

SECTION 3.0

# **Environmental Analysis**

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# Environmental Analysis

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## Introduction

Section 3, Environmental Analysis, which includes Sections 3.1 through 3.16, presents the existing environmental setting and analysis of impacts associated with the Proposed Project and Alternatives, defines the standards for determining the significance of impacts, and where applicable, describes mitigation measures for potentially significant environmental impacts associated with the Proposed Projects and Alternatives. The environmental analysis was prepared in accordance with NEPA and CEQA guidelines. This introductory section presents background information and assumptions that were used in the development of the environmental analysis. The following resource areas are discussed in this section:

- Hydrology and Water Quality
- Biological Resources
- Geology and Soils
- Land Use
- Agricultural Resources
- Recreation
- Air Quality
- Cultural Resources
- Indian Trust Assets
- Noise
- Aesthetics
- Public Services and Utilities
- Transportation
- Socioeconomics
- Environmental Justice
- Transboundary Impacts

No hazards and hazardous materials section is included in this EIR/EIS because the Lead Agencies concluded that there are no potential impacts associated with hazards and hazardous materials that could result from implementation of the Proposed Project. Additionally, Indian Trust Assets, Socioeconomics, Environmental Justice and Transboundary Impacts are sections that are included for federal NEPA purposes only; thus, they are formatted differently than the other sections, and, in particular, they do not include significance criteria.

## Organization of the Impact Analysis

The impact analysis for each resource area addresses the components of the Proposed Project (see Section 2, Description of the Proposed Project and Alternatives) that are applicable to each of the following geographic subregions, as shown below. The bulleted items are further described below.

### Lower Colorado River

- Water Conservation and Transfer
- Inadvertent Overrun and Payback Policy (IOP)
- Biological Conservation Measures in USFWS' Biological Opinion

## **IID Water Service Area and AAC**

- Water Conservation and Transfer
- Inadvertent Overrun and Payback Policy (IOP)
- HCP (IID Water Service Area Portion)
- HCP (Salton Sea Habitat Conservation Strategy)

## **Salton Sea**

- Water Conservation and Transfer
- HCP (Salton Sea Habitat Conservation Strategy)

For the reasons summarized in Table 3.0-1 (see “Subregions Excluded From the Impact Analysis” starting on page 3.0-4), there would be no impacts in the SDCWA service area geographic subregion; therefore, this geographic subregion is not carried forward into the impact analysis. The SDCWA subregion is discussed in Section 5.2, Growth-Inducing Impacts. In addition, impacts of the Proposed Project in the CVWD and MWD service areas (see “Impacts in the CVWD and MWD Service Areas” starting on page 3.0-7) are summarized in Table 3.0-3 (see page 3.0-15) and are not carried forward into the impact analysis.

## **Water Conservation and Transfer**

The impacts of the Proposed Project’s water conservation and transfer components (see Section 2, Description of the Proposed Project and Alternatives), including the impacts of the federal action, are evaluated at a project level of detail for each relevant geographic subregion.

## **Inadvertent Overrun and Payback Policy (IOP)**

IID’s compliance with Reclamation’s IOP (see Section 1.5.3) is evaluated at a project level of detail for each relevant geographic subregion. Note that IID’s compliance with the IOP is a CEQA action whereas Reclamation’s adoption and *implementation* of the IOP is a NEPA action, which is analyzed in the IA EIS (Reclamation 2002).

Also note that IOP impacts are described for the Proposed Project only and are not repeated for each of the Project Alternatives because the resultant impacts from compliance with the IOP would be the same for each Alternative. The IOP would not be implemented under the No Project Alternative.

## **Biological Conservation Measures in USFWS’ Biological Opinion**

The biological conservation measures were developed as part of the USFWS’ Biological Opinion (see Section 1.5.3). These measures are evaluated at a programmatic level of detail under the LCR geographic subregion in this EIR/EIS. If subsequent environmental review is necessary before these measures can be implemented, this review will be prepared by Reclamation. The impacts resulting from implementation of the biological conservation measures are described for the Proposed Project and are not repeated for each of the Project Alternatives because the biological conservation measures and the resulting impacts would be the same for each Alternative. Biological conservation measures would not be implemented under the No Project Alternative.

