



California Regional Water Quality Control Board

Colorado River Basin Region



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January 10, 2007

Dale Hoffman-Floerke
Salton Sea PEIR Comments
Department of Water Resources
Colorado River & Salton Sea Office
1416 9th Street, Room 1148-6
Sacramento, CA 95814

SUBJECT: Draft Programmatic Environmental Impact Report (PEIR) for the Salton Sea Ecosystem Restoration Program

Dear Dale Hoffman-Floerke:

Thank you for providing us with the opportunity to comment on the Draft PEIR for the Salton Sea Ecosystem Restoration Program. Senate Bill 277 established the Salton Sea Restoration Act. Senate Bill 317 directs the Secretary for Resources to prepare an ecosystem restoration study and programmatic environmental documents for the Salton Sea to identify a preferred alternative that will provide the maximum feasible attainment of the following objectives:

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

The Draft PEIR presents and analyses various different Salton Sea restoration alternatives pursuant to the California Environmental Quality Act (CEQA). The alternatives can be distinguished by one or two central features and are as follows:

- Alternative 1 - Saline Habitat Complex I
- Alternative 2 - Saline Habitat Complex II
- Alternative 3 - Concentric Rings
- Alternative 4 - Concentric Lakes (developed by the Imperial Group)
- Alternative 5 - North Sea
- Alternative 6 - North Sea Combined

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- Alternative 7 - Combined North and South Lakes (developed by the Salton Sea Authority)
- Alternative 8 - South Sea Combined
- No Action Alternative-CEQA conditions
- No Action Alternative-Variability conditions

Our April 6, 2004 letter to your Department provides water quality regulatory background on the Salton Sea Watershed, including a discussion of water quality standards (WQSs), our Total Daily Maximum Load (TMDL) efforts conducted pursuant to Section 303(d) of the federal Clean Water Act (42 U.S.C. § 1313(d)), the Salton Sea Reclamation Act of 1998, and key WQS provisions contained in Title 40, Code of Federal Regulations (CFR). The following comments focus on the Draft PEIRs proposed eight Salton Sea restoration alternatives and two no action alternatives with regards to protecting the water quality standards of the Salton Sea. We are dividing our comments into 4 areas: (1) Update on TMDL Program; (2) General Comments (i.e., comments applicable to all Draft PEIR alternatives); (3) Comments on Alternatives 1-8 and the two No Action Alternatives; and (4) Specific Corrections/Suggestions.

UPDATE ON TMDL PROGRAM

As an update on our TMDL efforts, please note that the four approved TMDLs in the Watershed are the Alamo River Silt TMDL, the New River Silt TMDL, the Imperial Valley Agricultural Drains Silt TMDL, and the New River Pathogens TMDL. A Trash TMDL for the New River was adopted by the Regional Board and is in the approval process at the State Water Resources Control Board (State Water Board). We are also developing the following TMDLs: Dissolved Oxygen (DO) for the New River, a Pathogen TMDL for the Coachella Valley Stormwater Channel (to be completed in 2007), and a Nutrient TMDL for the Salton Sea (pending selection of the Salton Sea restoration alternative). A Draft New River Volatile Organic Compounds (VOCs) TMDL was developed by Regional Board staff and reviewed by the U.S. Environmental Protection Agency (USEPA). The Draft VOCs TMDL is currently on hold as a result of an agreement between Regional Board management and the USEPA until further water quality data collection and analysis of the effect of Mexicali II Sanitation Project is accomplished through June 2007. Also, on October 25, 2006, the State Board adopted an updated Section 303(d) list for the State. The adopted list adds the Colorado River for that segment of the river from the Imperial Reservoir to the California-Mexico Border as being impaired by selenium. Other relevant changes to the State list can be found http://www.waterboards.ca.gov/tmdl/docs/303dlists2006/final/r7_final303dlist.pdf. The USEPA approved the State Water Board's listing for our region on November 30, 2006. In this context, we request that you revise Table 6-1 (p. 6-2) of the Draft PEIR as follows:

