

California Environmental Protection Agency

Salton Sea Restoration Draft EIS/EIR January 2000

California Air Resources Board (CARB) Review Comments

Cmnt. #	Page #	Line #	Commentor	Comment	Response (Contractor)
1.	ES-03		CARB	Air quality should be included in the list of issues and concerns that the EIS/EIR should address.	
2.	ES-11		CARB	Under each of the described alternatives there should be the inclusion that fugitive dust problems may occur with the proposed lowered elevation of the Salton Sea.	
3.	2-45	Table 2.7-1	CARB	Identify that the following actions may have air quality impacts if they result in less water delivered to the Salton Sea: 1) California Plan 4.4, 2) The Imperial District Water Transfer Program, 3) The All American and Coachella Canal Lining Project, and 4) Mexicali Wastewater System Improvements. Identify that the Gateway of the American Specific Plan as the New Port of Entry may have air quality impacts due to increased vehicular traffic and from new facilities (e.g., industrial).	
4.	2-59	Table 2.9-1	CARB	Air Quality Conditions – <i>“The construction work force would be the major affected population.”</i> This is irrelevant, since designations for air quality standards do not distinguish between the public and the work force. Reduced Inflows – <i>“Areas exposed by receding water levels would generally be expected to revegetate slowly in a manner consistent with adjacent shoreline area, resulting in minimal potential...”</i> Not recognizing the potential for windblown fugitive emissions from increased surface exposure of a lowered Salton Sea elevation would ignore previous issues with dry lakebeds.	
5.	2-59	Table 2.9-1	CARB	Air Quality Planning – <i>“Emissions from on-site construction activities could require a CAA conformity review. Options for achieving compliance with the CAA conformity rule are limited.”</i> This summary statement appears to be stated without assessing mitigation measures for construction activities.	
6.	3-47	3 rd P	CARB	Under the federal Clean Air Act, Imperial County is classified as “transitional” and not “moderate” as stated in the EIR.	
7.	3-50	7thP	CARB	Revise the statement to reflect that PM10 conditions in the Salton Sea Air Basin are primarily due to contributions from natural blowing sand in the Coachella Valley region and transported emissions originating from Mexicali in the El Centro/Calexico region.	

Cmnt.#	Page #	Line #	Commentor	Comment	Response (Contractor)
8.	3-55	2 nd P	CARB	State Requirements – Revise the statement, “ <i>CARB is responsible for addressing actions</i> ” to “Local air districts are responsible for addressing actions required to meet State PM10 standards, but is not required to develop a formal plan for meeting the State PM10 standard.”	
9.	6-69	1 st P	CARB	Summary of Environmental Consequences – “ <i>Major air quality issues associated with various alternatives.</i> ” – The list of bullets should identify the potential inability to make conformity findings under the federal Clean Air Act.	
10.	4-69	2 nd P	CARB	“ <i>The greatest Phase 1 exposure of currently submerged lands would occur with Alternatives 2 and 3.</i> ” This statement does not agree with the information presented in Section 4.3 on the acres exposed for each alternative. Alternative 5 is shown having more exposed acres than alternatives 2 and 3. Alternative 1 is shown having the most exposed acres.	
11.	4-69	4 th P	CARB	“ <i>These lands are expected to revegetate to a condition similar to historical conditions and adjacent upland areas. In the absence of active surface disturbances, the wind erosion potential of these areas would be similar to that of surrounding undisturbed lands. Consequently, the air quality impacts of lowered Salton Sea water levels would be less than significant.</i> ” The EIR has little discussion about the historical revegetation effort in adjacent areas. This hypothesis is based on the premise that the existing monitoring network of the Salton Sea region is sufficient to document the PM10 emissions from current and historically based exposed areas. The theory that revegetation of a lowered Salton Sea will minimize wind erosion potential is not well supported by the EIR document.	
12.	4-70	Section 4.4.1	CARB	“ <i>All restoration alternatives would require a formal Clean Air Act conformity determination to address construction-related emissions. The conformity demonstration may require state and local air quality agencies to develop SIP amendments that accommodate the selected alternative.</i> ” An analysis of mitigation efforts to minimize construction emissions needs to be incorporated into the EIR for conformity analysis. This should be done prior to any reliance that the State/local will be responsible for making conformity findings by amending the existing SIP and offsetting the emission increases from the Salton Sea restoration effort. Additionally, the EIR should recognize the potential that windblown dust from a lowered Salton Sea would make any conformity findings even more difficult.	
13.	4-70	Section 4.4.3	CARB	Section 4.4.3 should assess the impact of increased recreational traffic (e.g., vehicles and boats) from a restored Salton Sea.	

Cmnt.#	Page #	Line #	Commentor	Comment	Response (Contractor)
14.	4-71	4 th P	CARB	<p>Windblown Dust From Exposed Areas – <i>“The potential for air quality problems associated with areas exposed by lowered Salton Sea water levels was evaluated in a qualitative manner based on general factors important to wind erosion processes plus specific factors that have generated windblown dust problems at Mono Lake, Owens Lake, and other locations.”</i> Because of the windblown dust problems exhibited at other exposed lakebeds in California, this area should be evaluated quantitatively and needs to be well founded and documented. Information in the Owens Valley PM10 Planning Area Demonstration of Attainment State Implementation Plan Project Alternative Analysis, October 23, 1996, by the Great Basin Unified Air Pollution Control District, indicates that some of the salts at the Salton Sea are also present at Owens Lake, in some cases in comparable weight fractions. Wind tunnel studies should be conducted using soils from the Salton Sea to identify the potential magnitude of windblown dust from an exposed Salton Sea lakebed.</p> <p><i>“...the absence of evidence for significant windblown dust problems originating from existing Salton Sea shoreline areas.”</i> Specifically, the EIR/EIS needs to identify the evidence suggesting no significant windblown dust problems (e.g., PM monitoring data, documented observations during high wind events). Identification and discussion of existing monitoring network is critical when concluding the absence of a windblown dust problem.</p>	
15.	4-73	1 st P	CARB	<p>Windblown Dust from Exposed Areas – <i>“Drainage of exposed soils should allow revegetation to occur at densities typical of historical conditions or surrounding upland areas.”</i> Present evidence that revegetation would occur, over what time period, with what vegetation. Document potential for windblown dust until revegetation occurs.</p>	
16.	4-73	2 nd P	CARB	<p><i>“If perched water tables formed, that might inhibit revegetation rates. But capillary action would also encourage soil crusting, which would minimize the potential for wind erosion.”</i> Discuss how much area may be effected by perched water tables and the evidence that the soil crusting would be sufficient to keep windblown dust to acceptable levels. Discuss the potential of an additionally exposed Salton Sea being disturbed by activities such as off-road vehicles and tillage and the impact of those activities.</p>	
17.	4-73	3 rd P	CARB	<p><i>“Salts dominated by sodium sulfate, sodium carbonate, and sodium bicarbonate salts are the source of most windblown dust associated with salt deposits.”</i> This statement needs a reference without technical supporting evidence.</p>	
18.	4-73		CARB	<p>Haul Road Dust Modeling – Explain where the 65% control effectiveness for dust control measures comes from and what measures are used to get the 65% control. The assumption of 65% control efficiency for the unpaved roads is higher than the traditional 50% used. Since the Salton Sea is in a very dry climate, even the traditional 50% may be an over estimate.</p>	

Cmnt.#	Page #	Line #	Commentor	Comment	Response (Contractor)
19.	4-74 4-75	Last P	CARB	<p>In regards to the discussion on revegetation, present supporting documentation (e.g., appropriate studies). Discuss the evidence that newly exposed lakebed would revegetate, what vegetation is expected, if it is a natural process or if vegetation would be planted and how long revegetation would take.</p> <p><i>"In the absence of active surface disturbance, the wind erosion potential of these areas would be similar to the low wind erosion hazard of surrounding undisturbed lands. Consequently, the air quality impacts of lowered Salton Sea water levels would be less than significant."</i> The June 1994 Owens Valley PM-10 Planning area BACM SIP (Pg. 20) states that "The drying and heating of the surface that occurs in the heat of spring and summer buckles the newly formed crusts, exposing the clay and silt layers immediately below. These exposed fine particles can then be lifted by the wind." Present supporting evidence that this will not be a problem at the Salton Sea.</p> <p>These comments apply to each alternative presented.</p>	
20.	4-76	1 st P	CARB	<p><i>"Preliminary dispersion modeling of fugitive PM10 emissions along the proposed haul road indicates that the federal 24-hour PM10 standard might be exceeded within 2,500 feet of the haul road during periods when daytime winds speeds average about 2 mph, and within 600 feet of the haul road when daytime wind speeds average about 7 mph."</i> U.S. EPA's policy requires that SIPs must address exceedances monitored by FRM monitors for any exceedances where the public has access to. Furthermore, the analysis should also make mention that the modeled predicted value would also exceed the State ambient air quality standard for PM10 at 50 ug/m3.</p>	
21.	4-76	3 rd P	CARB	<p><i>"The absence of any discernable trend in PM10 concentrations suggests that the federal PM10 standards will not be attained in the near future. Consequently, a four-year period of significant construction-related PM10 may not alter the realistic prospects for achieving the federal PM10 standard."</i> Conformity requires that the frequency or severity of violations not be increased. (See page 3-53, <i>"The EPA conformity rule ... Will not increase the frequency or severity of existing violations of federal air quality standards."</i>). It must be noted that the PM10 problem identified to date in Imperial County and the Coachella Valley has been primarily attributed to international transport from Mexicali and transport of "blown sand" in the Coachella Valley. If PM10 exceedances are monitored due to either exposed surface areas due to a lowered elevation of the Salton Sea or from construction emissions as part of the restoration effort, a new control strategy must be incorporated in the SIP to demonstrate attainment of the federal PM10 standard.</p>	
22.	4-77	2 nd P	CARB	<p><i>"Paving of the haul road to reduce fugitive dust emissions is considered infeasible due to the size and weight of haul trucks."</i> Considering the projected impact from these roads, it is important to identify the most effective method to reduce fugitive dust emissions. If paved roads can not be designed and built to handle the heavy trucks, explain why.</p>	