## Habitat Conservation Plan

The HCP is a component of the Project and is intended to address impacts in both the IID water service area and AAC right-of-way and the Salton Sea. The portion of the HCP that addresses impacts in the IID water service area is described in Section 2, Description of the Proposed Project and Alternatives, and is referred to as the “HCP (IID Water Service Area Portion).” The portion of the HCP that will address impacts to the Salton Sea is referred to as the “Salton Sea Habitat Conservation Strategy (HCP-SS).” These are further described below.

**HCP (HCP-IID) (IID Water Service Area Portion).** The HCP-IID was developed in consultation with USFWS and CDFG and is described in Section 2.2.6, and in detail in Appendix C. This portion of the HCP is evaluated at a project level of detail in this EIR/EIS.

**Salton Sea Habitat Conservation Strategy (HCP-SS).** The Salton Sea Habitat Conservation Strategy is also described in Section 2.2.6, and in detail in Appendix C. As noted in Section 2.2.6.7, an alternative HCP approach for Salton Sea impacts that was considered in the Draft EIR/EIS is not discussed in this Final EIR/EIS. That approach would have constructed a hatchery and ponds to raise fish as a food base for piscivorous birds. Subsequent to issuance of the Draft EIR/EIS, the resource agencies advised IID that this alternative approach likely would not meet the permit issuance criteria, and it was subsequently eliminated from the HCP.

**HCP Alternatives.** The Alternatives to the HCP are the same as the Alternatives to the Proposed Project:

- Alternative 1: No Project
- Alternative 2: Water Conservation and Transfer of Up To 130 KAFY to SDCWA (On-farm Irrigation System Improvements as Exclusive Conservation Measure)
- Alternative 3: Water Conservation and Transfer of Up To 230 KAFY to SDCWA, CVWD, and/or MWD (All Conservation Measures)
- Alternative 4: Water Conservation and Transfer of Up To 300 KAFY to SDCWA, CVWD, and/or MWD (Following As Exclusive Conservation Measure)

As stated in Section 2, Description of the Proposed Project and Alternatives, Alternative 1 (No Project Alternative) is the scenario under which the HCP is not constructed, permitted, or implemented. Alternatives 2 and 3 consider varying lower levels of water conservation than those covered by the Proposed HCP. Alternative 4 considers the same level of water conservation as the Proposed Project; the difference between the Proposed Project and Alternative 4 is that Alternative 4 considers the impacts of conserving water with following as the exclusive conservation measure in the IID water service area.

The environmental impacts associated with implementation of these Alternatives would be substantially similar to and within the range of the environmental impacts of the Proposed HCP because the amount of mitigation/restoration required under these Alternatives is similar to the amount of mitigation/restoration in the Proposed HCP. Therefore, the description of HCP impacts associated with the Proposed HCP adequately covers the impacts of any of the HCP Alternatives and no additional evaluation of the impacts of these

Alternatives, is conducted in this EIR/EIS. Section 6 of the HCP (see Appendix C) and Section 4 of this EIR/EIS provide additional discussion of why these Alternatives would have the same effects as the Proposed HCP.

### **Impact Numbering System**

Impacts are numbered consecutively within the Proposed Project and each Alternative. In addition, each resource area and Alternative has been assigned a code. For example, the code for biological resources is "BR." Impacts for the Proposed Project are numbered sequentially, e.g., Impact BR-1, etc. Biological Resources impacts for Alternatives 2, 3, and 4 are labeled A2-BR-1, A3-BR-1, A4-BR-1, respectively. Effects of Alternative 1, the No Project Alternative, are not numbered because they are not impacts of the Project.

For impacts that are the same for all Alternatives, such as the impacts of the Biological Conservation Measures in USFWS' Biological Opinion, IID's compliance with the IOP, and the HCP, impacts are numbered and listed under the Proposed Project only; therefore, although these impacts would also result from implementation of Alternatives 2, 3, and 4, they are not discussed under these Alternatives.

Additionally, impacts associated with the HCP (IID Water Service Area Portion) and HCP (Salton Sea Habitat Conservation Strategy) are assigned codes of HCP-IID, HCP-SS, respectively.