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Water Body	Pollutant of Concern	TMDL Completion Date
Coachella Valley Stormwater Channel (Whitewater River) - 17 mile segment from Dillon Road to the Salton Sea	Bacteria	Draft Published April 2006
Coachella Valley Stormwater Channel (Whitewater River)- 2 mile segment from Lincoln Street to the Salton Sea	Toxaphene	2019
Colorado River - Imperial Reservoir to California-Mexico Border	Selenium	2019
Alamo River	Chlorpyrifos	2019
	DDT	2019
	Dieldrin	2019
	PCBs (Polychlorinated biphenyls)	2019
	Pesticides	2014 2019
	Selenium	2010 2019
	Sedimentation/Siltation	Adopted Approved by USEPA on June 28, 2002
	Toxaphene	2019
Imperial Valley Drains - Barbara Worth Drain, Peach Drain and Rice Drain segments	DDT	2019
Imperial Valley Drains - Barbara Worth Drain and Fig Drain segments	Dieldrin	2019
Imperial Valley Drains - Peach Drain segment	Endosulfan	2019
Imperial Valley Drains - Central Drain segment from Meloland Road to the outlet into the Alamo River	PCBs (Polychlorinated biphenyls)	2019

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Water Body	Pollutant of Concern	TMDL Completion Date
Imperial Valley Drains	Pesticides	2011 2019
	Selenium	2008 2019
	Sedimentation/Siltation	Draft Published Approved by USEPA on September 30, 2005
Imperial Valley Drains - Barbara Worth Drain, Peach Drain and Rice Drain segments	Toxaphene	2019
New River	Chlordane	2019
	Chlorpyrifos	2019
	DDT	2019
	Diazinon	2019
	Dieldrin	2019
	Mercury	2019
	PCBs (Polychlorinated biphenyls)	2019
	Toxaphene	2019
	Toxicity	2019
	Nutrients	2010 2009
	Pesticides	2011 2019
	Sedimentation/Siltation	Adopted Approved by USEPA on August 28, 2002
	Dissolved Oxygen	2006 2008
	Trash	Draft Published Adopted by Regional Board on June 21, 2006 and is under SWRCB consideration
	Chloroform	2011 2008
	Toluene	2011 2008
	p-Cymene	2009 2008
	1,2,4-trimethylbenzene	2009 2008
	m,p,-Xylene	2008
	o-Xylenes	2008
p-DCB	2010 2008	
Pathogens	Adopted Approved by USEPA on August 4, 2002	
Salton Sea	Nutrients	Draft Published 2009
	Salt	Not identified 2019
	Selenium	2010 2019

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Other than the New River and Salton Sea, we do not have any other surface waters in the Salton Sea Watershed listed as impaired by nutrients. The pressing need for a Nutrient TMDL for the Salton Sea is driven by the Sea's hyper-eutrophic condition and related impacts (e.g., fish kills) on the Sea's Beneficial Uses. Under the No Action Alternatives, the Sea would become hyper-saline and its current fishery would disappear. Therefore, under the No Action Alternatives a nutrient TMDL for the Sea may be inappropriate.

On the other hand, if any of Alternatives 1 through 8 were to be implemented, we would continue our nutrient TMDL efforts. Regarding these efforts, our work to date indicates that the bulk of the nutrient load in the Salton Sea comes from agricultural activities in the Imperial Valley and pollution from Mexico. We are completing the Source Analysis and Load and Waste Load Allocations for the Salton Sea Nutrient TMDL. We have developed a Draft TMDL Numeric Target of 35 µg/L for total phosphorus. The numeric target proposed for this TMDL is based on the Carlson Trophic Status Index and U.S. EPA Trophic Classification of U.S. lakes recommendations. Of course, the Draft Target may change as new information becomes available (e.g., the choice of the Salton Sea Restoration Alternative, updated scientific knowledge of the nutrient dynamics in the Salton Sea, etc.).

The Mexicali II Wastewater Treatment Plant in Mexicali, Mexico started operating in November 2006. It is expected to reduce total phosphorous loads into the Salton Sea by about 10% (United States Environmental Protection Agency, 2003).

