be added to Alternative 4 to fully meet the legislative objectives. This would increase the costs of Alternative 4, and therefore, Alternative 4 would likely be more costly than Alternative 2. Alternatives 3, 5, 6, 7, and 8 meet the legislative objectives to varying degrees, but are not as cost-effective.

Although Alternative 2 would provide diversity of fish and wildlife at levels similar to those that currently exist at the Salton Sea, Alternative 2 may not fully meet the legislative objective "historic levels and diversity of fish and wildlife" because it does not contain a marine waterbody as has historically existed at the Salton Sea. The most cost-effective, technically feasible alternative that best meets this objective is Alternative 5. Alternative 5 includes a Marine Sea that would provide habitat for a diverse fishery that would support fish-eating birds. Alternative 5 is the most cost-effective of the alternatives that include a Marine Sea. Due to water quality impacts identified in the Draft PEIR (including the potential for hydrogen sulfide generation), the Marine Sea depth in Alternative 5 may need to be reduced to less than 13 meters.

While the most cost-effective, technically feasible alternatives were identified during development of the Preferred Alternative, the most cost-effective, technically feasible alternatives were not selected as the Preferred Alternative. The selection criteria for the Preferred Alternative not only included the legislative objectives, but also included additional criteria based on input from the Salton Sea Advisory Committee and public. These criteria included providing Saline Habitat Complex and Marine Sea habitat along the northern shoreline, a Marine Sea area near existing communities and recreational areas, a Marine Sea along the southern shoreline for recreation, and areas for geothermal generation development.

Appendix H-1

Habitat Components of the Salton Sea Ecosystem Restoration, second paragraph; page H1-1:

This appendix provides information on the historical context and need for restoration, and information on fish and wildlife species found at the Salton Sea. This appendix also identifies possible habitat components that could comprise a restored Salton Sea ecosystem, including the physical and biological requirements needed to support fish and wildlife dependent on the Salton Sea. These components were developed in consideration of ~~the realities of~~ projected water supply availability and the feasibility of the infrastructure needed to maintain habitat values over the long term. Development of the habitat components represents collaboration between biology and engineering, in which multiple conceptual designs were reviewed, modified, and refined. Input also was provided by representatives of the Salton Sea Advisory Committee and scientists with expertise related to the Salton Sea.

Figure H1-11, Conceptual Layout of Type 1, 2, and 3 Saline Habitat Complex Cells; page H1-43:

Revised figure is on the following page.

Appendix H-2

Table of Contents, List of Figures, Item H2-9; page H2-v:

Inflows from Mexico, subsection Alamo River, first paragraph; page H2-10:

Flows in the Alamo River at the United States-Mexico border are primarily the result of drainage water from irrigated agriculture~~al~~ in the Mexicali Valley. Pursuant to an agreement between the United States and Mexico, a weir was constructed in 1997 on the Alamo River in Mexico, about 100 feet upstream of the United States-Mexico border with the intent of preventing dry weather flows from Mexico from flowing into the United States. Although the weir is currently in place, lack of operation and maintenance of drainage channels upstream has caused the water to continue to flow into the United States (CRBRWQCB, 2001). Alamo River flows at the United States-Mexico border have been estimated by IID (2002 and 2003a), but details regarding the methods and sources are not included in those documents. The United States Section of the International Boundary and Water Commission (USIBWC) reports that flows from 1949 to 1992 were estimated based on historical daily measurements of gage height at the Cipolleti weir and rating curves developed from monthly current meter measurements. From 1992 to the present, continuous gage height recordings and daily discharge measurements are available from IID (USIBWC, 2002). The data provided by IID have been adopted for use in this analysis. Average flow in the Alamo River at the United States-Mexico border is 1,646 acre-feet/year with a minimum and maximum of 324 and 2,274 acre-feet/year, respectively.

Range of Future Evaporation, new second paragraph; page H2-83:

High salinity in the Brine Sink will decrease the rate of evaporation. An evaporation-salinity relationship was incorporated into the hydrologic modeling and is discussed in detail in Appendix H-2, Attachment 1.

References, fifth listing; page H2-112:

United States Section of the International Boundary and Water Commission. 2002. Western Water Bulletin 2002.