### **Subregions Excluded From the Environmental Impact Analysis**

The region of influence for the Proposed Project includes six geographic subregions as described in Section 1.3. The geographic subregions include the LCR, IID water service area and AAC, Salton Sea, SDCWA service area, CVWD service area (Improvement District No. 1), and MWD service area. Impacts within the CVWD and MWD service areas are also addressed in separate environmental documents (see "Impacts in the CVWD and MWD Service Areas" below, and Section 1.5).

The Proposed Project and Alternatives include construction primarily in the IID water service area and AAC and the Salton Sea geographic subregions only. Therefore, for many of the resource areas, impacts only result in those two subregions. Within each resource section in Section 3, the resource areas that may experience potential impacts in a particular subregion are discussed. Subregions that are not affected for a given resource area are omitted.

Table 3.0-1 shows which geographic subregions would/would not experience impacts for each resource area. This table serves as a guide for Section 3, showing which subregions are discussed in each section. Within the "Methodology" section of each resource area, the subregions that are excluded from the environmental impact analysis are also identified for the reader.

**TABLE 3.0-1**  
Resource Areas With/Without Impacts Listed by Geographic Subregion

	<b>Geographic Subregion</b>			
	<b>LCR</b>	<b>IID Water Service Area and AAC</b>	<b>Salton Sea</b>	<b>SDCWA Service Area</b>
<b>3.1 Hydrology and Water Quality</b>	Potential impacts	Potential impacts	Potential impacts	No impacts because SDCWA would receive the same blend of water from MWD that it currently receives under existing agreements with MWD. No new facilities, operations, or maintenance practices would be required to convey, receive, or use the water resulting from the IID transfer.
<b>3.2 Biological Resources</b>	Potential impacts	Potential impacts	Potential impacts	No impacts (see above under "3.1, Hydrology and Water Quality")
<b>3.3 Geology and Soils</b>	Potential impacts	Potential impacts	Potential impacts	No impacts (see above under "3.1, Hydrology and Water Quality")
<b>3.4 Land Use</b>	Potential impacts	Potential impacts	Potential impacts	No impacts (see above under "3.1, Hydrology and Water Quality")
<b>3.5 Agricultural Resources</b>	Potential impacts	Potential impacts	Potential impacts	No impacts (see above under "3.1, Hydrology and Water Quality")
<b>3.6 Recreation</b>	Potential impacts	Potential impacts	Potential impacts	No impacts (see above under "3.1, Hydrology and Water Quality")
<b>3.7 Air Quality</b>	Potential impacts	Potential impacts	Potential impacts	No impacts (see above under "3.1, Hydrology and Water Quality")
<b>3.8 Cultural Resources</b>	Potential impacts	Potential impacts	Potential impacts	No impacts (see above under "3.1, Hydrology and Water Quality")

**TABLE 3.0-1**  
Resource Areas With/Without Impacts Listed by Geographic Subregion

	Geographic Subregion			
	LCR	IID Water Service Area and AAC	Salton Sea	SDCWA Service Area
<b>3.9 Indian Trust Assets</b>	No impacts because the change in LCR flows falls within the normal range of fluctuations along the reach. Also, the biological conservation measures mitigate any biological resources impacts.	Potential impacts.	Potential impacts.	No impacts (see above under "3.1, Hydrology and Water Quality)
<b>3.10 Noise</b>	Potential impacts	Potential impacts	Potential impacts	No impacts (see above under "3.1, Hydrology and Water Quality)
<b>3.11 Aesthetics</b>	No impacts because the change in LCR flows falls within the normal range of fluctuations that occur along the reach. Also, the biological conservation measures mitigate any aesthetics impacts.	Potential impacts	Potential impacts	No impacts (see above under "3.1, Hydrology and Water Quality)
<b>3.12 Public Services and Utilities</b>	Potential impacts	Potential impacts	Potential impacts	No impacts (see above under "3.1, Hydrology and Water Quality)
<b>3.13 Transportation</b>	No impacts because a very limited amount of construction would take place under the USFWS Biological Opinion.	Potential impacts	Potential impacts	No impacts (see above under "3.1, Hydrology and Water Quality)
<b>3.14 Socioeconomics</b>	Potential impacts	Potential impacts	Potential impacts	No impacts would occur (see above under "3.1, Hydrology and Water Quality)