Cmnt.#	Page #	Line #	Commentor	Comment	Response (Contractor)
23.	4-77	2 nd P	CARB	<p>"During the four year construction period, approximately 21.5 million cubic yards of aggregate and rip-rap material would need to be excavated from two borrow sites and transported to the concentration pond construction site. Approximately, 8 million tons of aggregate material would need to be hauled each year from the quarry site to the construction site. Assuming 250 days per year....a four year construction period would require an average of 325 truck loads of aggregate each working day...For a 10 hour work load day, this would average 65 truck trips along the road each hour." The significance of the diesel exhaust from these heavy duty trucks cannot be underscored, with particulates from diesel exhaust being identified as a toxic air contaminant. The EIR needs to address mitigation of these toxic air emissions.</p>	
24.	Section 4.4	All alternatives	CARB	<p>Dust control measures – all alternatives should discuss the effectiveness of the potential control measures including paving roads, available soil suppressants, watering, and vehicle speed. This information is available. Identify and quantify potential alternatives. SIP amendments to accommodate the construction is not an acceptable alternative at least until all potential alternatives have been evaluated and found infeasible.</p> <p>Ozone precursors – all alternatives should discuss the effectiveness of mitigating construction emissions through the use of new equipment and the retrofitting of old equipment. This information is available. The use of the cleanest possible equipment should be required. SIP amendments to accommodate the construction is not an acceptable alternative at least until all potential alternatives have been evaluated and found infeasible.</p> <p>Electric and diesel pumps - all alternatives should discuss measures to mitigate emissions if diesel pumps are used. Information on the size and expected emissions of these pumps should be included along with effectiveness of potential control measures such as the use of low-sulfur diesel fuel, after-treatment control equipment, and clean engine technologies. The size of electric pumps should be discussed along with where the power for those pumps would come from. Enough information should be presented to identify if these may be a significant source of air pollution.</p>	
25.	4-129	4 th P	CARB	<p>"Significant and unmitigable impacts would be expected under the No Action Alternative with reduced inflows. Under these conditions, Sea level would drop by 9 feet. Effects of this drop would be widespread. The negative effects described above would be made more severe with salinity levels of 75,050 mg/L, which would inhibit any significant revegetation. Impact would include vegetation losses, including 348 acres of shoreline strand wetlands and an indeterminate amount of adjacent wetlands that depend on Sea water for existence. This habitat is not likely to reestablish itself as the Sea level drops because of high levels of residual salt in the soils." Quantify the air quality impacts of this scenario, particularly the potential windblown dust. The EIR summarizes that for each restoration alternatives described, there would be no air quality impacts (windblown sediments) from a lowered Salton Sea based on the premise that a lowered salinity level would allow for revegetation to occur. This hypothesis needs to be further substantiated prior to initiation of any restoration efforts.</p>	
26.	5-3		CARB	<p>Air Quality – There should be some quantification of the air quality impacts of fish harvesting, including impacts from the diesel powered harvesting boats, power generation for the facility, and other process emissions, and exhaust and dust emissions from construction activities.</p>	
27.	5-6	3 rd P	CARB	<p>Public Health and Environmental Hazards – There should be some quantification of the air quality impacts from increased motorized watercraft at the Sea and tourist vehicular traffic.</p>	

Cmnt.#	Page #	Line #	Commentor	Comment	Response (Contractor)
28.	5-10		CARB	Air Quality – There should be some quantification of the air quality impacts from the skimmer barges and beach tractors that would be used in shoreline cleanup and from the construction and operation of an incinerator.	
29.	9-5	2 nd P	CARB	“This EIS/EIR includes a conformity analysis of the Salton Sea Restoration Project Phase 1 alternatives.” – Unless more complete analyses are included in the report for each activity or process requiring a conformity analysis, this statement should be deleted. This EIS/EIR discusses conformity, but does not provide the detail or analyses needed for conformity determinations.	
30.	9-5	3 rd P	CARB	Air Quality Standards – This section should discuss the health protective State ambient air quality standards for PM10 and ozone. Acknowledge the predicted modeling exceedances of both the state and federal ambient air quality standards for PM10.	
31.		Table C-52	CARB	The last two rows under Owens Lake indicate that salts are the cause of PM problems at Owens Lake. (“Wind erosion hazard for other sediments and soils – Mostly low emission rates, typical of desert basin soils.”) The June 1994 Owens Valley PM-10 Planning area BACM SIP (Pg. 20) states that “there are three primary sources of airborne dust: clay and silt layers unprotected by crusts, fine materials created through surface abrasion by wind-blown sand-sized particles and fine salts created by efflorescence.” Provide the references in support of Owens Lake statements in Table C-52. Also provide references in support of the Salton Sea statements in Table C-52 that indicate wind erosion would not be a problem there, particularly when the lake bed is exposed.	
32.	Tables C-38 through C-46		CARB	<p>1) The emissions estimates for construction related traffic were computed with an older emission factor equation. In the original publication of the U.S. EPA AP-42 document, a methodology dated 1/95 was provided. In later supplements, the unpaved road dust emission estimation methodology was revised. The most recent version is dated 9/98.</p> <p>The impact of this is relatively minor. Using Table C-38 as an example, the originally computed emissions are 2569 tons PM10/year. When the updated emissions equation is used, the emissions are 2738 tons PM10/year, an increase of about 6.6%. Interestingly, using the new equation, some of the individual activities show lower emissions, some higher, but overall there is an increase.</p> <p>The OLD equation used silt, vehicle speed, weight, and number of wheels as inputs, which may make it more sensitive to actual vehicle operating conditions. The NEW equation uses only silt, vehicle weight, and soil moisture as inputs, which may make it more sensitive to local road conditions (use local silt data and soil moisture).</p> <p>2) Some documentation should be provided (based on actual soils data, not a generic look-up table) on the percent silt for the lake bed area. Currently 5% is used, which is a little on the low side based on average values provided in AP-42.</p> <p>3) The assumption of 65% control efficiency for the unpaved roads is higher than the traditional 50% that is used. The source of this control factor should be provided. (Even the 50% may be too high for the climatic conditions at the Salton Sea.)</p> <p>4) The tables provide the emissions from vehicle movement, but they do not include the emissions from the actual truck loading and unloading operations, or other material handling operations. If this is relevant it should be included.</p>	

Cmnt.#	Page #	Line #	Commentor	Comment	Response (Contractor)
33.	Page after Table C-47		CARB	'Assumed Mass Distribution' chart – the chart shows that around 4-5% of the total unpaved road dust is considered to be PM10 or less. Based on tests in California, the default value we use for the percentage of PM10 from unpaved road dust is 59%. Some documentation should be provided in the report explaining what PM10 fraction they are using and a justification for the selection.	

Cmnt.#	Page #	Line #	Commentor	Comment	Response (Contractor)
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**Department of Toxic Substances Control (DTSC)
Review Comments**

Cmnt.#	Page #	Line #	Commentor	Comment	Response (Contractor)
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34.	NA	NA	DTSC	HERD's major concern with the EIS/EIR is that legitimate issues regarding public and ecological health have been raised but have not been appropriately evaluated. Both federal and state guidances are available to assess or screen risks from chemical stressors in the environment (see HERD memorandum of February 19, 1999). This guidance has been ignored in the development of the Strategic Science Plan and in the development of the EIS/EIR. Whereas the previous administrative draft of the document (November 1999) proposed that sediments in the Sea should be further studied to determine whether remedial actions would be necessary to protect public health, no such proposal is made in the current draft of the document (January 2000). In light of the public perception that the Salton Sea is a "...toxic dump created by agriculture" (Informational Binder, Salton Sea Symposium, January 13 and 14, 2000), HERD strongly recommends quantitative screening of public health and ecological risks posed by contaminated sediments and surface water before regulatory approval. The qualitative analysis conducted by the Salton Sea Authority and the Bureau of Reclamation is not scientifically defensible.	
35.	NA	NA	DTSC	Many of the restoration alternatives (especially coupled with a projected reduction in the current water inflow rates to the Salton Sea) will result in a significant drop in Sea level. Concomitant with the drop in Sea level, large areas of exposed Sea bed sediments will be subject to wind erosion, suspension in air, and/or direct contact with human and ecological receptors. Potential exposure pathways include inhalation, ingestion, and dermal contact with sediments and surface water. Potential receptors include shoreline residents, recreational visitors, employees, and/or construction workers. Potential receptors also include fish and wildlife (e.g., birds, small mammals, reptiles, amphibians, vegetation). As discussed in Specific Comment 3 below, HERD cannot conclude that all potential contaminants of concern (organic or inorganic) have been adequately characterized in the Salton Sea basin. Without adequate site characterization and without quantitative assessment, it cannot be concluded as stated in Chapter 4, Section 4.14.12 (page 4-201) that " <i>No potentially significant unavoidable impacts to public health and environmental hazards have been identified.</i> "	

Cmnt.#	Page #	Line #	Commentor	Comment	Response (Contractor)
36.	3-1	3.1 & 3.3.3	DTSC	HERD cannot conclude that chemicals of concern identified in the document (Chapter 3, Sections 3.1 and 3.3) represent all potential contaminants of potential human health and ecological concern. First, in Section 3.3.3 the statement is made that " <i>current contaminant concentrations of the Salton Sea are extremely limited, and additional studies are in progress.</i> " Second, in the description of analytical data collected by Levine-Fricke (1999), there is no discussion of the types of analytes assessed, their detection/reporting limits, the number and depth of soil/sediments collected, and the spatial extent of sampling. Similarly, for surface water resources, conclusions are drawn that trace metal concentrations in water and organic compounds (e.g., semi-volatile organics, pesticides, polychlorinated biphenyls) are not of concern in the Sea. Since the document does not provide the benchmarks, criteria, and/or detection limits used to reach these conclusions, regulatory agencies cannot evaluate nor substantiate the conclusions drawn.	
37.	2-27	2.4.3	DTSC	In Chapter 2 (Section 2.4.3), and in subsequent chapters of the EIS/EIR, it is stated that evaporated salts from the Enhanced Evaporation System (EES) will be disposed of through conventional landfill techniques. HERD strongly recommends that chemical characterization of salt waste (either generated by the EES system or evaporation ponds) be conducted to determine if hazardous constituents are present and, if so, the appropriate means by which the material should be disposed of. In numerous instances in the EIS/EIR there are statements that the salt waste is "toxic." For example, in the discussion of surface water resources (Section 4.1.5, page 4-18), it is stated that " <i>Many of the metals of concern, such as lead, zinc, copper, and cadmium may precipitate from the brine as chlorides.....creating a potential toxic hazard to wildlife...</i> "	
38.	3-153	3.14.5	DTSC	In the discussion of public health and environmental hazards (Chapter 3, Section 3.14.5, page 3-153), there is a bias towards selenium as the only contaminant of potential concern. While HERD agrees that selenium is of major public health and ecological concern in the restoration of the Salton Sea, other contaminants of concern should be quantitatively evaluated (recommended methodology is presented in the HERD memorandum of February 19, 1999) and either included or excluded as chemicals of potential concern.	
39.	4-74	4.4.4	DTSC	The conclusion that air quality will be protected by revegetation of exposed Sea bed sediments is not supported [see first discussion of this issue in Chapter 4, Section 4.4.4 (page 4-74)]. How can it be stated unequivocally, without scientific analysis, that revegetation will occur? For example, soil salinity, pH, chemical characteristics, or particulate composition may restrict or inhibit any possible revegetation. Vegetation may take years to reestablish, hence it may take years to significantly reduce potential wind erosion problems and impacts on air quality. Even with revegetation, human and ecological receptors could be exposed following direct contact with contaminated shoreline sediments (i.e., via dermal contact or incidental ingestion).	
40.	4-189	4.14.2	DTSC	Significance Criteria (Chapter 4, Section 4.14.2) also should include the exposure of humans to contaminated shoreline sediments or EES/evaporation pond salts. Wind erosion/inhalation is not the only exposure pathway/route present to human receptors. Direct contact, including dermal contact with or incidental ingestion of contaminated sediments or surface water, should be considered.	