Appendix H-2, Attachment 1

Results of the Model Situations, subsection Alternative 4 – Concentric Lakes, first paragraph; page H2-1-42:

In Alternative 4, the first Berm was assumed to be completed as early as 2016, but the water surface elevation was required to decline to -235 feet msl before full operations. The First Lake could stabilize at the an elevation of -230 feet msl by 2016, the Second Lake could stabilize at -240 feet msl by 2019, the Third Lake could stabilize at -255 feet msl by 2026, and the Fourth Lake could stabilize at -26~~0~~5 feet msl by 2040, as shown in Figure H2-1-17. Under many hydrologic scenarios, however, the Fourth Lake would not be constructed due to the high elevation of the Brine Sink and the possibility of inundation. The salinity targets could be achieved within one year of achieving the elevation targets, as shown in Figure H2-1-18.

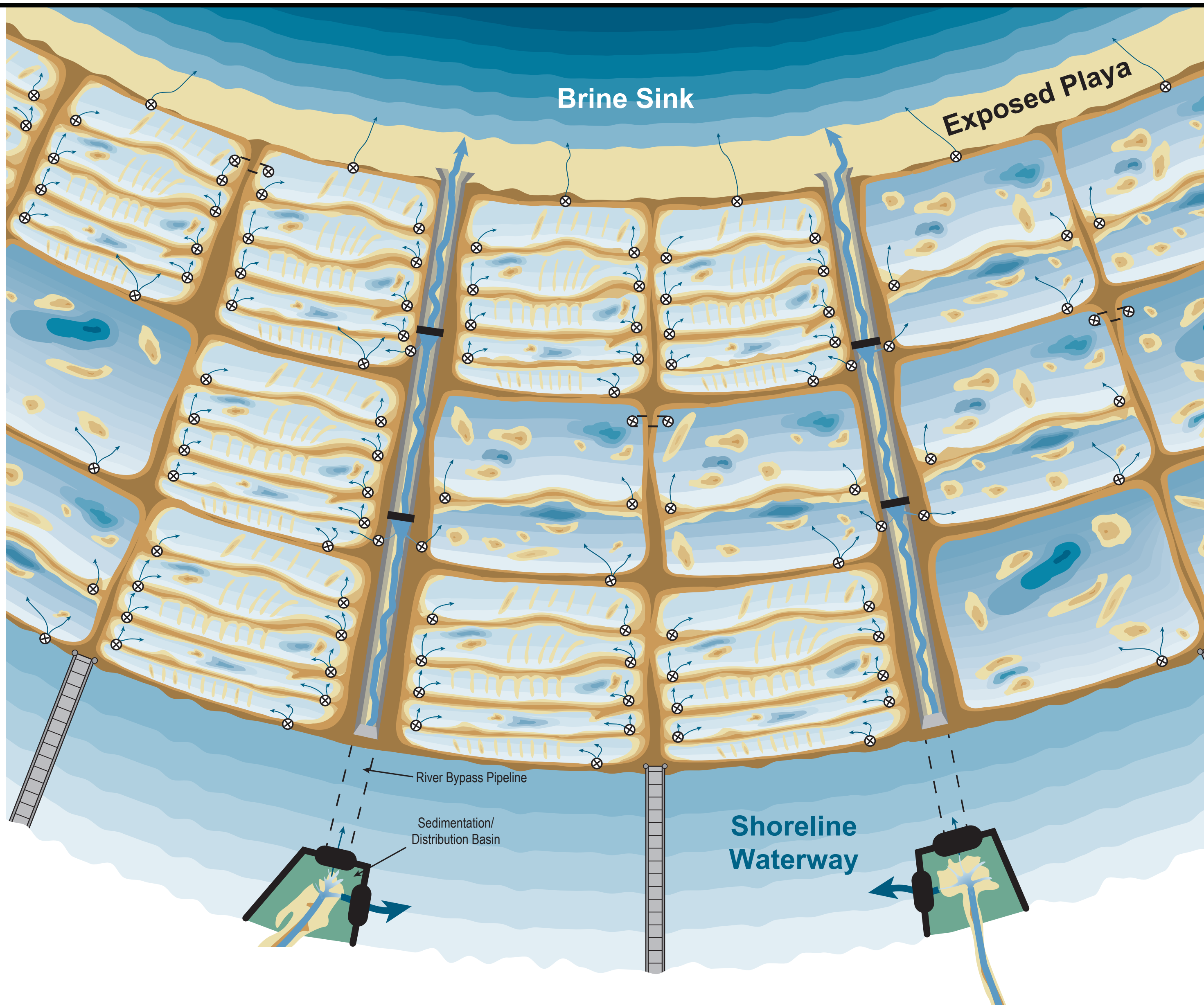
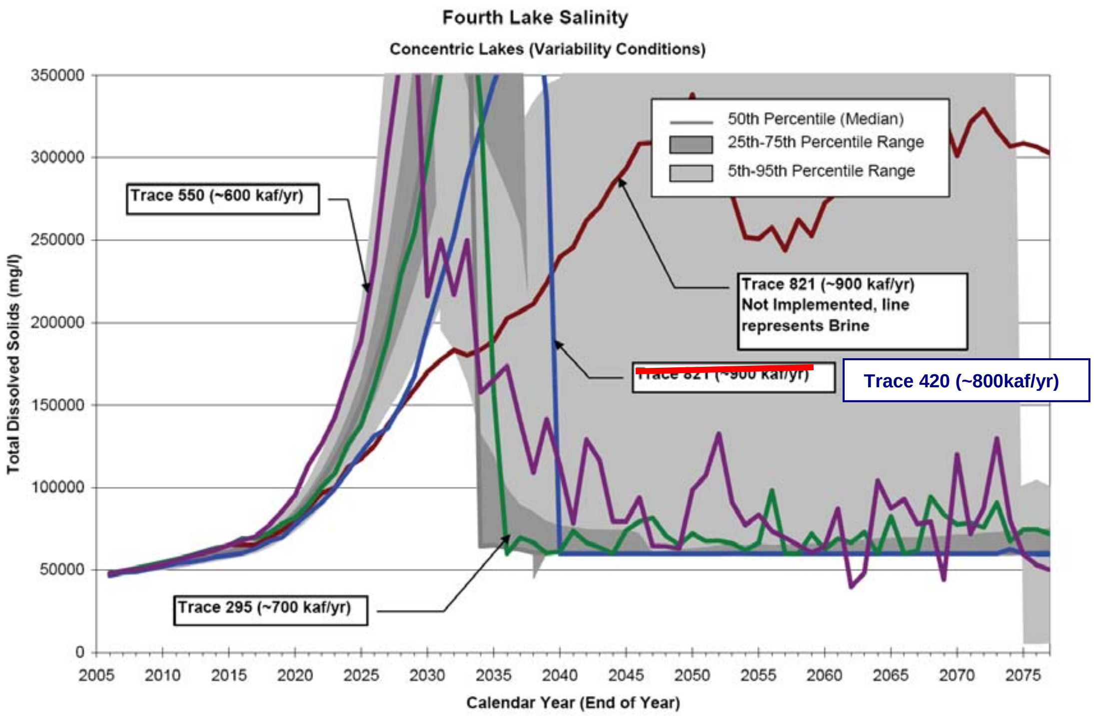