We project that full and successful implementation of the TMDL in the Imperial and Coachella Valleys would reduce the total phosphorous load from agricultural activities into the Salton Sea by about 30% (Salton Sea Nutrient TMDL Technical Advisory Committee, 2002; Rothfleisch and Smith, 2002). We remain concerned, however, about the potential adverse water quality impacts that the remaining nutrient load may have on the preferred alternative (see also our discussion under Key Projected Water Quality Changes).

GENERAL COMMENTS

We commend your Department and consultants, and the Department of Fish and Game, for putting together a comprehensive Draft PEIR and conducting extensive public outreach and education on the Restoration efforts. We recognize that without an engineered alternative, most of the current Beneficial Uses of the Salton Sea would undoubtedly disappear.

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We concur with DFG and DWR that Alternatives 1 through 8 would provide more habitat benefits than the No Action Alternatives and current conditions. Further, we concur with the Draft PEIR in that some alternatives meet the legislative goals better than others. However, we have to question whether Alternative 5 fully meets the objectives mandated by the State Salton Sea Restoration Act as it relates to the historic sports fishery (see our Comments on page 8). Regardless of the chosen alternative, we will continue to implement key regulatory programs, including the NPDES Program, the State's Nonpoint Source Pollution Control Plan and Policy for Implementation and Enforcement of the Nonpoint Source Pollution Control Program, and TMDLs to address the water quality impact that pollutants from point and nonpoint sources of pollution have on the Salton Sea and its tributaries. Our intent is to tailor our regulatory efforts to complement to the extent practicable a restoration alternative to minimize negative impacts on the Sea's WQS.

In 1998, Congress enacted the Salton Sea Reclamation Act of 1998 (Public Law 105-372). The Act directed the Secretary of Interior to complete environmental and engineering studies to: (1) permit the continued use of the Salton Sea as a reservoir for irrigation drainage; (2) reduce and stabilize the overall salinity of the Sea; (3) stabilize the surface elevation of the Sea; (4) reclaim in the long-term healthy fish and wildlife resources and their habitat; and (5) enhance the potential for recreational uses and economic development of the Salton Sea. The Draft PEIR does not fully and explicitly address item 5 of Public Law 105-372, however. Because a mission of the Regional Board is to protect and enhance water quality in the region and to ensure that water in the State provides for maximum benefit of current and future generations, we suggest that the preferred restoration alternative not only address water quality protection, but also water quality enhancement.

Beneficial Uses—In general, key Beneficial Uses of the Salton Sea in the two No Action Alternatives and all of the eight restoration Alternatives would be altered, eliminated, or restricted to smaller sections of the existing Sea depending on the alternative chosen. For example, Alternatives 1 and 2 would geographically restrict the WARM, WILD, and RARE Beneficial Uses, which in turn would result in minimizing or eliminating sport fishing and boating. Alternatives 3 through 8 would have larger saline areas for habitat, fishing, and boating than Alternatives 1 and 2, but still considerably less than the current Salton Sea. Alternative 3 would achieve the salinity water quality objective earlier than other alternatives of the PEIR and would have the least long-term negative impact on Desert Pupfish movement and connectivity. Alternative 4 would drastically change the Sea's configuration. In addition, the No Action Alternatives would most likely result in total collapse of the Salton Sea's Beneficial Uses due mainly to expected reduction in flows into the sea and increases in salinity. All of these changes, as recognized in the Draft PEIR, are significant environmental impacts for CEQA purposes.

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We recognize that changes at the Sea are inevitable, even under the No Action alternatives. Nevertheless, changes that require removal of existing Beneficial Uses of the Sea conflict with provisions contained in Title 40 of the Code of Federal Regulations (CFR), Part 131 et seq., which prohibit removal of existing uses. The changes to the Beneficial Uses that would occur with implementation of these alternatives would also require significant amendments to be made to the Water Quality Control Plan (Basin Plan) for the Colorado River Basin.

To address the conflict on Beneficial Uses and facilitate the amendments, we respectfully suggest that the Resources Agency, as part of the PEIR: (1) request from the State and the USEPA exemptions to the provision of 40 CFR that prohibit removal of existing uses for the preferred alternative, and/or (2) recommend legislative changes at the State and Federal levels regarding the Sea's Beneficial Uses to facilitate implementation of the preferred alternative.