**TABLE 3.0-1**  
Resource Areas With/Without Impacts Listed by Geographic Subregion

	Geographic Subregion			
	LCR	IID Water Service Area and AAC	Salton Sea	SDCWA Service Area
<b>3.15 Environmental Justice</b>	No impacts because River flows would change throughout the LCR, affecting each community in an approximately equal fashion. Although this is the case, this subregion is discussed in Section 3.15.	Potential impacts	Potential impacts	No environmental impacts in the SDCWA service area; therefore, no environmental justice impacts.
<b>3.16 Transboundary Effects</b>	No impacts because changing the point of diversion would not affect River flows to Mexico.	No impacts because construction of conservation measures would not affect environmental resources in Mexico.	No impacts because the impacts to the Salton Sea do not affect environmental resources in Mexico.	No environmental impacts in the SDCWA service area; therefore, no transboundary impacts would occur.

## Impacts in the CVWD and MWD Service Areas

As described in Section 1.5, impacts to the CVWD and MWD service areas as a result of implementing the Proposed Project and Alternatives are fully analyzed in the following documents and summarized in Table 3.0-2:

- **MWD service area:** QSA PEIR, IA EIS
- **CVWD service area (Improvement District No. 1):** QSA PEIR, IA EIS, and Coachella Valley Water Management Plan PEIR<sup>1</sup>.

## Development of the Baseline

A predictive water quantity/quality computer model (see Appendix E and Section 3.1.4.1), which is called the IIDSS, has been developed to determine the amount of water conservation that would result from implementation of the water conservation program, and the resultant impact of such conservation on water supply and quality in the Project's region of influence. Utilization of such a model requires the establishment of a "Baseline" against which to measure change. CEQA also requires that EIRs include a description of the

<sup>1</sup> The release of the Coachella Valley Water Management Plan PEIR was pending at the time IID certified the June 2002 version of the Final EIR/EIS. Available information from that document is included in this EIR/EIS.

**TABLE 3.0-2**  
Impacts Analysis for CVWD and MWD Service Areas

Resource Area	CVWD Service Area (Improvement District No. 1)	MWD Service Area
<b>Hydrology and Water Quality</b>	<p>Implementation of the Proposed Project (second scenario – QSA Implementation) would result in a net increase in water flows in the Coachella Valley Stormwater Channel (CVSC) and drains flowing directly into the Salton Sea. Increased local and imported water supplies would be used in place of local groundwater and to recharge the local groundwater, reducing the extraction of groundwater to meet demand. It is anticipated that the current groundwater overdraft condition in the Coachella Valley would be eliminated by the Proposed Project in conjunction with the Coachella Valley Water Management Plan (which is being developed by CVWD and will be assessed in a subsequent Program EIR being prepared by CVWD--see Section 1.5.4). The increased use of Colorado River water supplies in the CVWD service area as a result of the transfer of conserved water by IID is a beneficial impact and is not considered significant as it would not impact drainage patterns, runoff rates, or flood hazards, and would not cause inundation.</p> <p>The average overall TDS and turbidity of the CVSC and the Coachella Valley drains is projected to increase with implementation of the Project (second scenario – QSA Implementation). These effects are less than significant.</p> <p>Increased use of Colorado River water for agriculture may increase the selenium concentration in the drains and the CVSC. The projected flow-weighted average concentration of selenium is currently above the established aquatic life criterion of 5 µg/l; therefore, there would be a significant impact. Based upon the lack of available mitigation measures for selenium concentration, as described in the EIR/EIS, this significant impact would be unavoidable.</p> <p>Use of Colorado River water for groundwater recharge would increase the TDS of groundwater near the recharge basins, exceeding secondary (aesthetic) drinking water standards. This effect is a significant and unavoidable adverse impact that cannot be feasibly mitigated.</p> <p>In addition, Colorado River water contains small amounts of perchlorate, a potential health risk for which no standards exist. Introduction of perchlorate into the groundwater is a potentially significant impact. However, CVWD has indicated that if recharge would cause any domestic drinking water well of the Torres Martinez Band of Desert Cahuilla Indians to exceed any recognized health-based water quality standard, CVWD will work with the tribe to bring the drinking water supply of the tribe into compliance with such standard either by providing domestic water service to the tribe from the district's domestic water system or by providing appropriate well-head treatment; as a result of these mitigation measures, this impact would be reduced to a less than significant level.</p>	<p>Implementation of the Proposed Project (second scenario – QSA Implementation), would result in an increase in Priority 3a Colorado River diversions at the CRA intake. Colorado River water diversions by MWD would replace a portion of the previously diverted surplus and unused apportionment water with Priority 3a water. This change in diversions is not considered a significant impact to water resources; would not impact water quality, groundwater, drainage patterns and runoff, or flood hazard; and would not cause inundation.</p>