FIGURE H1-11
CONCEPTUAL LAYOUT OF TYPE 1, 2, AND 3 SALINE HABITAT COMPLEX CELLS

Appendix H-2, Attachment 2

SALSA Model Results - Fourth Lake Salinity for Alternative 4 – Concentric Lakes, page 1:



Appendix H-4

Table of Contents; page H4-iii:

Executive Summary, third paragraph; page H4-1:

The Sea Bed deposits consist predominantly of low strength clay. This unfavorable foundation condition, coupled with the high level of input ground motions, requires typical upstream and downstream slope inclinations of 10 to 1 and 15 to 1, respectively, for barriers. This conceptual cross-section is considered appropriate due to the weak foundation layers and the very limited geotechnical data at the Salton Sea. If a preferred restoration alternative involving a barrier is selected, additional investigations will be needed along any proposed barrier alignment. The investigations should also focus on assessing the liquefaction potential of the foundation soils and its extent. It is anticipated that future investigations and analyses may be able to economize on the necessary fill volumes. The design slope inclinations assume the greatest differential between water surface elevations possible.

Executive Summary, sixth paragraph; page H4-1:

To achieve these performance characteristics, a rockfill having a maximum particle size in the 4-5 foot diameter range is required for barriers in excess of 25 feet in height. Larger size rocks could be placed on the upstream slope to resist wave action. It is anticipated that some restoration alternatives may require a quantity of rock in the range of ~~65~~ up to ~~75~~ 100 million cubic yards.

Executive Summary, eighth paragraph; page H4-2:

In addition, the Salton Sea Authority, in coordination with the U.S. Department of the Interior, Bureau of Reclamation (Reclamation) is currently developing a reconnaissance level investigation of Coolidge Mountain, ~~which is near~~ located closer to the Salton Sea. The results will likely not be completed in time to be incorporated into this document; however, if found suitable, this location could provide a relatively economical source of rockfill to construct in-sea barriers because of its proximity to the Salton Sea.