Water Quality Control Permits—Any alternative which results in discharges of wastes to land (e.g., discharges of brines into a brine sink) would require waste discharge requirements (WDRs) pursuant to Section 13260 of the Porter-Cologne Water Quality Control Act (Cal. Wat. Code § 13000 et seq.). Also, all of the alternatives would require Clean Water Act (CWA) Section 401 water quality certifications, CWA Section 404 permits, and CWA Section 402 National Pollutant Discharge Elimination System (NPDES) stormwater permits. Any alternative that includes wastewater treatment facilities (e.g., Alternative 7) and/or with activities which may result in discharges of pollutants into waters of the United States would also require an NPDES permit. For the purposes of CEQA, the potential environmental impacts from these regulatory issues should be evaluated at the project level once a preferred alternative is selected. Preparing and processing the applications for those permits might take several years, depending on the project, number of permits required, and types of permits.

Key Projected Water Quality Changes—We are concerned about the projected concentrations of phosphorous and selenium in Alternatives 1 through 8 because they would exceed our Basin Plan's water quality objectives for these constituents. More specifically, we are concerned about the bioaccumulation of selenium in the biota and habitats in all proposed alternatives (tables 8-7, 8-8).

It is expected that there would be an increase in selenium concentration from the rivers and drains discharging into the Salton Sea, which is expected to be smaller in volume and area. It is also expected that the immobilized selenium in the anoxic sediments would flow back to the water column and food web with the increase of oxygen and disturbance/resuspension of the sediments. Further, there would be a loss and/or decrease in the selenium sink in the anoxic sediments due to increases of oxygen and changes in the water chemistry.

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We are also concerned about the reduction or elimination of the Sea's deep saline compartments/zones in most of the proposed alternatives, particularly in Alternatives 3 and 4. The deeper portions of the Sea also currently serve as sinks for phosphorous. It is expected that the immobilized phosphorus in the anoxic sediments would flow back to the water column and food web with the increase of oxygen and disturbance/resuspension of the sediments.

It is difficult to predict the extent of these water chemistry changes in the proposed alternatives at this time due to the limited data available in this area. However, an assessment of selenium risk based on an area-weighted hazard index reveals moderate risk for pupfish and birds for the majority of alternatives (table 8-8, page 8-45).

Effective mitigation measures to address the selenium and nutrient concerns are essential to the success of any chosen/preferred alternative. We will continue with our regulatory efforts to address these pollutants—particularly with Nutrient TMDL efforts—to complement the preferred alternative. Because current selenium removal measures are cost-prohibitive and the water quality impacts are significant, we recommend that:

1. The State take appropriate steps so that the Federal government (e.g., USEPA) implement effective measures to ensure the Colorado River Upper Basin States, which are the source of the selenium in the lower Colorado River, fully comply with Section 303(d) of the Clean Water Act for their selenium-impaired surface waters to reduce the load of selenium coming into California in the first place;
2. Selenium in the Sea and its tributaries be closely monitored under any of the alternatives to track, prevent, and mitigate to the extent practicable bioaccumulation;
3. Special studies be conducted to identify selenium "hot spots" (e.g., certain farming areas and drains in the Imperial Valley that contribute the highest concentrations of selenium into the Sea and/or its tributaries). The USGS (Setmire et al., 1990) did a comprehensive investigation of selenium in the agricultural drains in the Salton Sea watershed and found that some drains consistently had selenium at very high concentrations while others did not. The special studies should also include research and development of treatment technologies and best management practices to reduce the selenium load into the Sea and its tributaries.

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SPECIFIC COMMENTS

The following paragraphs summarize the different restoration alternatives as described in the Draft PEIR and our comments on each alternative:

Alternative 1 - Saline Habitat Complex I (construction cost is \$2.3 billion and annual operation and maintenance cost is \$91 million). This alternative features the construction of a 38,000-acre saline habitat complex in the southern footprint of the seabed. Additional features include 123,000-acres of brine sink, canals for Desert Pupfish connectivity to sensitive habitat areas, and air quality management components in the form a huge brine pond and planting water efficient vegetation. The primary benefit of this alternative would be to provide habitat that would support tilapia, invertebrates, and a wide variety of birds.