Cmnt.#	Page #	Line #	Commentor	Comment	Response (Contractor)
41.	4-188	4.14	DTSC	In the discussion of public health and environmental hazards (Chapter 4, Section 4.14), Unexploded Ordnance (UXO) are of critical concern because of the risk of lethal contact with UXO. The brief text does not provide assurance that the UXO issue will be dealt with in an appropriate manner. HERD recommends that the Salton Sea Authority and Bureau of Reclamation consult with the U.S. Army Corps of Engineers (ACOE) to assess the best course of action with respect to UXOs and the former Salton Sea Naval Weapons Test Base. Following discussions with the ACOE (and the Navy as mentioned in the text), the text should be revised to provide more detail on how UXO hazards will be addressed before, during, and after construction activities.	
42.	4-188	4.14	DTSC	In the discussion of public health and environmental hazards (Chapter 4, Section 4.14), there is no quantitative (i.e., risk) evaluation of impacts posed by inorganic and organic contaminants. The issue of food chain bioaccumulation of selenium and other bioaccumulative substances is raised as an important issue (Chapter 4, Section 4.6.5, page 4-107). Human receptors include consumers of fish or waterfowl from the Salton Sea. Ecological receptors include birds, small mammals, reptiles, amphibians, vegetation, and aquatic life (i.e., aquatic plants, plankton, zooplankton, benthic and sessile invertebrates, fish). Acceptable residue levels in soil, sediment, surface water, and/or tissue for selenium and potentially other contaminants of concern should be calculated that are protective of human and ecological health. Chemical monitoring must be conducted and the appropriate mitigation implemented if selenium or potentially other contaminants exceed predetermined acceptable residue levels. The determination of acceptable residue levels can be calculated by human and ecological risk assessment methodology (see HERD memorandum of February 19, 1999). In the current version of the EIS/EIR (January 2000), monitoring of fish and waterfowl has been proposed (Chapter 4, Section 4.14.11) as a mitigation measure, but the purpose, objectives, and scope of such an effort are not discussed in detail. Furthermore, there are no decision-criteria presented as a means to evaluate whether contaminant concentrations are of concern to humans or wildlife. The proposed monitoring effort would only focus on potential human health risks from selenium. There appears to be no concern for other Sea-related contaminants, nor are there mitigation measures proposed for the protection of fish (Section 4.6.11), birds (Section 4.7.12), or wildlife (Section 4.8.12) with regards to adverse effects of food-chain bioaccumulation of selenium and other potential contaminants.	
43.	4-191	4.14.5	DTSC	In the discussion of public health and environmental hazards (Chapter 4, Section 4.14.5), there is mention of potential construction worker risks associated with the construction of evaporation ponds, habitat ponds and dikes. Potential exposure pathways discussed include dermal contact with contaminated sediments and inhalation/ingestion of seawater. In previous chapters of the EIS/EIR, the inhalation of fugitive dusts also was raised as a concern for construction worker health but is not discussed in Chapter 4. It should be noted and assessed in the document that construction workers also could be exposed to Sea-related contaminants via inhalation of volatile compounds (e.g., hydrogen sulfide, acetone, carbon disulfide, 2-butanone), inhalation of exposed (dry) sediments, and incidental ingestion of sediments. Of particular concern is the exposure of construction workers to hydrogen sulfide (Section 4.1.5, page 4-20) which is highly toxic. The disposal of dredged material is also of concern (see issues raised in Comment 4 above regarding disposal of waste materials).	

Cmnt.#	Page #	Line #	Commentor	Comment	Response (Contractor)
44.	5-5	5.1	DTSC	In the discussion of fish harvesting (Chapter 5, Section 5.1, page 5-5), the EIS/EIR states that "...harvested fish may contain selenium and other chemicals present in the fish, these products would not be consumed or ingested." Fish meal will be fed to fish that may be consumed by humans. Fertilizers will be spread on crops that may be consumed by humans. Therefore, humans may indirectly be exposed to these substances. This fact should be stated in the text. Since the chemicals of concern are bioaccumulative, all fish meal and fertilizer products from the Salton Sea should be evaluated following regulatory guidelines for contaminant residues. For fertilizer products, please contact the U.S. Environmental Protection Agency. For fish as animal food, contact the U.S. Food and Drug Administration (USFDA) Center for Veterinary Medicine [contact Linda Tolliver; phone: (301) 827-6674]. For fish as human food, contact the USFDA Center for Food Safety and Applied Nutrition.	
45.	3-38	3.3.3	DTSC	OEHA toxicologists should review preliminary analytical data generated by the Levine-Fricke (1999) study. With consideration for the proposed restoration alternatives, the data review should include the areal extent and depth of sampling, data useability for human and ecological risk assessment (e.g., selected analytes, chemical detection limits), appropriateness of ecological risk screening methodology, and validity of conclusions drawn.	
46.	NA	NA	DTSC	<p>Conclusions:</p> <ul style="list-style-type: none"> • First, the credibility of the proposed Salton Sea Restoration Project would be enhanced greatly if human health and ecological risk assessments were used to help select of an appropriate restoration alternative (including no action) and to help select an appropriate contaminant-related environmental monitoring strategy for the Salton Sea. Second, the public perception that the Salton Sea "is a toxic waste dump created by agriculture" should be addressed quantitatively in a defensible, scientific manner through the risk assessment paradigm. • The Salton Sea Authority and Bureau of Reclamation also should consult with the Army Corps of Engineers to assess the best course of action with respect to UXOs and construction activities at the former Salton Sea Naval Weapons Test Base. • Salt waste, generated by the EES system or by the evaporation ponds should be assessed for hazardous waste constituents. If hazardous waste constituents exceed regulatory thresholds, the DTSC should be notified. This evaluation should be conducted during the pilot stage tests of the EES and related technologies. 	

Cmnt.#	Page #	Line #	Commentor	Comment	Response (Contractor)
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**Office of Environmental Health Hazard Assessment (OEHHA)
Review Comments**

Cmnt.#	Page #	Line #	Commentor	Comment	Response (Contractor)
47.	Figures	NA	OEHHA	Figure 3.1.1 would be improved by showing the tributaries flowing into the Salton Sea that are discussed in the accompanying text.	
48.	ES-2	20	OEHHA	Because recreational use of the Sea is anticipated to increase as the restoration proceeds (see Salton Sea Restoration Project Goals and Objectives), it is critical that relevant health issues are adequately addressed in this document, such as the likelihood and potential for increased exposure to chemical contaminants (or other contaminants), and the potential impacts on public health that may result from more water contact or fish consumption as a result of increased recreational activity.	
49.	ES-11-12	16-18	OEHHA	All alternatives that use some form of enhanced evaporation system should list drift of salt aerosol and salt deposition outside the pond areas as substantive environmental effects.	
50.	2-041	30-39	OEHHA	This strategic science plan or long term management strategy should explicitly include a monitoring program to ensure implementation and determine effectiveness of mitigation activities undertaken for project impacts to natural resources.	
51.	3-003	36	OEHHA	Typographical error. 2,000 AFY into the Alamo River is less than 0.3 not 0.03 percent of its yearly flow.	
52.	3-015	26-30	OEHHA	This section suggests that sampling for metals and other contaminants in surface water has been minimal. More thorough description of sampling methods, location and analyses is needed in order to assess whether sampling efforts have adequately characterized contaminants in Salton Sea water. Presumably, the water quality study currently being conducted by the Salton Sea Science Subcommittee (SSC) will improve this characterization. Reported water sample selenium concentrations of 2 to 5 ppb suggest potential for biological effects via aquatic food chain bioaccumulation.	
53.	3-017	12-15	OEHHA	More information should be provided on sampling done by Reclamation, including the degree to which the three sampling stations are expected to provide adequate representation of water quality in the Sea.	
54.	3-018	27-34	OEHHA	Regarding the 6 th bulleted item, the preliminary finding that trace metals do not appear to be a major concern does not seem consistent with the facts that sampling and analyses are not complete and that previous sampling indicated elevated selenium concentrations in surface water samples. This statement should be clarified in this regard.	