**TABLE 3.0-2**  
Impacts Analysis for CVWD and MWD Service Areas

Resource Area	CVWD Service Area (Improvement District No. 1)	MWD Service Area
<b>Biological Resources</b>	<p>Additional supplies of Colorado River water for CVWD would be put to beneficial use within CVWD's Improvement District No.1 (ID-1) in the Lower Coachella Valley. ID-1 is the only area that can receive Colorado River water transferred from IID as a result of the Proposed Project (second scenario – QSA Implementation). This is one element of the Coachella Valley Water Management Plan for which a Program EIR is in preparation (Section 1.5.4). The water transferred from IID would be conveyed via the Coachella Canal, the existing Canal water distribution system, expansion of this distribution system to supply unserved portions of ID-1, and construction of recharge basins on the west side of the Coachella Valley. As construction of piping and pumping facilities would occur primarily in roadways or in adjacent agricultural areas, temporary and permanent impacts on desert terrestrial habitat are expected to be less than significant. Recharge basins would be constructed in desert habitat. Focused surveys for listed species will be performed once facilities sites are identified. Increased flows in the agricultural drains could have an unknown but potentially significant impact on endangered desert pupfish. A project-level impact assessment and potential mitigation measures will be identified in subsequent environmental documentation prepared in connection with the Coachella Valley Water Management Plan, and these mitigation measures will reduce any impacts to less than significant levels.</p> <p>CVWD has been meeting with CDFG and USFWS to obtain incidental take authorization for activities resulting from the implementation of the Coachella Valley Water Management Plan, including receipt of water in accordance with the Proposed Project (second scenario – QSA Implementation). Due to time constraints inherent in the QSA, and the fact that any incidental take potentially resulting from the implementation of the Coachella Valley Water Management Plan will occur many years in the future, the resources agencies have conferred and agreed that it is appropriate for all of CVWD's activities under the Coachella Valley Water Management Plan to be analyzed and covered under the Coachella Valley Multi-Species Habitat Conservation Plan (CVMSHCP), which is currently being prepared (see Section 5.3). If the CVMSHCP does not proceed, CVWD and the resource agencies have agreed that an independent HCP shall be in place prior to CVWD receiving any transferred water from IID as contemplated under the Proposed Project (second scenario – QSA Implementation).</p>	<p>Implementation of the Proposed Project would not result in any physical changes within the MWD service area. There would be no construction associated with implementation of the QSA in the MWD service area or along the CRA. There would be no significant impact to biological resources.</p>