Comments—The Saline Habitat Complex has variable depths up to 15 feet deep. The shallow cells/sections of the Saline Habitat Complex have the potential to have high phosphorus concentrations, be biologically productive, have high oxygen demand, and to deplete dissolved oxygen at night and during windless periods according to the DLM-WQ and EUTROMOD models (Chapter 6 and Appendix D). These conditions create an environment for high fluctuations of oxygen and pH with potential for fish kills due to low dissolved oxygen in the evening. Therefore, these conditions have a potential negative effect on Beneficial Uses. Alternative 1 would also restrict the Beneficial Uses WARM, WILD and RARE to few a sections of the lake by not maintaining enough habitat for existing fish and birds, including special status species. The proposed mitigations (e.g., the Saline Habitat Complex) may not be enough to counterbalance the impact on the special status species (federal and state endangered and species of special concern). Also, we are particularly concerned about the significant impacts that this alternative would have on the REC I and REC II Beneficial Uses. It would significantly restrict fishing and boating for the residents of communities adjacent to the Sea because it effectively eliminates the Sea for these communities (i.e., Desert Shores, West Shores, Salton City, Bombay Beach, and North Shores).

Alternative 2 - Saline Habitat Complex II (Estimated construction cost is \$3.3 billion and annual operation and maintenance cost is \$107 million). This alternative includes similar features as Alternative 1 except that the area for the Saline Habitat Complex would be larger (75,000 acres). Two separate Saline Habitat Complexes would occur in the southern and northern portions of the seabed foot-print. Additional features include 85,000–acres of brine sink, shoreline waterways for Desert Pupfish connectivity to sensitive habitat areas, and air quality management components in the form of brine ponds and planting water efficient vegetation. Similar to Alternative 1, the primary benefit of this alternative would be to provide habitat that would support tilapia, invertebrates, and a wide variety of birds.

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Comments—This Alternative would have similar impacts on Beneficial Uses as Alternative 1, but the impact to REC Beneficial Uses would be lessened because of more habitat for birds due to a larger area for the saline habitat complex.

Alternative 3 - Concentric Rings (construction cost is \$4.9 billion and annual operation and maintenance cost is \$138 million). This alternative features the construction of two concentric waterways that ring the Sea's footprint that would provide a moderately deep (~10 feet) 61,000–acres of Marine Sea. Additional features include 68,000–acres of brine sink, Desert Pupfish connectivity provided in the first (outer) ring, and air quality management components in the form of brine ponds and planting water efficient vegetation. 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.

Comments—The shallow rings habitat may create problems with selenium, high phosphorus concentrations, and low dissolved oxygen concentrations in the morning. The selenium concentrations may bioaccumulate in the biota as explained in the general comments and, therefore, have the potential to impact the beneficial uses of WARM, WILD and RARE. According to the DLM-WQ model, the concentric rings would have high algal productivity and, consequently, daily variation of dissolved oxygen. Low dissolved oxygen may impact the survival of the fishery depending on the length of the episode. Alternative 3 would create the most favorable conditions for movement and growth of Desert Pupfish. Therefore, this alternative would have the least long-term negative impact on Desert Pupfish movement and connectivity. This alternative would also achieve the salinity water quality objective earlier than all other alternatives of the PEIR. This alternative would create more positive impacts on Beneficial Uses when compared to Alternative 2.

Alternative 4 - Concentric Lakes (Estimated construction cost is \$2.3 billion and annual operation and maintenance cost is \$20 million). This alternative features the construction of four separate lakes (total area of 88,000 acres) formed by berms that provide habitat similar to Saline Habitat Complex without individual cells, and a salinity range of 20,000 to 60,000 mg/L. Additional features include 22,000–acres of brine sink, Desert Pupfish connectivity to sensitive habitat in the first (outer) and second lakes, and air quality management components. The primary benefit of this alternative would be to provide habitat that would support tilapia, invertebrates, and a wide variety of birds. This alternative may have less water available because more water may be required for air quality management.

Comments—This Alternative would have similar impacts on Beneficial Uses as Alternatives 3 with larger water surface areas for habitat and other Beneficial Uses. However, besides of its shortcomings on air quality management, and as discussed in the Draft PEIR (page 8-56), this Alternative is not expected to support a marine sport

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fishery. Therefore, we question whether this Alternative fully complies with the intent of the State Salton Sea Restoration Act and the Act's supporting legislation as it relates to the Sea's historic sport fishery.