Cmnt.#	Page #	Line #	Commentor	Comment	Response (Contractor)
55.	3-018	35-36	OEHHA	A brief statement that concentrations of semi-volatile organics and chlorinated pesticides/PCBs were below analytical detection limits was made. This statement would be better supported if detection limits and other methods of the study were discussed. Without more information, it is not possible to determine the extent to which chemical contaminants might present health hazards.	
56.	3-037	37	OEHHA	The text indicates that relatively recent studies (up to 1997) showed organochlorine pesticide residues in riverbeds feeding the Sea, but that the most recent data (1998, 1999) do not corroborate the previous findings. This suggests that further sampling should be conducted to better characterize pesticide distribution in Sea sediment. In addition, although not discussed in this document, detection limits used for PCB sampling at the Sea should be lower than toxicity thresholds (i.e., ER-Ls) in order to be useful for evaluating risks to ecological receptors.	
57.	3-039	6-9	OEHHA	The theory that selenium is transformed into insoluble forms when it reaches the anoxic zone is one way to remove it from the food chain. What happens when the Sea becomes less anoxic because of mitigation measures? Will selenium become a problem?	
58.	3-045	4	OEHHA	Vinyl chloride is not going to be an irritant at the environmental levels that would be found around the Salton Sea. It should be listed as a systemic poison if listed at all. The ambient air quality standard is old and not relevant.	
59.	3-075	38-43	OEHHA	Data presented by the U.S. Fish and Wildlife Service at the Salton Sea Symposium (January 2000) suggest potential for contaminant (i.e., selenium and p,p'-DDE) effects on breeding birds, and is therefore another potentially useful source of information for evaluating contaminant risks to birds at the Sea (Selenium and p,p'-DDE bioaccumulation and reproductive effects in birds and fish of the Salton Sea, California. C. A. Roberts and J. K. Bennett. Poster presentation at the Salton Sea Symposium, January 13-14, 2000, Desert Hot Springs, CA). Disease risks to birds will presumably be addressed with the Integrated Wildlife Disease Program (discussed on page 2-39), however it is not evident that similar efforts are planned for contaminants. The assessment and remediation of contaminant, as well as disease, risks may be necessary for achieving the second and third goals listed for the Salton Sea Restoration Project (page 1-9).	
60.	3-148	11	OEHHA	Ingestion exposure is not only through intake of food and water, but also from inadvertent intake of contaminated soil and dust. This may be a significant source of exposure and should be considered in any assessment.	
61.	3-153	11	OEHHA	Only selenium is identified as a chemical hazard. On page 3-15, arsenic was identified as a possible problem. It should be listed here.	
62.	3-153	NA	OEHHA	Public health issues regarding chemical contamination require greater attention. For example, only selenium is identified as a chemical of potential concern (Section 3.14.5), despite large inputs of pesticides and other chemicals from agricultural and other runoff. Testing for pesticides and herbicides in 1969-1970 is mentioned, but the discussion of subsequent testing is very brief. It is simply noted that data collected by various agencies "are not widely disseminated." The Toxic Substances Monitoring Program, however, which has sampled in the Salton Sea and which provides readily available data, is not identified or discussed in any detail.	

Cmnt.#	Page #	Line #	Commentor	Comment	Response (Contractor)
63.	3-153	38-39	OEHHA	A "health advisory level" of 8ug/g for human consumption of fish is cited and seems to be attributed to Setmire et al. (1990). Published health advisory levels for fish consumption are not typically expressed as fish tissue concentrations. This is not an advisory level set by OEHHA and tissue levels from fillets of fish from the Salton Sea should not be compared to it to determine whether they are above or below a level of health concern.	
64.	3-155	3-5	OEHHA	It is stated that none of the compounds listed in the paragraph were included in the fish advisory for the Salton Sea. There should be some following sentence about whether these compounds were even evaluated when the fish advisory was developed. Their exclusion may be due to a decision that they do not pose a problem.	
65.	4-001	NA	OEHHA	In Chapter 4, there was in general little discussion of plans that will or might be implemented to mitigate the potential effects from some of the restoration activities. In order to evaluate the potential for public health effects from exposure to chemical contaminants (e.g., via consumption of fish), it will be necessary to conduct monitoring of chemical levels in fish tissues and changes that may occur over time as a result of planned activities at the sea. The EIS/EIR mentions (on page 4-200) the fish sampling and monitoring protocol that was prepared by the Salton Sea Science Subcommittee. However, the proposed plan is for one-time sampling only, and should not be considered as a "monitoring" plan. Additionally, it is stated that the sampling protocol requires regulatory agency approval. It is not clear which regulatory agency must approve the plan. It is also mentioned (on page 4-200) that "agencies with public health responsibility" should evaluate fish and wildlife samples periodically. However, it is not clear which public health agencies would perform this function at the Salton Sea. It should be the responsibility of the lead agencies for the Salton Sea restoration to monitor and evaluate the effects from implementation of the proposed projects. Although there is mention of long-term monitoring in Phase 2 activities, it is not clear what these activities are and how they will be accomplished.	
66.	4-001	NA	OEHHA	In chapter 4, section 4.1, there are attempts to predict changes in water flow and salinity levels, but the potential for changes in the distribution and concentrations of chemical contaminants is only briefly discussed. The transport and accumulation of chemical contaminants in fish and wildlife (for selenium as well as any other potential chemicals of concern) are largely unknown. A plan for ongoing monitoring of water quality and chemical levels in environmental samples and fish (and wildlife) tissues should be incorporated into the planned activities.	
67.	4-006	19	OEHHA	While at higher salt concentrations the evaporation may decrease, the Sea level will decrease leading to an increase in temperature and a possible increase in evaporation.	
68.	4-022	NA	OEHHA	Given the potential for concentration of contaminants in pupfish ponds and the North Wetland Habitat, it is recommended that monitoring for contaminant levels in water and sediment be put into place so that potentially dangerous concentrations of chemicals can be detected and mitigated.	
69.	4-047	17-20	OEHHA	It is not apparent from information provided in this document that adequate sampling has been conducted to determine that only low levels of selenium will be mobilized during pond construction, or to determine what other contaminants might be present in disturbed sediments. In addition, the term "low" should be put into context by comparison with background or reference levels. As the text currently reads, "high levels" and "low levels" are not meaningful descriptors with respect to toxicity or other relevant endpoints.	

Cmnt.#	Page #	Line #	Commentor	Comment	Response (Contractor)
70.	4-069	2	OEHHA	The primary impact of the five alternative strategies to improve the Salton Sea appears to be mostly related to increases in salt spray drift downwind, fugitive dust emissions from vehicle travel on unpaved roads, and fuel use for pumps for facility operations. The particle impacts could be better characterized by size distribution. For example, what portion of the salt spray or fugitive dust emissions, if any, are below 2.5 microns?	
71.	4-069	NA	OEHHA	Better spatial indication of potentially impacted areas would be useful.	
72.	4-069	34	OEHHA	While lack of active surface disturbance would result in sediment that would have wind erosion similar to other undisturbed areas, if the Sea environment improves, there will be more recreation and more people to disturb the surface. This could lead to an increase in wind erosion and exposure.	
73.	4-079	42	OEHHA	While drift from the EES is modeled here, there is no discussion of resuspension of the aerosol particles in high wind conditions. This could move the salt particles beyond any buffer zone.	
74.	4-107	37-42	OEHHA	Regarding the last bulleted item, the potential for biological exposure and effects due to mobilized selenium and other contaminants after dredging should be more fully characterized before the selection of an alternative is completed.	
75.	4-110	14-15	OEHHA	Regarding the last bulleted item, as indicated in a previous comment, a more complete assessment of risks due to altered contaminant levels is essential for making scientifically defensible decisions regarding the use of alternative actions.	
76.	4-118	4-7	OEHHA	The assessment method does not address the identification and mitigation of existing contaminants and other environmental stressors to avian resources at the Sea. While these stressors may or may not be influenced by various alternative actions, they should be addressed as part of plan to restore a sustainable ecosystem at the Sea. It is suggested that a more comprehensive and integrated risk assessment be conducted of existing environmental conditions at the Sea; this will facilitate prioritization of activities to mitigate current problems and allow for more informed decision making regarding the alternative actions under consideration in this EIS/EIR.	
77.	4-120	5-9	OEHHA	It would be useful if the technical basis for statements regarding the likelihood and severity of impacts to birds from different alternative actions were briefly described here. For example, if estimated concentrations of contaminants in evaporation ponds were evaluated as the basis for the potential for exposure of birds to these compounds, and toxicity data were used for predicting potential impacts, this should be stated. The term unmitigable suggests that avian exposure to the evaporation pond water is unavoidable, however it is not clear from this or later sections whether options for preventing such exposure have been considered. In addition, several metals are listed as "metals of concern" here, but it is not clear how they were classified as such. It would be useful if the supporting data for this list were referenced in some way. In addition, because selenium was indicated in section 3.1.4 as a potential element of concern (based on high levels found in recent water samples from the Sea), it would be appropriate to include it here as one of the elements likely to concentrate in pond water.	
78.	4-121	37-40	OEHHA	See comment for page 4-120.	

Cmnt.#	Page #	Line #	Commentor	Comment	Response (Contractor)
79.	4-122	2-6	OEHHA	It should be noted that the salt spray that will potentially contact birds will also contain chemical contaminants (see metals listed on page 4-120). Therefore, preening of soaked feathers will potentially lead to ingestion of contaminants as well as "salt". For such birds, therefore, exposure to waterborne contaminants will consist of combined exposures from diet, drinking, and preening.	
80.	4-124	3-5	OEHHA	See comment for page 4-120.	
81.	4-124	22-25	OEHHA	See comment for page 4-120.	
82.	4-125	34-37	OEHHA	See comment for page 4-120.	
83.	4-126	7-10	OEHHA	See comment for page 4-122.	
84.	4-126	33-40	OEHHA	The basis for the conclusion (under cumulative effects) that there will be an overall beneficial effect is not clear; it would be helpful if this rationale were briefly described here. In addition, this section would be improved by more detailed information on cumulative effects, including specific proposed activities expected to contribute to effects on birds, the expected environmental effects of these activities, and potential interactions among these activities. Furthermore, this section should address whether reasonable options are available for mitigating the significant cumulative effects.	
85.	4-127	2-11	OEHHA	As indicated previously (see comment for page 4-120), it would be appropriate to address whether mitigation for direct exposure of birds to evaporation pond water is feasible.	
86.	4-127	13-18	OEHHA	Losses due to exposure to elevated contaminants in evaporation pond water should be included in this section.	
87.	4-128	NA	OEHHA	The exposure of thousands of acres of nearshore sediments that potentially contain metals and other contaminants is described for Alternatives 1-5 in Section 4.3. Because these exposed sediments will be potentially available to terrestrial plants and animals, they should be addressed in Section 4.8 as a potential source of contaminant exposure for animals, via oral, dermal and inhalation pathways.	
88.	4-131	7-10	OEHHA	As with avian resources, the technical basis for statements regarding the likelihood and severity of impacts to wildlife caused by evaporation pond contaminants should be briefly described. Use of the term "highly toxic" suggests that there has been a comparison made between expected exposures to contaminants and some toxicity benchmark. If so, it would be appropriate to describe this comparison here; alternatively, the rationale for the use of this term should be stated. In addition, it would also be appropriate to list species that will potentially contact the water, based on their distribution and habitat use.	
89.	4-132	15-21	OEHHA	See comment for page 4-131.	
90.	4-133	1	OEHHA	See comment for page 4-131.	