Liquefaction of Foundation Soils, entire subsection; page H4-6:

~~Liquefaction of Foundation Soils~~

~~The liquefaction potential of the foundation for the Perimeter Dikes is a concern. This is a concern under any alternative involving construction of structures on the Sea Bed. Liquefaction mitigation measures are available such as replacement of soil and dynamic compaction.~~

Foundation Investigations, paragraph before Table H4-1; page H4-7:

The subsurface investigation initiated in September 2003 was used to supplement the above information. The September 2003 investigation consisted of 11 boring and 17 Cone Penetration Tests, with locations as shown in Table H4-1.

Foundation Investigations, list item 1; page H4-7:

1. The first layer, Sea Bed deposits, is comprised of recently deposited very soft to loose highly plastic clays to silty fine sands. The thickness of this layer ranged from 0 to 21 feet, with the greatest thickness occurring in the southern and mid-Sea areas. (It is noted that throughout ~~this~~ the PEIR and this appendix, the term “Sea Bed” is used to describe the existing bottom elevation of the Salton Sea, while the term Sea Bed deposits is used to described the first 21 feet of soils below the existing bottom elevation).

California Department of Water Resources, Division of Safety of Dams, entire section; page H4-8:

~~California Department of Water Resources, Division of Safety of Dams Peer Review of Bureau of Reclamation Appraisal Level Design~~

~~Under Public Law 108-361, the Secretary of the Interior was required to complete a feasibility study on a preferred alternative for Salton Sea restoration. In October 2005, the DWR Division of Safety of Dams (DSOD) performed a peer review of Reclamation's 2005 Salton Sea Restoration Project Feasibility Study, Phase 1 (DWR, 2005). The review was focused on the need to treat the foundation for dams and barriers constructed within the Salton Sea. The conclusions gained from this peer review included:~~

- ~~Reclamation's appraisal level design exceeds DSOD's design standards and is judged to attain a high level of performance under all severe loading conditions.~~
- ~~In the case of jurisdictional impoundments for the restoration alternatives, the risk of life and property downstream of a dam is determined to be minimal.~~
- ~~Considering the limited amount of subsurface data compared to the size of the Salton Sea, Reclamation assessment that liquefiable materials are present everywhere within the Salton Sea's footprint is judged to be conservative.~~

~~DSOD's design criteria to meet minimum factors of safety and to have sufficient freeboard can be met by utilizing slopes that are appropriately inclined, treating the foundation, or a combination of both.~~

Table H4-8, table note; page H4-22:

* See Figure H~~5~~4-2 for locations of 'A' & 'B'.

Selected Ground Motions, third paragraph; page H4-79:

This suite of motions includes five consistent pairs of fault normal and fault parallel components (i.e., each pair are orthogonal components of the same motion that have been rotated to their fault normal and fault parallel directions). The two pairs of synthetic ground motions developed by ~~Somerville~~ non-DWR personnel (2003) ~~were~~ are also intended to represent orthogonal components of the same motion, although they have the appearance of being more independent than many natural recordings.

Selected Ground Motions, fourth through sixth bulleted items; page H4-80:

- R1300 / R1390: Modified synthetic records selected from a suite ~~developed by Paul Somerville~~ using fault rupture modeling (hybrid Green's function method).
- R1500 / R1590: Modified synthetic records selected from a suite ~~developed by Paul Somerville~~ using fault rupture modeling (hybrid Green's function method).
- S1021m: Modified synthetic record selected from a suite ~~developed by Walt Silva as reported by Wong (2004)~~ using fault rupture modeling (stochastic finite-fault ground motion model).

Selected Ground Motions, final paragraph; page H4-80:

As shown in Table H4-12, the selected ground motions prior to modification cover a range in directivity conditions. Most of the motions appear to represent a significant length of fault rupture toward the site from 42 km to 335 km, with the two sets of synthetic records ~~developed by Somerville~~ (R1300/R1390 and R1500/R1590) modeling the greatest distance (240 km and 335 km). Each of these motions represents a different fault rupture scenario and each must, in some sense, be considered independently. It should be noted that the R1300/R1390 motion has a non-physical character and should not be used for any future study.