Alternative 5 - North Sea (Estimated construction cost is \$4.5 billion and annual operation and maintenance cost is \$134 million). This alternative features the construction of 62,000–acres of deep Marine Sea (up to 50 feet deep) in the north side of the sea bed. Other features include 45,000–acres of saline habitat complex in the south, 13,000 acres of brine sinks, Desert Pupfish connectivity to sensitive habitat in the North Lake and southern shoreline waterways, and air quality management components in the form of brine ponds and planting water efficient vegetation. 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.

Comments—Alternative 5 would have similar impacts on Beneficial Uses as Alternative 1 regarding the Saline Habitat Complex. Even though the Deep Sea habitat may significantly retain the ability that the current Sea has to sequester phosphorus and selenium, we are concerned that the Deep Sea habitat of this Alternative most likely would have thermal stratification. This would cause upsurges of hydrogen sulfide and ammonia into the surface layer at concentrations that may result in fish kills during a seasonal overturn event. Therefore, these thermal stratification events would impact the Beneficial Uses of WARM, WILD and RARE. Should this alternative be selected as the preferred alternative, these potential adverse impacts should be further analyzed as required by CEQA at the Project EIR level. In comparison to the other Alternatives, the Deep Sea habitat would have the least impact on the REC1 and REC2 Beneficial Uses.

Alternative 6 - North Sea Combined (Estimated construction cost is \$5.9 billion and annual operation and maintenance cost is \$149 million). This alternative features the construction of 74,000–acres of deep (up to 50 feet deep) Marine Sea in the north combined with a moderately deep (~10 feet) Marine Sea in the south, connected along the western shoreline. Twenty nine thousand (29,000) acres of saline habitat complex would be developed in the southern sea bed. Additional features include an 11,000-acre brine sink, Desert Pupfish connectivity to sensitive habitat provided by a Marine Sea mixing zone and channels, and air quality management components in the form of brine ponds and planting water efficient vegetation. 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.

Comments—The Saline Habitat Complex of Alternative 6 would have an impact on Beneficial Uses similar to the Saline Habitat Complex of Alternative 1. Additionally, the Deep Marine Sea Habitat of Alternative 6 would have an impact on Beneficial Uses similar to the Deep Marine Sea Habitat Complex of Alternative 5. However, we agree with the Draft PEIRs conclusion that Alternative 6 is one of the alternatives that would

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have the least adverse impacts on special status species, riparian, sensitive natural communities, and wetlands along the shoreline due to construction.

Alternative 7 - Combined North and South Lakes (Estimated construction cost is \$5.2 billion and annual operation and maintenance cost is \$82 million). This alternative features the construction of 104,000–acres of deep Marine Sea (Recreational Saltwater Lake) in the north combined with a moderately deep Marine Sea (Recreational Estuary Lake) in the south. Twelve thousand (12,000) acres of saline habitat complex would be developed along the southeastern shoreline. Additional features include 15,000–acres of brine sink, Desert Pupfish connectivity to sensitive habitat through the lakes and canals, air quality management actions such as the creation of a protective salt crust using salt crystallizer ponds, and an 11,000-acre freshwater reservoir to be operated by the Imperial Irrigation District. 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.

Comments—The Saline Habitat Complex of Alternative 7 would have an impact on Beneficial Uses similar to the Saline Habitat Complex of Alternative 1. Additionally, the Deep Marine Sea Habitat of Alternative 7 would have an impact on Beneficial Uses similar to the Deep Marine Sea Habitat Complex of Alternative 5. This alternative would provide the largest area habitat for fish and bird and for boating because the estimated 104,000–acres of deep Marine Sea is the largest of all the alternatives. The Deep Sea habitat would have similar impacts on water quality as Alternative 5. We agree with the Draft PEIRs conclusion that Alternatives 6 and 7 would have the least adverse impacts on special status species, riparian, sensitive natural communities, and wetlands along the shoreline due to construction. We also submit for your consideration that the Salton Sea Authority has made significant changes to Alternative 7 (e.g., flow calculations and location of the mid-sea dam) so that the Alternative may more fully meet the legislative goals for the Sea, well within the time frame for the project.