Cmnt.#	Page #	Line #	Commentor	Comment	Response (Contractor)
91.	4-134	28-33	OEHHA	The basis for the conclusion (under cumulative effects) that there will be minimal cumulative effects is not clear, given the long term, multiple impacts discussed in the preceding sections (i.e., habitat loss and alterations, exposure to potentially contaminated evaporation pond waters); it would be helpful if this rationale were briefly described here. In addition, this section would be improved by more detailed information on cumulative effects, including specific proposed activities expected to contribute to effects on vegetation and wildlife, the expected environmental effects of these activities, and potential interactions among these activities. Furthermore, this section should address whether reasonable options are available for mitigating the significant cumulative effects.	
92.	4-194	15	OEHHA	There should be a mention of exposure to the salt aerosol from the EES. Residential areas appear to be in the location of the proposed unit.	
93.	4-195	31	OEHHA	There should be a mention of exposure to the salt aerosol from the EES. Salton City is north of the proposed unit. If the Sea improves the City may grow closer to the EES unit.	
94.	4-200	19	OEHHA	Mitigation for the EES should include monitoring the air and soil in the area to ensure the salt is not going beyond the restricted areas.	
95.	5-001	NA	OEHHA	Greater scientific basis and support for some statements made regarding potential environmental changes and impacts is needed. As an example, in Section 5.1 on Fish Harvesting, it is noted parenthetically in the first paragraph on page 5-2 that a reference is needed to support the claim that fish harvesting would reduce the tilapia population which is currently at a very high density. It would be helpful if additional information were provided on measures of current population density, the extent to which the existing tilapia population would be reduced and impacted by commercial fish harvesting, or the likelihood and supporting evidence that harvesting these fish would enhance the current population.	
96.	5-001	25-26	OEHHA	In the last sentence on this page, it is stated that the "harvest rate would be managed to maintain a healthy tilapia population." A discussion would be appropriate here of what constitutes a "healthy population" or the basis for assessing the status of the population or the effects of the project on the tilapia population or other fish species.	
97.	5-002	27-29	OEHHA	It is noted that input of nutrients from rivers, creeks, and drains makes a large contribution to high nutrient levels, and that the fish harvest plan would do little to address the problem. It would be appropriate to include any plans to control the nutrient (and contaminant) input from the tributaries and other waters flowing into the sea. If the problem of nutrient and contaminant input is not addressed, it is doubtful that the project can succeed overall in meeting its goals (other than the first goal).	
98.	5-002	29-31	OEHHA	It is stated here that the potential effects from fish harvesting on reducing nutrient levels would be minimal. No evidence is furnished as to how this project will achieve its stated goals, and, therefore, it is not clear why fish harvesting is proposed or whether the effects will be beneficial.	
99.	5-018	NA	OEHHA	Public health and environmental hazards from fish harvesting may include increasing selenium and other contaminants in the food chain when the meal is used as feed or fertilizer.	
100.	6-001	NA	OEHHA	OEHHA understands that detailed analyses of environmental consequences of Phase 2 actions are not possible at this time and that further development and subsequent agency reviews are planned for these activities.	

Cmnt.#	Page #	Line #	Commentor	Comment	Response (Contractor)
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**California Regional Water Quality Control Board, Region 7 (CRWQCB 7)
Review Comments**

Cmnt.#	Page #	Line #	Commentor	Comment	Response (Contractor)
101.	1-12	1 et seq.	RWQCB 7	As indicated by the subject document, a staged EIR should evaluate a proposal in light of current and contemplated plans and produce an informed estimate of the environmental consequences of the entire project—a principle which we believe the lead agencies are mostly applying to Phase II of the restoration effort (page 1-12, Section 1.6 of the EIS/EIR). Subsequently, the subject EIR states that the Phase I alternatives have been "...analyzed in sufficient detail to support implementation decisions, following completion and certification of the final EIS/EIR and all required permits." While we believe that the level of analysis supports the decision to move forward with alternatives to address salinity and secure the Sea as a depository for agricultural wastes, we believe the EIS/EIR needs additional data to fully support some of the inferences and conclusions regarding Goal Nos. 2 through 4 of the project. It is, therefore, in these areas that we focus our comments, not with the intention of derailing this project, but rather with the intention of strengthening the subject EIS/EIR and moving this process forward. We recognize that the EIS/EIR acknowledges in a general way that current and planned water quality control efforts by our Regional Board would enhance the effectiveness of the Project's alternatives (page 2-11 of the EIS/EIR). Hence, our comments also identify the specific positive impacts that current and planned water quality control efforts being implemented by the Regional Board pursuant to state and federal law may have on water quality—impacts which we believe fit under any of the contemplated scenarios and support the aforementioned inferences and conclusions.	
102.	ES-4	9 th ¶, 3 rd Sentence	RWQCB 7	The Salton Sea is also listed pursuant to Section 303(d) of the Clean Water Act as impaired by nutrients, selenium, and salt. Therefore, TMDLs for the Sea itself must also be developed and implemented (i.e., the process would not just have a long-term beneficial impact on the Sea's inflows, but also on the Sea itself). This aside, the Regional Board recognizes that the current water quality regulatory framework cannot, from a practical perspective, satisfactorily address the salt impairment facing the Sea. Consequently, without a salinity restoration project, such as the ones contemplated in the EIS/EIR, the Sea will become super-saline and the fishery will disappear.	
103.	ES-5	1 st ¶, 3 rd Sentence	RWQCB 7	Although the Water Quality Objective (WQO) established by the Regional Board for the Sea is 35,000 mg/L, that objective should be considered subject to amendment to accommodate any reasonable salinity control effort that is protective enough of the Sea's beneficial uses.	
104.	1-5	2 nd Paragraph, 3 rd Sentence	RWQCB 7	Regarding the study area, the EIS/EIR references the "Sea of Cortez." Later in the same paragraph, it refers to the "Sea of Cortez" as the "Gulf of California". For consistency and clarity, we suggest that EIS/EIR use "Gulf of California" throughout the document.	

Cmnt.#	Page #	Line #	Commentor	Comment	Response (Contractor)
105.	1-8	8 th Paragraph, 5 th Sentence	RWQCB 7	The EIS/EIR indicates that the primary use of the Sea is for collecting agricultural drainwater, seepage, leaching, and control waters. Neither the Clean Water Act nor the California Water Code recognizes "collection of waste" (e.g., collecting agricultural drainwater) as a beneficial use. Moreover, Title 40 of the Code of Federal Regulations (40 CFR), Part 131.10(a) prohibits waste transport or waste assimilation as a designated use for waters of the United States. It would be correct to replace the word "use" with "purpose".	
106.	1-9	2 nd Paragraph, Last Sentence	RWQCB 7	The EIS/EIR list a series of specific objectives to "ensure that [a safe and productive environment] is attained." The water in the Sea, in its tributaries, and in the agricultural drains, and the year-round cropping patterns in the area are what fundamentally sustain the Sea and its ecosystem. It therefore stands to reason that improving and protecting the quality of the water of the Sea and its main tributaries, not just in terms of salinity (see comment on nutrients below), must be also listed as an objective to meet Goal 2, but it is not. Data collected by the State pursuant to its Toxics Monitoring Program indicate that selenium is bioaccumulating in fish in the Sea and pesticides in the fish in the tributaries. We understand that the lead agencies will be conducting studies to address whether the selenium public health advisory for consumption of Sea fish is appropriate. Regardless of the results of the study, pesticides and selenium continue to bioaccumulate in fish, which, if not necessarily part of the food chain for humans, do form part of the food chain for migratory birds and endangered species. Studies conducted by the USGS ^{1,2,3} and the data presented by USFWS during the recent Salton Sea Symposium also indicate that selenium and pesticides are also and more directly adversely impacting migratory birds. The EIS/EIR should specify how any of the proposed alternatives, associated tasks, and listed objectives: (1) would reduce bioaccumulation of these pollutants, which is essential for a safe environment; and (2) what their impact on the TMDL process required by the Clean Water Act would be. On a related issue, data collected by Regional Board staff in January and February 2000 indicate that the Sea's delta with the New River is also impaired by fecal coliform and E. Coli bacteria. The data for the delta show concentrations as high as 20,000 MPN/100 ml of both fecal and E. Coli bacteria, which are almost 50 times greater than the concentrations that USGS measured last year for the New River near the delta. We believe that reduction of these pathogen-indicator organisms is also essential for a safe environment, not just for wildlife, but also for the public. Towards that end, the Regional Board is also developing a bacteria TMDL for the New River, which should largely address this water quality problem. The EIS/EIR should indicate how any of the alternatives address pathogen input and how they relate/impact the TMDL process.	

¹ Setmire, J.G., Schroeder R.A., Densmore J.N., Goodbred S.L., Audet D.J., and Radke W.R., 1993, *Detailed Study of Water Quality, Bottom Sediment, and Biota Associated with Irrigation Drainage in the Salton Sea Area, California, 1988-90*. U.S. Geological Survey Water-Resources Investigations Report 93-4014.

² Eccles L.A., 1979, *Pesticide Residues in Agricultural Drains, Southeastern Desert Area, California*. U.S. Geological Survey Water-Resources Investigations 79-16.

³ Setmire J.G., Wolfe J.C., and Stroud R.K., 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.