Spectral Matching of Ground Motions, second paragraph; page H4-80:

Although simple, uniform scaling can lead to records that significantly exceed the response spectrum or are unacceptably deficient over extensive ranges in frequency. This problem seems to worsen for records with pronounced directivity effects or for target spectra representing large magnitude earthquakes at near field locations. To address this concern, non-stationary spectral matching was used to adjust the earthquake records developed for the eastern shore using the computer program RSPMATCH (Abrahamson, 1998). This program modifies the acceleration history in the time domain by adding wavelets at appropriate times and of suitable magnitudes and frequencies. This method is a significant improvement over frequency domain approaches as it tends to preserve the character of the original motion when properly applied.

Table H4-12; page H4-81:

Table H4-12
Summary of Selected Ground Motions Prior to Modification

Description of Original Unscaled Records from Strike-Slip Events or Simulations

Name	Earthquake Name	Mw	Rupture Distance (km)	Epicentral Distance (km)	Rupture Length (km)	Length Ratio X [1]	Site Type	Orientation to Fault	~~Source of Record~~ [2]	PGA (g)	PGV (m/s)	Dur. $D_{5\text{-}95}$ (sec)
PS10FN PS10FP	2002 Denali	7.9	3	88	> 340	0.25	Holocene gravel	Normal Parallel	~~USGS~~	0.29 0.32	1.15 1.51	26.3 25.3
LUC51FN LUC321FP	1992 Landers	7.3	2	42	85	0.5	6m Dec. Granite	Normal Parallel	~~COSMOS~~	0.74 0.72	1.11 1.10	13.2 13.8
ELC53FN ELC143FP	1940 El Centro	6.9	8.3	--	> 40	0.15	> 300m alluvium	Normal Parallel	~~PEER~~	0.21 0.29	0.23 0.38	24.1 23.9
R1590FN R1500FP	Synthetic	8.2	5	240	470	0.5	soft rock	Normal Parallel	~~Somerville~~	0.56 0.35	2.18 1.05	50.1 39.6
R1390FN R1300FP	Synthetic	8.2	5	335	470	0.7	soft rock	Normal Parallel	~~Somerville~~	0.96 0.77	2.13 0.93	78.1 65.4
S1021M	Synthetic	8	7.5	--	576	--	soil	Normal ?	~~Silva~~	0.47	0.93	73.0
SIM8	Synthetic	8	--	--	--	--	soft rock ?	Parallel ?	~~Seed/Idriss~~	0.42	0.39	37.6

Notes:

[1] Length ratio is the fault length that ruptures towards the site divided by the total rupture length.
X=1.0 indicates full forward directivity, X=0.0 indicates full backward directivity.
X for 1940 El Centro taken from Somerville et al (1997). Otherwise, values estimated from reported distances.

[2] Source of record before rotation or other modification.

Ground Motions for Preliminary and Final Barrier Design, third bulleted item; page H4-82:

- Additional efforts may identify records that are more appropriate for the Salton Sea site. Specific concerns related to this site can be addressed, such as basin effects and the potential for fling movements. Refinements to the spectral matching may be desirable. The R1300/R1390 pair of ground motions should be removed from future consideration.

Displacement and Yield Acceleration, new final paragraph; page H4-83:

These initial estimates of yield acceleration versus displacement are considered approximate. These estimates do not include the effects of site specific response, the depth of failure surface, and the change in acceleration history with depth. Future studies should include site response analysis.

Rock Quarry Investigation, fourth paragraph; page H-4-114:

A third task order, Quarry Field Exploration, dated April 21, 2005 was issued to carry out a field investigation of both sites. The permitting process has been initiated with the Bureau of Indian Affairs to conduct field work at Coolidge Mountain on the Tribal Lands of Torres Martinez Desert Cahuilla Indians. However, the permitting process has been stalled to date because of environmental issues. More recently, the Salton Sea Authority, in coordination with the USBR, is currently developing a reconnaissance level investigation of the Coolidge Mountain. The results will likely not be completed in time to be incorporated into this document. But, if found suitable, this location ~~w~~could provide a relatively economical source of rockfill to construct in-Sea embankments because of its proximity to the sea.

Summary and Conclusion, second bulleted item; page H4-120:

- California Division of Safety of Dams Guidelines;

References, fifth listing; page H4-123:

Nicolon, Ten Cate. 2005. Miratech. Personal communication with ~~Thang D. Nguyen~~ John Vrymoed, DWR. February.