Alternative 8 - South Sea Combined (Estimated construction cost is \$5.8 billion and annual operation and maintenance cost is \$145 million). This alternative features the construction of 83,000–acres of deep Marine Sea in the south combined with a moderately deep Marine Sea in the north, connected along the western shoreline. Eighteen thousand (18,000) acres of saline habitat complex would be created along the southwestern and southeastern shorelines of the seas footprint. Additional features include 9,000–acres of brine sink, Desert Pupfish connectivity to sensitive habitat by the shoreline waterways, and air quality management components in the form of brine ponds and planting water efficient vegetation. 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.

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Comments—The Saline Habitat Complex of Alternative 8 would have an impact on Beneficial Uses similar to the Saline Habitat Complex of Alternative 1. Additionally, the Deep Marine Sea Habitat of Alternative 8 would have an impact on Beneficial Uses similar to the Deep Marine Sea Habitat Complex of Alternative 5.

The Two No Action Alternatives (Estimated construction cost of No Action Alternative-Variability conditions is \$0.8 billion and annual operation and maintenance cost is \$48 million). The two No Action Alternatives reflect existing conditions plus changes that are reasonably expected to occur in the foreseeable future if the restoration is not implemented. The two No Action Alternatives differ on assumptions regarding inflow patterns over the 75-year study period and construction of the Quantification Settlement Agreement (QSA) related facilities in the sea bed. The two No Action Alternatives in the PEIR include numerous actions and facilities to be constructed in accordance with implementation of the QSA. Most of these actions and facilities would not be located within the existing seabed footprint. However, several of the QSA provisions require actions or construction of components within the seabed that could be modified substantially through implementation of the PEIR alternatives, including air quality management and Desert Pupfish connectivity to sensitive habitat areas.

Comments—The two No Action Alternatives would have the most negative impacts of all alternatives on the Sea's Beneficial Uses. Under these scenarios, the Salton Sea would become a hyper-eutrophic, hyper-saline lake due to expected reductions of inflows. This reduction would eventually result in a total collapse of the Sea's fishery and the Sea's Beneficial Uses as we currently know them.

CORRECTIONS/SUGGESTIONS TO THE PEIR

This section provides you with some corrections, suggestions, and/or updates to the PEIR. Additions are shown by underline; deletions are shown by ~~strikeout~~.

- Change the last paragraph in Page 4-18, under the section "Total Maximum Daily Load Implementation" ~~From~~ "Currently, TMDLs have been adopted 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. The CRBRWQCB is considering TMDLs for nutrients and selenium as related to the Salton Sea and the major tributaries." To "Currently, TMDLs have been adopted by CRBRWQCB and approved by the USEPA for siltation/sedimentation in the New and Alamo rivers and Imperial Valley drains, and for pathogens in the New River, as described in Chapter 6. A Trash TMDL for the New River was adopted by the Regional Board and is in the process of being approved by the State Water Resources Control Board (State Water Board) and the USEPA. The

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CRBRWQCB is considering TMDLs for nutrients, selenium, salinity, dissolved oxygen, bacteria and pesticides as related to the Salton Sea and the major tributaries."

- Change the second paragraph in Page 6-2, **From**
 - "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 Pathogen TMDL for the New River were adopted by the CRBRWQCB and approved by the State Water Board and USEPA. The Sedimentation/Siltation TMDL for Imperial Valley drains has been adopted by the CRBRWQCB and is being reviewed by the State Water Board and USEPA. Other TMDLs are in the development and review processes, as shown in Table 6-1."
- To**
 - "The California Environmental Protection Agency, State Water Board, 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 River, the Alamo River, and the Imperial Valley drains, and Pathogen TMDL for the New River were adopted by the CRBRWQCB and approved by the State Water Board and USEPA. A Trash ~~The Sedimentation/Siltation~~ TMDL for the New River ~~Imperial Valley drains~~ has been adopted by the CRBRWQCB and is being reviewed by the State Water Board ~~and USEPA~~. Other TMDLs are in the development and review processes, as shown in Table 6-1."
- Correct the Selenium Water Quality Objective in the second paragraph of Page 6-27 under "Selenium" to read as "The CRBRWQCB Water Quality Control Plan identifies a selenium objective of 5 $\mu\text{g/L}$ (0.005 mg/L) based on a four-day average and 20 $\mu\text{g/L}$ (0.02 mg/L) on a one-hour average for all tributaries to the Salton Sea."