Cmnt.#	Page #	Line #	Commentor	Comment	Response (Contractor)
107.	1-10	1 st Paragraph (Objective s)	RWQCB 7	<p>The EIS/EIR lists, in part, addressing selenium health advisories on eating fish, reducing the occurrence of algal blooms, and maintaining the Sea as a Class I recreational impoundment as specific objectives to restore recreational uses at the Sea (Goal 3). Regarding selenium, we understand that the lead agencies plan to address the selenium health advisory by conducting a new risk-assessment study based on analyses of new fish-tissue samples collected from the Sea. The results of this assessment may or may not suggest that a revised advisory be issued (or the advisory be altogether rescinded). However, the health advisory is only part of the problem. Over fifteen years of data collected by the State Water Resources Control Board and the State Department of Fish and Game have continuously, consistently, and fundamentally shown that selenium is bioaccumulating in the Sea's fish. As the data has been peer-reviewed and validated by other studies, including studies conducted by the U.S. Department of Interior, the scientific presumption is that the data are good until proven otherwise. It therefore seems logical that the input of selenium (i.e., reducing selenium into the Sea) must also be fundamentally addressed in the EIS/EIR. The need for this analysis is more obvious if one considers that selenium concentrations could easily double and triple in the tributaries if the aforementioned water transfer materializes. The Regional Board will be developing and implementing selenium TMDLs for the Alamo River and the Sea itself. The TMDLs will have to factor in technical and economic practicalities. However, the water transfer proponents will have to address (i.e., mitigate) environmental impacts caused by the transfer. While the Authority and Bureau of Reclamation may not be responsible for the increases in concentrations itself, we believe that PL-105-372 explicitly directs the Authority and Bureau of Reclamation to analyze such a predictable impact, not just to mention it as it does in Section 2.7.3 of the EIS/EIR. It should also note how the alternatives relate/impact the selenium TMDLs.</p> <p>Similarly, the input and accumulation of nutrients in the Sea are believed to be associated with algal blooms, which are believed to be linked to the fish die-offs. One of the tasks associated with the project is a fish harvesting operation, whose purpose, according to the EIS/EIR, is to reduce the internal nutrient load in the Sea. The proposed fish harvesting operation is a step in the right direction, but it does not address the input of nutrients into the Sea. Should the current input of nutrients continue, the Sea is bound to remain hyper-eutrophic, even with the proposed fish operation. The main sources of nutrient inputs are agricultural wastewater from Imperial Valley and wastewater from Mexico. The Regional Board is developing a nutrient TMDL to address the eutrophic conditions. Successful development and implementation of the TMDL will be critical to correct the Sea's eutrophic conditions. The EIS/EIR should explicitly note this and how the alternatives address relate/impact the nutrient TMDL. It should also specify how any of the identified alternatives (and associated tasks) would maintain the water quality of the Sea as a DHS Class I impoundment (see also previous comment on bacteria).</p>	
108.	1-10	2 nd Paragraph (Objective s)	RWQCB 7	<p>The EIS/EIR lists, in part, maintaining a healthy habitat for orangemouth corvina, tilapia, bairdiella, and sargo as an specific objective to maintaining a viable sports fishery at the Sea (Goal 4). It also lists salinity objective of 40,000 mg/L or less to meet Goal 4. Regarding a healthy habitat for fish, please refer to our previous comment on pesticide and selenium bioaccumulation. Regarding the salinity target, please refer to the RWQCB(7)'s 2nd comment.</p>	
109.	2-6	3 rd Paragraph, 13 th Sentence	RWQCB 7	<p>The EIS/EIR states that for modeling purposes, the salinity target was set at 37,500 mg/L to ensure that the a salinity objective of 40,000 mg/L is not exceeded. Also, please refer to the RWQCB(7)'s 2nd comment.</p>	

Cmnt.#	Page #	Line #	Commentor	Comment	Response (Contractor)
110.	2-9	5 th Paragraph, 2 nd Sentence et seq.	RWQCB 7	The EIS/EIR, under the No Project alternative, outlines the likely potential reduction of inflows into the Sea and affirms that the water quality of the Sea and its tributaries "...will likely be worse due to water transfers from agricultural areas to urban areas..." The EIS/EIR correctly identifies the potential water losses to the Sea and related water quality impacts. The statement implies that these impacts will, as a matter of fact, happen, which is highly speculative. The proponents of the water transfer projects (e.g., the Imperial Irrigation District and San Diego County Water Authority) are obligated under CEQA to address not just the adverse water quality impacts created and potentially created by the water transfers, but also the environmental impacts created by the associated drop in Sea elevation. The EIS/EIR should note this under the analysis of the No Action Alternative as well as under any alternative where the potential for drop in elevation and water quality impacts are caused by other projects subject to CEQA such as water transfers. This comment also applies to Section 2.7.3 of the EIS/EIR.	
111.	2-11	1 st Paragraph, Last Sentence	RWQCB 7	The EIS/EIR indicates that the water quality standards for the waters of the Region are contained in the Regional Board's Basin Plan. The EIS/EIR should include in this section a listing of the beneficial uses and water quality objectives (jointly referred to as "WQS") contained in the Basin Plan. These WQS are enforceable by current law and regulation, and the listing would help others evaluating the proposed project put in perspective the objectives of the project and value of the Sea and its tributaries. Attached is a copy of the applicable WQS.	
112.	2-13	Section 2.4.2 (Alternative 1), 1 st Paragraph	RWQCB 7	The EIS/EIR states that, in addition to the common actions described under Section 2.5, Alternative 1 would involve the construction of two evaporation ponds within the Sea to concentrate salts and assist in controlling the Sea's elevation. Approximately 98,000 ac-ft/yr of Sea water would be discharged into the ponds. The EIS/EIR goes on to indicate (p. 2-20, 1 st Paragraph) that construction of the ponds would involve dredging of sludge material, and that the dredged material would be discharged into the Sea. Pursuant to Section 13260 of the California Water Code, anyone discharging or proposing to discharge wastes in a manner that could affect the quality of the waters of the state (e.g., the proposed discharge of brine wastes into the proposed ponds) must file a Report of Waste Discharge with the Regional Board. Following review of the RWD, Regional Board staff would prepare tentative waste discharge requirements (WDRs) for Board consideration of adoption at one of the Board's regularly scheduled public meetings. This comment also applies to all other project Alternatives where waste surface impoundments (e.g., brine ponds) are under consideration. Similarly, Section 404 of the Clean Water Act requires that proponents of dredging operations apply for water quality certification or obtain WDRs for the operation from the Regional Board. The construction of the ponds themselves may also require water quality certification from the Regional Board pursuant to Section 401 of the Clean Water Act.	
113.	2-22	2 nd Paragraph, 1 st Sentence	RWQCB 7	The EIS/EIR states that additional dikes would be constructed from the north and south ends of the south evaporation pond to protect Pupfish habitat. This proposed activity is subject to the requirements of Section 401 of the Clean Water Act. Hence, the project proponents need to apply for Water Quality Certification or WDRs from the Regional Board.	
114.	2-22	3 rd Paragraph, 3 rd Sentence	RWQCB 7	The EIS/EIR states that a North Wetland Habitat area would be constructed to preserve existing resources in the area as well as allow adaptive management. The total proposed area would cover about 1000 acres. This proposed activity is also subject to the requirements of Section 401 of the Clean Water Act. Hence, the project proponents need to apply for Water Quality Certification or WDRs from the Regional Board.	

Cmnt.#	Page #	Line #	Commentor	Comment	Response (Contractor)
115.	2-25	Last Paragraph, 1 st Sentence	RWQCB 7	The EIS/EIR states that under the 1.06 maf/yr flow scenario, Alternative 1, Phase 1, a displacement dike would also be constructed to maintain the elevation target goals. This proposed activity is also subject to the requirements of Section 401 of the Clean Water Act. Hence, the project proponents need to apply for Water Quality Certification or WDRs from the Regional Board.	
116.	2-26	4 th Paragraph, 1 st Sentence et seq., (Alternative 1, Phase2)	RWQCB 7	The EIS/EIR states that under the 1.06 maf/yr flow scenario, Alternative 1, Phase 2, this phase would involve the import of water from the proposed Central Arizona Salinity Interceptor (CASI), which is designed to transport brackish water from Phoenix and Tucson areas to Yuma. Approximately 300,000 ac-ft/yr of CASI water would be available for diversion into the Sea. This water would have a salinity of approximately 4,400 mg/L. This proposed activity would be subject to State review and approval as the proposed water may contain other pollutants (e.g., pesticides) that may adversely impact the quality of the waters of the State. This comment also applies to all other project (e.g., Phase 2 of Alternatives 2 and 3) where CASI water is under consideration.	
117.	2-27	5 th Paragraph, 1 st Sentence, et seq. (Alternative 2, Phase 1)	RWQCB 7	Under the current flow scenario, Alternative 2, Phase 1, in part, would involve the construction of an EES. This activity (i.e., the proposed discharge of brine wastes from the EES into a catch basin and then into proposed ponds) would be subject to Section 13260 of the California Water Code. Following review of the RWD, Regional Board staff would prepare tentative waste discharge requirements (WDRs) for the proposed discharge for Board consideration of adoption at one of the Board's regularly scheduled public meetings.	
118.	2-27	(Use of flood flows)	RWQCB 7	The EIS/EIR states that, when available, floodwater flows would be conveyed through the existing facilities to either the Alamo River or the Coachella Canal and into the Salton Sea. Further, the EIS/EIR states that in order to implement this action, "improvements in the Alamo channel" may be required. Channel modification is subject to State review and approval. The water quality impacts, including increased sedimentation and the resultant suspension of DDT and its metabolites into the aquatic system should be evaluated. These impacts should be evaluated with respect to the Regional Basin Plan. Further, the impact of an additional flow of 1250 cfs (1.6 times the current flow of the Alamo River at its outlet to the Salton Sea) for the one to four month period referenced in the EIS/EIR on the aquatic species that inhabit the Alamo River and its tributaries should be evaluated. Additionally, the hydrologic impact on wetland areas along the Alamo River, including Fig Lagoon, and the Finney and Ramer Units should be evaluated.	
119.	2-35	3 rd Paragraph, 3 rd Sentence, et seq. (fish harvesting)	RWQCB 7	The EIS/EIR indicates that dump trucks used to transport fish would be washed down daily at a wash rack equipped with containment berms and an oil/grease separator, and that wastewater from the wash rack would be processed through a sewer system. The EIS/EIR should include projections/estimates as to how much wastewater would be generated from this operation, whether the referenced processing sewer system will be a new on-site system, and what the ultimate method of wastes disposal would be to determine whether Section 13260 of the California Water Code also applies to this activity.	