Appendix H-6

Pipelines, first paragraph; page H6-24:

River Bypass pipelines would be used when the extensions of the rivers must cross under ~~a Shoreline Waterway,~~ a Concentric Ring, Concentric Lake, or other canals, or when fresher inflows need to be conveyed to lower areas in the Sea Bed without being mixed with other water bodies.

Figure H6-11, Sedimentation/Distribution Basin for No Action Alternative and Alternative 1; page H6-43:

Revised figure is on the following page.

Figure H6-12, Sedimentation/Distribution Basin for Alternatives 2, 3, 4, 5, and 8; page H6-45:

Revised figure is on the following pages.

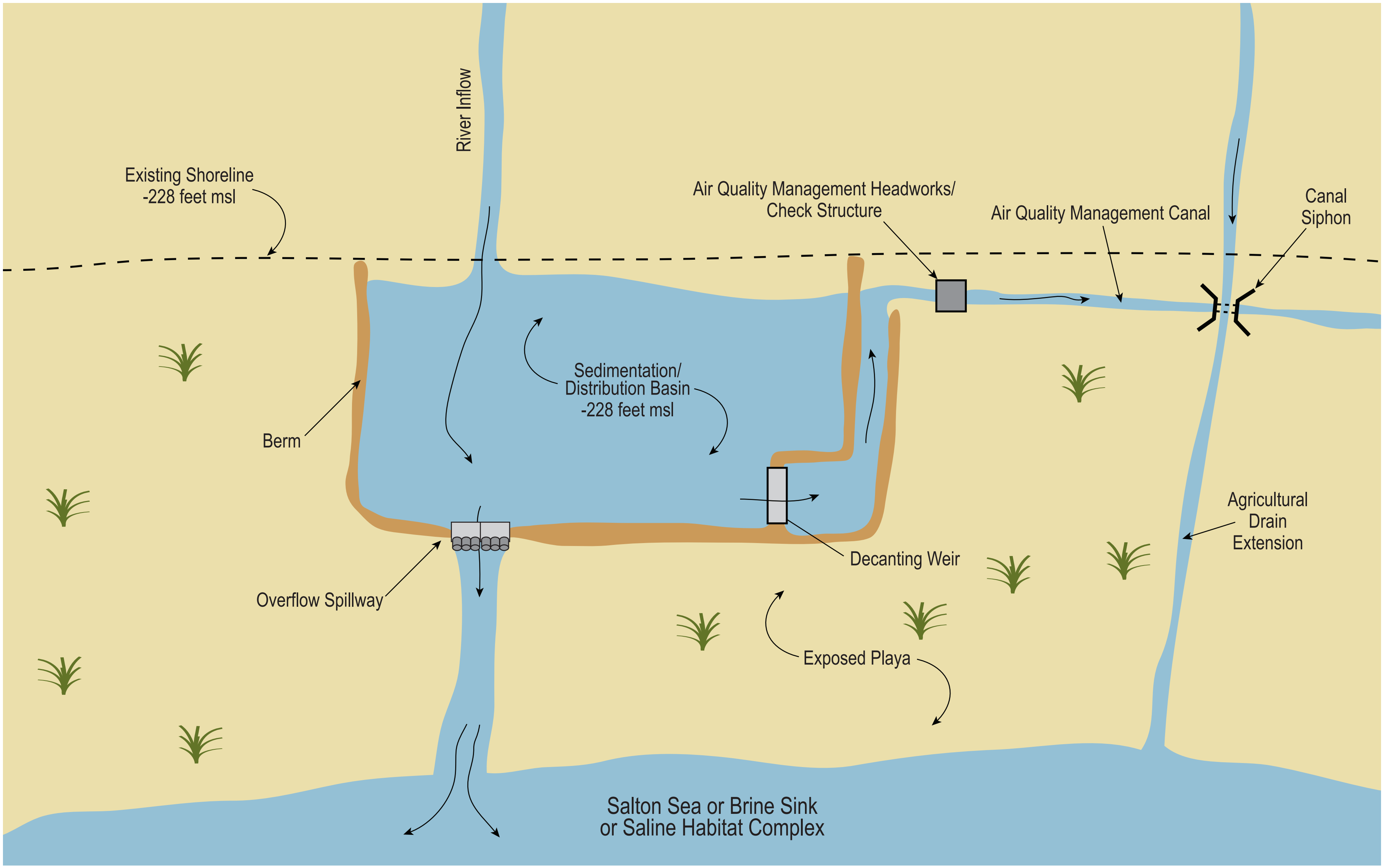


FIGURE H6-11
SEDIMENTATION/DISTRIBUTION BASIN FOR NO ACTION ALTERNATIVE AND ALTERNATIVE 1

W112005005SAC figure_H6-11.ai 06/06/07 tdaus