**TABLE 3.0-2**  
Impacts Analysis for CVWD and MWD Service Areas

Resource Area	CVWD Service Area (Improvement District No. 1)	MWD Service Area
<b>Geology and Soils</b>	<p>Implementation of the Proposed Project (second scenario – QSA Implementation) would result in increased groundwater levels, thereby reducing the potential for subsidence. This is a beneficial impact.</p> <p>In addition, the construction impacts that are described under Biological Resources would result in less than significant impacts to geology because they will not result in the covering, destruction, or modification of any geologic or physical feature.</p> <p>The construction impacts would result in less than significant impacts to soils because they would affect a small land area, be limited in duration, and be mitigated by BMPs.</p>	No impacts (see explanation under Biological Resources).
<b>Land Use</b>	The facilities that would be constructed as a result of the Project (see Biological Resources) would be compatible with existing and planned land uses because they would be constructed in vacant and/or open space areas.	No impacts (see explanation under Biological Resources).
<b>Agricultural Resources</b>	<p>The additional Colorado River water that would be obtained by CVWD would be used to replace the current groundwater use or would be used for direct groundwater recharge. Colorado River water generally has a higher TDS concentration than Coachella Valley groundwater and would require the application of additional water to some lands irrigated with Colorado River water to leach salts from the soil; the additional water necessary to leach salts was included in the agricultural water demand estimates prepared by CVWD in connection with preparation of the Coachella Valley Water Management Plan, and the water supplies for agricultural uses would remain adequate.</p> <p>In addition, construction of new facilities would not occur on prime farmland nor would the construction activities conflict with Williamson Act contracts. Impacts would be less than significant.</p>	No impacts (see explanation under Biological Resources).

**TABLE 3.0-2**  
Impacts Analysis for CVWD and MWD Service Areas

Resource Area	CVWD Service Area (Improvement District No. 1)	MWD Service Area
<b>Recreation</b>	<p data-bbox="384 375 789 402"><u>Coachella Valley Stormwater Channel</u></p> <p data-bbox="384 423 1373 532">The projected increase in flows in the CVSC will have no significant effect on the ability of swimmers to make unauthorized use of the channel with respect to water flow or quality. With respect to fishing, fishes in the higher reaches may move farther upstream with higher drain flows.</p> <p data-bbox="384 553 562 581"><u>Coachella Canal</u></p> <p data-bbox="384 602 1373 711">Water levels in the canal are expected to increase, and no significant change in water quality is predicted as a result of the Project. Thus, there would be no impact on fish and unauthorized fishing in the canal. There would be no impact on fish and fishing or any other recreational activities in Lake Cahuilla.</p> <p data-bbox="384 732 632 760"><u>Trails/Scenic Corridors</u></p> <p data-bbox="384 781 1373 862">Construction of the facilities mentioned under Biological Resources would result in temporary, localized effects. Site-specific impacts will be identified in subsequent environmental documentation.</p>	No impacts (see explanation under Biological Resources).
<b>Air Quality</b>	<p data-bbox="384 889 1373 946">There would be temporary impacts to air quality during construction of the facilities mentioned under Biological Resources. Such impacts are expected to be less than significant.</p> <p data-bbox="384 967 1339 1024">The reduction in groundwater pumping and increased groundwater levels would result in a beneficial air quality impact due to reduced energy consumption.</p> <p data-bbox="384 1045 1352 1127">Air quality impact as a result of the vehicular travel associated with the maintenance of new facilities will be analyzed in subsequent environmental documentation, to be prepared by CVWD. Such impacts are expected to be less than significant.</p> <p data-bbox="384 1148 1360 1198">Air quality impacts from the exposure of the Salton Sea shoreline could extend to the Salton Sea Air Basin, as described in Section 3.7.</p>	No impacts (see explanation under Biological Resources).
<b>Cultural Resources</b>	The potential impacts on specific cultural resources will be addressed in subsequent documentation once construction sites have been determined. However, if any cultural resources impact is determined, site-specific mitigation measures will be identified for implementation as appropriate.	No impacts (see explanation under Biological Resources).