Correct the statement in the fourth row in the column "Comments" of Table 25-1, Page 25-2, **To** "Activities undertaken by a federal agency are not subject to Waste Discharge Requirements."

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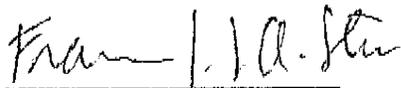
- Page 6-1. Under section "Federal Regulations". This section describes federal programs regarding water quality administered by the State of California. However the second to the last paragraph ("Section 404 of the Clean Water...") deals with a federally managed program. Therefore, it would clarify the meaning of this section if the following sentence were added to the second to the last paragraph: "This program is managed by the U.S. Corp of Engineers."
- Page 6-1. Under section "Federal Regulations". Seventh paragraph of this page. Suggest adding a sentence at the end of this paragraph to clarify who administers the Section 404 permit program at the study area. "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. Corp of Engineers administers the section 404 permit program in the study area.
- Page 6-26. Under section "Salinity". Seventh sentence of the paragraph. Where it reads, "The CRBRWQCB Water Quality Control Plan identifies a salinity objective of 35,000 mg/L for the Salton Sea to support fish and wildlife, and states that it will be difficult to meet this objective in the Salton Sea." Please consider the following changes: "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."
- Page 6-27. Under section "Phosphorus". Second sentence of the paragraph. Adding the following sentence: "As previously described, the existing average waterborne total phosphorus concentration in the Salton Sea is about 69 $\mu\text{g/L}$ (0.069 mg/L)." would clarify that the phosphorus concentration in the Salton Sea is not homogeneous.
- Use the current version of the CRBRWQCB Water Quality Control Plan published on October 2005 in the PEIR document. The reference should be: CRBRWQCB (Colorado River Basin Regional Water Quality Control Board). 20052002a. Water Quality Control Plan, Colorado River Basin-Region 7, includes Amendments Adopted by the Regional Board through November 2002 October 2005.
<http://www.waterboards.ca.gov/coloradoriver/documents/RB7Plan.pdf>

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We appreciate your considerations on the matter. If you have questions regarding this comment letter, please contact Francisco Costa at (760) 776-8937 or me at (760) 776-8942.



FOR

NADIM ZEYWAR
TMDL/NPS Unit Chief

FC/NZ/JA/RP/TV/tab

- cc: Regional Board Members
- Bart Christensen, State Board, Sacramento
- Ricardo Martinez, CalEPA, Sacramento
- Nancy Woo, USEPA Region IX, San Francisco
- Rick Daniels, Salton Sea Authority, La Quinta
- Mike Morgan, Imperial Group, Brawley

File: SS GC

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References

Management Practices Subcommittee, Salton Sea Nutrient TMDL Technical Advisory Committee. 2002. Total Maximum Daily Loading of Nutrients into the Salton Sea. Management Practices Subcommittee, Salton Sea Nutrient TMDL Technical Advisory Committee, Palm Desert, CA.

Setmire, J.G., J.C. Wolfe, and R.K. Stroud. 1990. Reconnaissance Investigation of Water Quality, Bottom Sediment, and Biota Associated with Irrigation Drainage in the Salton Sea Area, California, 1986-87: U.S. Geological Survey Water-Resources Investigations Report 89-4102. U.S. Geological Survey, Sacramento, CA

Rothfleisch, N. and Smith, J. 2002. Suggested Best Management Techniques for the Salton Sea Nutrient TMDL. Presented at Salton Sea Nutrient TMDL Technical Advisory Committee, Palm Desert, CA.

United States Environmental Protection Agency. 2003. Wastewater Conveyance and Treatment Project for the Mexicali II Service Area, Environmental Assessment. United States Environmental Protection Agency, San Francisco, California.