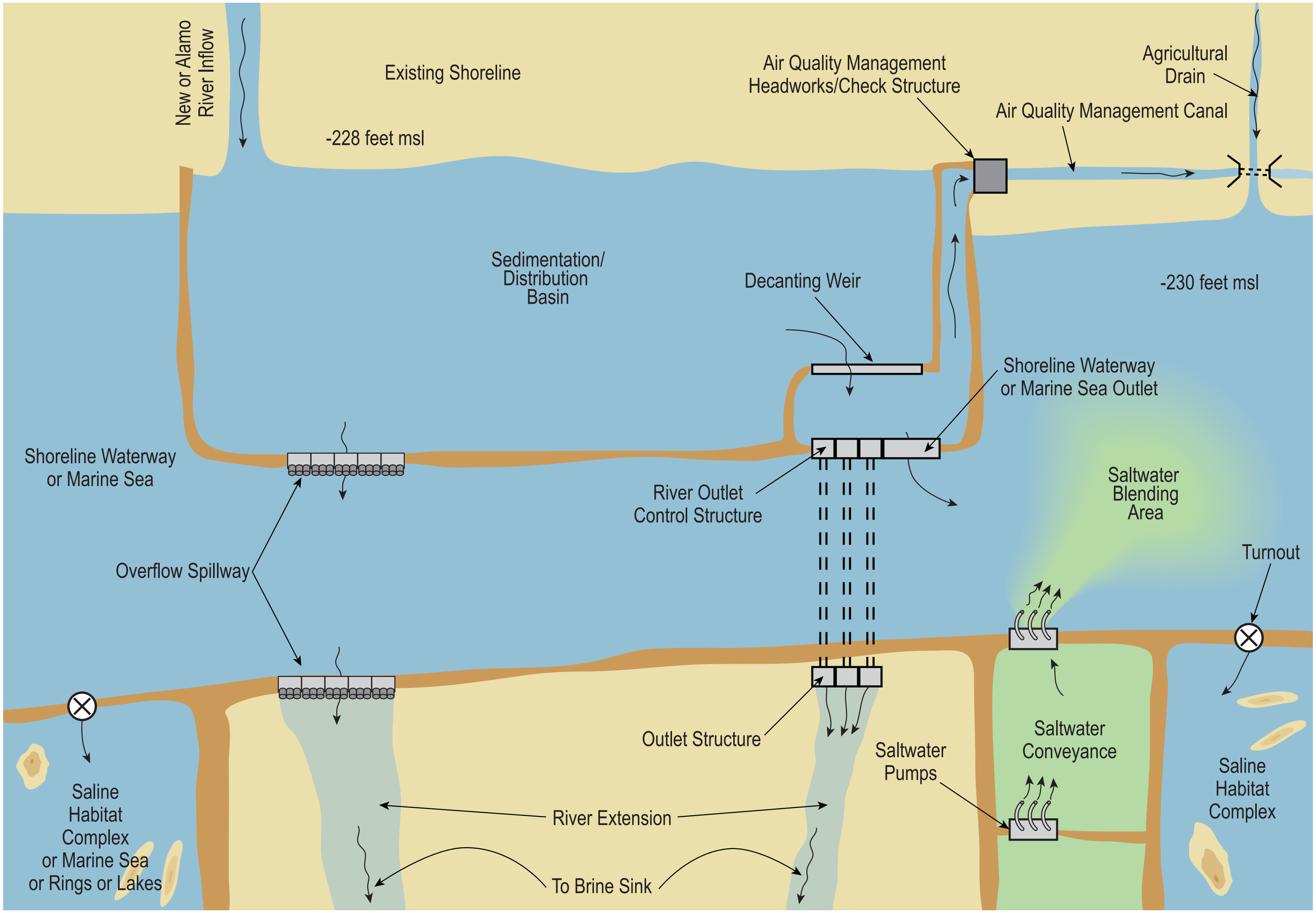


FIGURE H6-12
SEDIMENTATION/DISTRIBUTION BASIN FOR ALTERNATIVES 2, 3, 4, 5, AND 8

Geotube® Berms, first paragraph; page H6-58:

Alternative 4, as defined by the Imperial Group, includes the use of Geotube® Berms, as described in Appendix I. The Geotube® Berm would be a sediment filled, 60-foot circumference high strength geotextile fabric tube, placed on the Sea Bed to form a water retaining levee embankment. A high-strength geotextile (or geogrid) material would be placed on the Sea Bed under the Geotube® Berm to provide adequate foundation for the Geotube®. The Geotube® would be filled with dredged sediments at the Barrier site in wet conditions. After filling, the entire Geotube® would be covered with an earthfill material from the Sea Bed and protected with rock slope protection.