**TABLE 3.0-2**  
Impacts Analysis for CVWD and MWD Service Areas

Resource Area	CVWD Service Area (Improvement District No. 1)	MWD Service Area
<b>Indian Trust Assets<sup>1</sup></b>	The use of Colorado River water for groundwater recharge could increase the TDS of tribal groundwater near the recharge basins. The anticipated TDS increase would not impair any beneficial uses of the water as defined by established state and federal primary (or health-based) drinking water standards. Recharge with Colorado River water could introduce low levels of perchlorate into the groundwater near the recharge basins. However, CVWD has indicated that if recharge would cause any domestic drinking water well of the Torres Martinez Band of Desert Cahuilla Indians to exceed any recognized health-based water quality standard, CVWD will work with the tribe to bring the drinking water supply of the tribe into compliance with such standard either by providing domestic water service to the tribe from the district's domestic water system or by providing appropriate well-head treatment; as a result of these mitigation measures, this impact would be reduced to a less than significant level.	No impacts (see explanation under Biological Resources).
<b>Noise</b>	Noise impacts would occur during the construction activities mentioned under Biological Resources. Such impacts will be less than significant because the impacts would be temporary and occur in primarily agricultural areas.	No impacts (see explanation under Biological Resources).
<b>Aesthetics</b>	Aesthetics impacts would occur during the construction activities mentioned under Biological Resources. Such impacts will be less than significant because the impacts would be temporary and occur in primarily agricultural areas.  New facilities would be similar in visual character to the existing landscape and would be few in number and widely spaced. Aesthetic impacts will be less than significant.	No impacts (see explanation under Biological Resources).
<b>Public Services and Utilities</b>	The Proposed Project would not cause a change in population or otherwise impact public services. Service providers will be informed of construction schedule and location well in advance of construction commencement. The impact of the Project on water supplies is beneficial because supplies will increase. Overall impacts would be less than significant.	Implementation of the Proposed Project would reduce water flows along the LCR, resulting in lower energy production at Parker Dam. MWD could be economically impacted because the reduction in energy would mean less federal hydropower to pump Colorado River water through the CRA.
<b>Transportation</b>	Temporary transportation impacts, such as disruption of traffic patterns and increases in traffic hazards, or changes in availability of parking on local roadways, would occur during construction activities. Because of their temporary nature, impacts are expected to be less than significant.	No impacts (see explanation under Biological Resources).

**TABLE 3.0-2**  
Impacts Analysis for CVWD and MWD Service Areas

<b>Resource Area</b>	<b>CVWD Service Area (Improvement District No. 1)</b>	<b>MWD Service Area</b>
<b>Socioeconomics</b> <sup>1</sup>	The increased water supply would be used to offset the existing groundwater overdraft and would neither change population trends nor impact agriculture. Construction and operation of new facilities would be located in agricultural areas or along existing roadways, and this minor amount of construction would not adversely affect population or housing. No socioeconomic impacts would occur.	As stated above under Public Services and Utilities, MWD could be economically impacted as energy production is reduced at Parker Dam. Impacts would be less than significant.
<b>Environmental Justice</b> <sup>1</sup>	The increase in TDS from CVWD's use of Colorado River water would not have a disproportionately high and adverse affect on minority or low-income populations. The air quality impacts of the Proposed Project after Year 2035 in the SSAB could have a disproportionate impact on minorities and low-income populations in the CVWD service area.	No impacts (see explanation under Biological Resources).
<b>Transboundary Effects</b> <sup>1</sup>	No transboundary impacts.	No transboundary impacts.
<b>Growth-Inducing Impacts</b>	See Section 5 in this EIR/EIS.	See Section 5 in this EIR/EIS.

Sources: Reclamation 2002; CVWD et al. 2002; CVWD 2000

<sup>1</sup> Indian Trust Assets, Environmental Justice, Socioeconomics and Transboundary Effects are topic areas required in NEPA analysis and therefore are not addressed in the QSA PEIR. These summaries are provided to fulfill the NEPA requirements for this EIR/EIS.

conditions that existed at the time the NOP was published (September 28, 1999; see Appendix B) to also measure change and assess the significance of Project impacts (see CEQA Guidelines § 15125[a]).

To be meaningful, the Baseline must represent the expected variability of environmental resources that could reasonably be expected in the future, based on the present and historical state of such resources. It must also represent a sufficiently long record to allow assessment of long-term variability. For instance, hydrology and water quality will change over time and cannot be properly represented at a specific point in time.

Development of the Baseline involved the following major steps, which are further described below.

- (1) Adjustments to the available historical record to achieve accuracy and completeness.
- (2) Projection of the historic record to reflect existing trends carried into the future.

A 75-year predicted Baseline was developed using the IIDSS based on 12 years (1987 – 1998 model calibration period) of available historical data. These data were adjusted based on reasonable, anticipated future changes, such as an increase in Colorado River salinity and the effects of the conservation projects and water transfers implemented under the 1988 IID/MWD Agreement. Finally, the data were projected to 75 years using a correlation based on 75 years of historic weather data compared to the 12-year historical data period. The Baseline prediction also includes an adjustment to limit the diversion of Priorities 1, 2, and 3 for normal-year hydrology in the Colorado River to 3.85 MAFY.