Cmnt.#	Page #	Line #	Commentor	Comment	Response (Contractor)
120.	2-43	2 nd Paragraph, 1 st Sentence, et seq. (Export to Pacific Ocean)	RWQCB 7	Under this option, Salton Sea water would be pumped to the Pacific Ocean via an enclosed pipe and tunnel that would terminate in Oceanside. This activity (i.e., the proposed discharge of saline Sea water into the Ocean) would be subject to Section 13260 of the California Water Code. The San Diego Regional Water Quality Control Board would have primary water quality control jurisdiction over this activity.	
121.	2-43	3 rd Paragraph, 1 st Sentence, et seq. (Export to Palen Dry Lakebed)	RWQCB 7	Under this option, water could be pumped as water from the Sea or as brine from a pond to the subject lakebed via a pipe. This activity (i.e., the proposed discharge of saline wastewater or brine wastes from into the lakebed) would be subject to Section 13260 of the California Water Code. Following review of the RWD, Regional Board staff would prepare tentative waste discharge requirements (WDRs) for the proposed discharge for Board consideration of adoption at one of the Board's regularly scheduled public meetings.	
122.	2-45	Table 2.7- 1 (Summary of Resources Potentially Impacted by Cumulativ e Actions)	RWQCB 7	The subject Table shows that the TMDL program would potentially impact only surface water, fisheries and aquatic, and agriculture. The TMDLs address the water quality of surface waters within the watershed. The relative value of beneficial uses (e.g., recreation, aesthetics, wildlife habitat, etc.) of these waters depends on their water quality. The water quality objectives established to protect the recreational beneficial uses are also based on protection of public health. Restoring water quality has an economic impact, which would have to be distributed between point (e.g., wastewater treatment plants) and nonpoint sources of pollution (i.e., between rural communities, municipalities, and agricultural communities). Therefore, in addition to the resources listed in Table 2.7-1, the TMDLs can also potentially impact avian, wildlife, socioeconomic, land uses, recreation, aesthetics, public health, and utilities (e.g., wastewater treatment plants) resources. The EIS/EIR should address this.	
123.	2-49	Table 2.7- 2 (Timeline for TMDLs)	RWQCB 7	The subject Table lists silt, selenium, and nutrients as the three TMDLs scheduled for development for the Sea. The first listed TMDL is salt, not silt. Regarding the timelines for all the TMDLs listed in the Table, the schedule can change based on Regional and State priorities.	
124.	2-49	Section 2.7.6, Last Sentence (Mexicali Wastewat er System Improve ments)	RWQCB 7	The EIS/EIR states that after improvements, Mexicali may keep some or all wastewater instead of discharging it to the New River, potentially affecting the quantity of inflows into the Sea. This would not only affect the quantity of the inflows, but also the quality of the inflows. For example, the wastewater from Mexicali is diluting some pollutant concentrations downstream in the New River (e.g., selenium). It is also causing a severe bacterial impairment in the New River and a dissolved oxygen sag in the first 20 miles of the river.	

Cmnt.#	Page #	Line #	Commentor	Comment	Response (Contractor)
125.	2-51	Section 2.7.10 (Lower Colorado River Desert Region Plan)	RWQCB 7	The EIS/EIR states that NRCS is the lead agency for this plan and that one of the plan's objectives is development and implementation of TMDLs. According to the EIS/EIR, this project is scheduled for completion in 2002. The Regional Board is responsible for development and implementation of the TMDLs. The TMDL are ultimately approved (and if necessary developed) by USEPA. We are not aware of any TMDLs where NRCS is lead (let alone scheduled for completion by 2002), but we acknowledge its support in the development and implementation of the sediment TMDL for the Alamo River.	
126.	3-11	1 st Paragraph, 7 th Sentence	RWQCB 7	The EIS/EIR cites that a salinity of 60 ppt is equivalent to a salinity of about 63.3 mg/L. A salinity of 60 ppt is equivalent to 63,300 mg/L.	
127.	3-37	Paragraph following Table 3.3-1, 4 th Sentence, et seq.	RWQCB 7	The EIS/EIR states that the Levine-Fricke sediment sampling results showed no evidence of residual chlorine compounds in Sea's sediments. The report's findings need to be verified. Other sediment investigations ⁴ suggest that chlorinated hydrocarbon pesticides are accumulating in the Sea's sediment. Also, it is important to point out that the Holdren study also cited in the EIS/EIR focused on sampling for organochlorine pesticides (which are insoluble) in the water column, and did not sample for organophosphorus pesticides (which are soluble) in water. Several of these pesticides (diazinon, chlorpyrifos, malathion, and carbofuran) have been detected in the Alamo River delta at levels of concern (de Vlaming et al., 2000).	
128.	3-150	1 st Paragraph, Last Sentence	RWQCB 7	According to the EIS/EIR, the bacteria TMDL for the New River is scheduled for development by 2005. The subject TMDL is actually scheduled for development and implementation by no later than June 2000.	
129.	3-158	Paragraph following Table 3.15-2, 1 st Sentence, et seq.	RWQCB 7	The EIS/EIR states that the Regional Board has issued NPDES permits for the communities of Heber, Niland, Seeley, and Winterhaven. It also states that Bombay Beach has a public sewage system operated by CVWD. The community of Winterhaven does not have an NPDES permit. It treats and disposes of its wastes via septic tank-leachfield systems. The Regional Board has adopted WDRs for several of those systems. The wastes at the Bombay Beach wastewater treatment facility are governed by Waste Discharge Requirements Order No. 89-030, adopted by the Regional Board.	
130.	4-2	3 rd Paragraph, 1 st Sentence, et seq.	RWQCB 7	The EIS/EIR states that, in addition to salinity increase, the concentrations of nutrients and other constituents that are carried into the Sea would also increase. A successfully implemented nutrient TMDL for the Sea would likely reduce nutrient inputs by 70-90%. At this time, we cannot predict to what degree a successful implementation of selenium TMDL would reduce selenium inputs, but the water quality objective for selenium is 5 ppb, which would be a target for the TMDL. Please refer to our previous comments regarding the bacteria TMDL.	

⁴ *Setmire J.G., Wolfe J.C., and Stroud R.K., 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.*

Cmnt.#	Page #	Line #	Commentor	Comment	Response (Contractor)
131.	4-11	Last Paragraph, 1 st and 2 nd Sentences	RWQCB 7	According to the EIS/EIR, there are no regulatory criteria for salinity, and, therefore, the projected increase in salinity would have no regulatory significance. The statement is incorrect. Regarding salinity, the Water Quality Control Plan for the Colorado River Basin states, in part, that "The water quality objective for the Salton Sea is to reduce the present level of salinity, and stabilize it at 35,000 mg/l..."	

Cmnt.#	Page #	Line #	Commentor	Comment	Response (Contractor)
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**California Regional Water Quality Control Board, Region 9 (CRWQCB 9)
Review Comments**

Cmnt.#	Page #	Line #	Commentor	Comment	Response (Contractor)
132.	6-34	6.3.3	RWQCB 9	What is the risk of spills from the transmission facilities and what would be the impacts of spills that would occur? The impacts of spills of hypersaline water from the Salton Sea on inland water bodies and coastal lagoons in the San Diego Region must be addressed. In addition, mitigation measures and both proactive and reactive management practices must be thoroughly addressed.	
133.	6-34, 6-21	6.3.3, Table 6.3-1, respectively	RWQCB 9	What are the projected chemical and biological characteristics of the water proposed to be discharged? Chemical composition and toxicity are key constituents that must be determined.	
134.	6-34, 6-13	6.3.3, Table 6.3-1, respectively	RWQCB 9	What are the physical and biological baseline conditions in the proposed receiving waters? Extensive scientific studies, similar to those that have been done for the South Bay Ocean Outfall, will be necessary.	
135.	6-34, 6-13	6.3.3, Table 6.3-1, respectively	RWQCB 9	What are the projected water quality impacts of the proposed discharge? The proposed discharge will be subject to the requirements of California's Ocean Plan. Treatment of the flows prior to discharge may be necessary. The assessment of the impacts should be complete enough so a determination can be made regarding treatment requirements. The studies/case histories cited (in previous drafts) for existing POTW discharges do not appear particularly relevant to this proposal.	
136.	6-35, 6-13	6.3.3, Table 6.3-1, respectively	RWQCB 9	The design of the outfall will be important in this determination. Because of differences in density, an outfall for the Salton Sea discharge would be expected to have different dilution characteristics than a POTW outfall.	
137.	6-37	6.3.3	RWQCB 9	Another very important issue will be impacts resulting from bioaccumulation of pesticides and other constituents, possibly including selenium. The studies cited for existing brine discharges were not long-term studies where the impacts of bioaccumulation would be expected to show up.	

Cmnt.#	Page #	Line #	Commentor	Comment	Response (Contractor)
138.	6-36, 6-15	6.3.3, Table 6.3- 1, respectivel y	RWQCB 9	Finally, a discussion of impacts must include thoroughly addressing the issue of invasive exotic species.	
139.	2-43	2.6.1	RWQCB 9	If the intent is to discharge to the Pacific Ocean at Oceanside through the existing outfall, the estimated flow for the Salton Sea discharge exceeds the current design capacity of the Oceanside Ocean Outfall. The flow rate listed under <u>Export to Pacific Ocean</u> is 345 cfs, which equates to approximately 223 million gallons per day (MGD). The current design capacity of the Oceanside Ocean Outfall is 30 MGD (average daily flow), with a maximum rated peak-day capacity of 45 MGD. Based on current plans for United States Marine Corps Base, Camp Pendleton to connect to the Oceanside Ocean Outfall, within the next twelve months the outfall will be permitted for flows near the average daily capacity of 30 MGD. The potential need therefore exists for the City of Oceanside to modify the existing outfall sooner than the Phase II implementation date. If a new Oceanside Ocean Outfall is to include the Project's discharge, the coordination of the two discharge objectives may necessitate an earlier-than-planned preliminary design phase for the <u>Export to Pacific Ocean</u> alternative.	
140.	2-43	2.6.1	RWQCB 9	The last sentence under <u>Export to Pacific Ocean</u> indicates that the general pipeline alignments are shown in Figure 2.6-1. The figure was not found in the EIS/EIR.	
141.	6-13	Table 6.3- 1	RWQCB 9	The <u>Surface Water Hydrology</u> statement of environmental consequences estimates that the Salton Sea discharge could significantly impact receiving waters, but that the <u>cumulative</u> impact could be less than significant when considering other coastal waste discharges. The applicable effluent limitations of the California Ocean Plan (Ocean Plan) will apply to the Project's total effluent. As such, the evaluation of any proposed discharge to the Pacific Ocean will focus on the quality of the undiluted effluent in comparison to water quality objectives and ocean beneficial uses promulgated in the Ocean Plan.	