Table H6-5, Estimated Energy Requirements for Alternatives; page H6-69:

	No Action Alternative - CEQA Conditions	No Action Alternative - Variability Conditions	(1) Saline Habitat I Alternative	(2) Saline Habitat Complex II Alternative	(3) Concentric Rings Alternative	(4) Concentric Lakes Alternative	(5) North Sea Alternative	(6) North Sea Combined Alternative	(7) Combined North and South Lakes	(8) South Sea Combined Alternative
Average transmission line capacity needs (Megawatts)	1.1	1.1	1.8	2.1	3.1	~~0.9~~ 0.09	2.9	3.4	5.0	3.4

Special Construction Methods, second paragraph; page H6-70:

Many facilities would be constructed by using traditional construction methods and equipment. Most of the canals, pumping plants, pipelines, concrete structures, Air Quality Management facilities and habitat areas would not require special construction methods or equipment. However, construction of the Barriers and the larger canals would likely benefit from use of special construction methods and equipment. Production estimates used in developing construction schedules in the PEIR were based on 30,000,000 tons of embankment material in a Barrier with the unit weight about 1.68 tons/cubic yard (e.g., typical for Eagle Mountain Mine waste rock). To complete the Barriers as soon as possible, it was assumed that Barrier construction would occur 24 hours/day for 7 days/week for ~~4~~7 years. However, final permit conditions may not allow this level of construction activity due to community disruption, Air Quality Management permitting, or high winds that would significantly limit the ability of barges to conduct operations. For purposes of this analysis, an aggressive schedule was assumed to estimate worst case impacts to air quality and equipment needs.

Appendix H-7

Table H7-1, table head; pages H7-4 and H7-5:

Table H7-1
Comparison of Infrastructure Features in Alternatives

Component	Alternatives									
	No Action Alternative - CEQA Conditions	No Action Alternative - Variability Conditions	Alternative 1 Saline ~~Complex~~ Habitat I Complex	Alternative 2 Saline Habitat Complex II	Alternative 3 Concentric Rings	Alternative 4 Concentric Lakes	Alternative 5 North Sea	Alternative 6 North Sea Combined	Alternative 7 Combined North and South Lakes	Alternative 8 South Sea Combined

Table H7-2, Note; page H7-7:

Add the following note:

> Due to rounding of elevation values to the nearest foot, different acreage values are shown for the same elevation values.

Table H7-6; page H7-62:

Table H7-6
Location of Open Water in Lakes under Alternative 4

Phase (Year) to be Implemented	Sea Bed Elevation	Open Water (acres)				
		North Shoreline	West Shoreline	East Shoreline	South Shoreline	Total
Phase I (constructed by 2016)	-230 to ~~-234~~ -236 feet msl	-	-	-	7,000	7,000
Phase I (constructed by 2016)	-240 to -246 feet msl	21,000				21,000
Phase II (constructed by 2028)	-255 to -261 feet msl	20,000				20,000
Phase III (constructed by 2028)	~~-240 to -250~~-265 to -271 feet msl	40,000				40,000
Total						**88,000**

Construction and Operations under Phases I through IV, second paragraph; page H7-63:

Add the following note:

Construction and Operations under Phases I through IV

During Phase I, the First and Second lakes would be constructed as the water recedes. The Second Lake would remain submerged in the Brine Sink until Phase II. Operations and maintenance and monitoring activities would be initiated following construction of the initial components. During Phase II, the ~~Second and~~ Third and Fourth lakes would be constructed as the water recedes. The Fourth Lake would remain submerged in the Brine Sink until Phase III. Operations and maintenance and monitoring activities would be initiated following construction of the initial components. During Phase III, the ~~Fourth Lake and~~ Brine Interconnecting Canal between would be constructed. Operations and maintenance, and monitoring activities would be initiated following construction of the initial components. During Phase IV, operations and maintenance would continue for all facilities.