Cmnt.#	Page #	Line #	Commentor	Comment	Response (Contractor)
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State Water Resources Control Board (SWRCB) Review Comments

Cmnt.#	Page #	Line #	Commentor	Comment	Response (Contractor)
142.	ES-4	30	SWRCB	The TMDL process will have a beneficial effect on water quality, but water quantity may be reduced as a result of the management practices needed to comply with the pollutant limits established by the process. Reduction of agricultural wastewater quantity should be mentioned, along with quality improvement, as a likely outcome of the TMDL program.	
143.	ES-5	8	SWRCB	Alternatives 2-5 also require an import of Colorado River flood flows in Phase 1. A displacement dike is also required during Phase 1 for Alternatives 1-5.	
144.	ES-9	12	SWRCB	In accordance with a July 1,1997 Council on Environmental Quality memorandum, transboundary impacts that result from a federal act are covered by NEPA and an assessment of the environmental impact of loss of Colorado River flood flow may be needed before flood flows could be diverted to the Salton Sea.	
145.	ES-10	7	SWRCB	The cumulative impacts of projects that might divert Colorado River flood flows, such as the MWD Diamond Valley Reservoir or the Cadiz Groundwater Storage Program should be noted.	
146.	1-5	3	SWRCB	The Alamo River and portions of Salt Creek, which would be used to convey flood flows to the Salton Sea should also be in the primary study area .	
147.	1-6	all	SWRCB	The Salton Sea Restoration Program does not directly address the selenium fish consumption advisory, or the levels of selenium in the Sea. Unless the selenium advisory or the causes of the advisory are addressed, recreational fishing use of the Sea may not increase. See also Goal 3, page 1-9.	
148.	1-9	Goal 3	SWRCB	Algal blooms will not be reduced unless the TMDL program successfully reduces nutrient loadings to the Sea. The fish harvesting element of the Salton Sea Restoration Project will not reduce algal blooms or algae caused odors. Also, the Restoration Project does not address the causes of the fish advisory.	
149.	1-10	Goal 4	SWRCB	Elimination of the fish consumption advisory will be needed to maintain or expand the Salton Sea sport fishery, therefore the advisory should be re-evaluated.	
150.	1-10	Goal 5	SWRCB	Elevation control should be added to the list of objectives.	
151.	1-12	3	SWRCB	It is unclear if this NEPA/CEQA document is intended to cover " Accelerated Phase 2" actions such as importing flood flows or accelerated export, both of which are shown as Phase 1 actions (for example on Table 2.4-1)	
152.	2-11	30	SWRCB	See comment 1.	

Cmnt.#	Page #	Line #	Commentor	Comment	Response (Contractor)
153.	2-26	25	SWRCB	What is the basis for the assumption that this quantity and quality of water would be available from CASI?	
154.	2-27	EES	SWRCB	What criteria define the hours of operation for the EES system. Will the system operate at night? During the winter? During high humidity days? During bird migrations? During poor air quality days?	
155.	2-44	overview	SWRCB	Any project which plans to divert flood flows from the Colorado River would reduce the availability of this flow for elevation control in the Salton Sea, and would have a cumulative impact on the Restoration Project. Alternatives 2-5 all require flood flows by 2015, so any other competing projects that might limit the quantity of flood flows should be discussed.	
156.	2-49	Mexicali	SWRCB	There are additional projects proposed to transfer water from the Mexicali Valley to the Coastal Cities in Baja California. There is a joint US/Mexico study for a shared aqueduct to serve San Diego and Tijuana. This project could divert water away from the New River drainage system and the Salton Sea. The Department of Water Resources participates in this study.	
157.	2-55	Brawley Project	SWRCB	This project, if successful, may improve water quality but reduce water quantity (due to evaporation from the wetlands)	
158.	2-56	21	SWRCB	The environmental consequences of importation of flood flows is not included in Table 2.9-1 or in Table 6-2. Reduction of flood flow may have an impact on the Colorado River Delta and the Upper Gulf Biosphere Reserve. Release of the flood flows into the Alamo River and Salt Creek will have an impact on such things as suspension of contaminated sediments, erosion of banks and stream beds, reduced drainage from ag lands, impacts on fish in the Alamo River and pupfish in Salt Creek.	
159.	3-21	10	SWRCB	Verify the amount of Imperial Valley farm land. On page 3-22, it says 525,000 acres.	
160.	3-23	Colorado River Delta	SWRCB	The project impacts include the Delta but may extend beyond the Delta to the Upper Gulf of California Biosphere Reserve, some portions of which may be dependent on flood flows. Further, the seasonal timing of proposed diversions (September through December) may conflict with the environmental needs of the Delta and Biosphere Reserve. Although there are "no requirements to provide any water for environmental purposes to Mexico", a July 1, 1997 Memorandum from the Council on Environmental Quality advises Federal agencies that NEPA requires analysis and disclosure of transboundary impacts of proposed Federal actions taking place in the United States. This discussion also assumes that no other projects will compete for Colorado River flood flows with the Salton Sea Restoration Project, which may not be so.	
161.	3-64	Fisheries	SWRCB	A discussion of the fisheries and aquatic resources of the Alamo River and portions of Salt Creek which will be used to carry flood flows to the Salton Sea should be added.	
162.	4-19	Water Quality	SWRCB	The impact of dredging would equal 4 times the annual sediment load of the Alamo River, if construction is underway on all 4 dike ends at the same time. This impact will be followed by the impact of dredging for construction of the Displacement Dike by 2015.	
163.	4-23	Pupfish Pond	SWRCB	Why are there no project plans to keep the pupfish pond in operation with higher Salton Sea elevations.	
164.	4-27	Water Rights	SWRCB	The proposed appropriation of water from the Colorado River requires a water right permit from the SWRCB	

Cmnt.#	Page #	Line #	Commentor	Comment	Response (Contractor)
165.	4-27	Flood Flows	SWRCB	The draft EIR/EIS indicates that the proposed diversion may exceed the capacity of the channel of the Alamo River in some reaches and may cause scouring of the channel in other areas. Similar concerns are indicated for the channel of Salt Creek. These potential impacts should be evaluated and, if appropriate, mitigation measures presented in the document.	
166.	4-27	Flood Flows	SWRCB	The environmental consequences of flood flow diversions on the delta and biosphere reserve are not discussed in detail. As time goes on, this diversion of flood flows will take a greater and greater percentage of the amount of water released to Mexico and the downstream ecosystems. The result of these diversions will be that no flood flows will reach Mexico at all for an ever increasing amount of years. The environmental consequences of this diversion will likely be of concern to Mexico and US and international environmental groups. Diversion of the flood flows to the Salton Sea does have environmental benefits to the Salton Sea, which are covered in the document. If this assumed source of supplemental flow to the Sea is ultimately available, the impacts of the diversion to the Colorado River Delta and the Upper Gulf Biosphere Reserve should be addressed in this or a supplemental environmental document.	
167.	4-34	4.1.10	SWRCB	Other projects make have a cumulative impact on the availability of Colorado River flood flows.	
168.	4-45	4.3.5	SWRCB	The displacement dike should be addressed, since it is a Phase 1 action and it will take place in an area where the New and Alamo Rivers have deposited sediments. If it is not discussed here, it should be addressed in Chapter5, Phase 1 Common Actions.	
169.	4-69	4.4.1	SWRCB	See previous comment. Also, the combined potential particulate sources of the displacement dike, the abandoned evaporation ponds, the receded shoreline, and or the EES system should be addressed.	
170.	4-74	4.4.4	SWRCB	The report states there are "no recognizable constraints torevegetation". How will salts be leached from the exposed soils? Also, due to severe desert conditions in the area, how quickly will revegetation occur?	
171.	4-112	4.6.6	SWRCB	Flood flow impact on fisheries in Salt Creek (pupfish) should be discussed.	
172.	4-166	4.13.1	SWRCB	Odor generation from the pupfish pond, the evaporation pond, and the displacement dike (when it is drying up) should be addressed.	
173.	4-193	1	SWRCB	The health effects of exposure of the bottom sediment in the displacement dike and the maximum amount of exposed sediments from the maximum Sea level drop should be addressed. Are there any concerns about exposure to the organic sediments near the Alamo and New River deltas?	
174.	6-3	33	SWRCB	The assumption that the usefull life of the evaporation ponds is limited to 30 years because of seismic activity should be further discussed. Why couldn't the damage be repaired? If they are damaged before 30 years, there is no indication that they wouldn't be repaired and kept in use.	
175.	6-13	Table 6.3-1	SWRCB	Input from Mexican environment, resources, health and other agencies should be included in the summary of the environmental consequences of Phase 2 export of Salton Sea brines to the Gulf of California. The International Boundary and Water Commission would have to formally approve any cross-border transfer of water. Permits from numerous Mexican agencies would be required, and compliance with Mexican laws would be necessary.	

Cmnt.#	Page #	Line #	Commentor	Comment	Response (Contractor)
176.	6-27	27	SWRCB	The town of El Golfo de Santa Clara, Sonora is not outside the UN designated Biosphere Reserve. The Reserve extends nearly to the town of Puerto Penasco, according to a map provided by Jose Campoy, Reserve Director, INE/SEMARNAP. The discussion of environmental consequences of discharge to the Gulf does not include much information of the Mexican environment, which will be a factor in any possible agreement by Mexico to allow such a discharge. In some sections, such as Socioeconomics, Mexico is not mentioned at all.	
177.	6-29	10	SWRCB	The proposed discharge would be about 1/3 larger than the MODE Canal.	
178.	6-43	Section 6.4	SWRCB	Import of 304,800 acre-feet of 5000 mg/l TDS CASI water will significantly increase the quantity of salt that will have to be removed from the Salton Sea. The need to dispose of this added quantity of salt will have environmental consequences which should be noted in this discussion.	
179.	6-46	Section 6.5	SWRCB	Projects which will increase the capacity to take water from the Colorado River when it is available, such as the new Diamond Valley Reservoir or the proposed Cadiz groundwater storage facility, will have a cumulative impact on availability of flood flows which could be diverted to the Salton Sea. Wetlands treatment systems, which are proposed to treat agricultural drain water and the New River and Alamo River, will provide an opportunity for evaporative loss of water which currently reaches the Salton Sea.	