Once Baseline conditions are established, impacts can be assessed by comparing Project impacts to the Baseline condition. Therefore, the Baseline for this EIR/EIS represents the existing conditions at the time the NOP was published, based on historical data and reasonable, anticipated future changes in these conditions over the Project term. By including a future projection of existing conditions in the Baseline, effects caused by the Project can be differentiated from effects that are reasonably expected to result from existing conditions and trends. This description of existing and predicted future conditions is referred to as the “Baseline” throughout the environmental impact analysis in this section. Additional detail regarding the development of the Baseline and the IIDSS used to develop the Baseline is included in Appendix E and in Section 3.1, Hydrology and Water Quality.

### **Salton Sea Baseline**

Because the impacts of the Proposed Project and Alternatives would be realized over a 75-year period as described above, it is appropriate to measure them against both current and projected conditions to provide an accurate description of Project effects. The use of the projected condition of the Sea as the Baseline for determining the significance of Project-related impacts is particularly relevant for the water and biological resources of the Sea, as well as socioeconomics, local recreation, and aesthetics.

The three parameters primarily used to determine the impacts that would result from the reduction of flow to the Sea are elevation, salinity, and surface area. Table 3.0-3 shows the Baseline predictions for each of these three parameters, which are further described below.

**TABLE 3.0-3**  
Salton Sea Baseline

Year	Elevation (feet msl)		Surface Area (square miles)		Salinity (mg/L)	
	Value	Change	Value	Change	Value	Change
2002	-228	N/A	364	N/A	46	N/A
2023	-232	-4	350	-14	60	+14
2077 (Baseline)	-235	-7	339	-25	86	+40

Note: For Elevation and Surface Area parameters, the Baseline is the year 2077. However, for Salinity, the Baseline is the year when 60 g/L is reached. This is the salinity level at which the ability for fish to reproduce is compromised.

Additional information about the Salton Sea is presented in the existing setting sections of both 3.1, Hydrology and Water Quality, and 3.2, Biological Resources.

### Sea Elevation

The elevation of the Salton Sea is currently approximately -228 feet msl. Without implementation of the Project or Alternatives, the Sea is projected to continue to decline 7 feet to a level of approximately -235 feet msl. This decline is considered the Baseline condition, and additional declines associated with the Proposed Project and Alternatives are measured against this Baseline. Impacts associated with a decline in elevation are discussed in Sections 3.3, Geology and Soils; 3.6, Recreation; 3.7, Air Quality; and 3.11, Aesthetics.

### Salinity

The existing salinity of the Sea is approximately 46 g/L. Without the project, salinity is expected to continue to increase to approximately 86 g/L by the year 2077. The initial impact resulting from increased salinity would likely be the inability of the fishery to reproduce, which would ultimately lead to its virtual disappearance from the Sea. The salinity level at which this impact occurs is approximately 60 g/L. Subsequently, piscivorous (fish eating) birds would be impacted as their food supply diminished and disappeared. In the Baseline condition, salinity of approximately 60 g/L is reached in year 2023 as shown on Table 3.0-3. Acceleration of salinity levels resulting from the Proposed Project and Alternatives is measured against the Baseline reaching approximately 60 g/L in year 2023. Impacts associated with increasing salinity are discussed in Sections 3.1, Hydrology and Water Quality and 3.2, Biological Resources.

### Surface Area

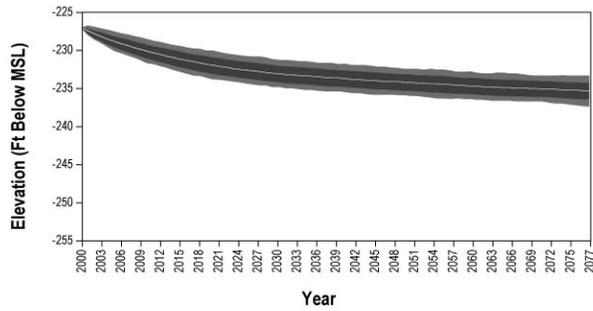
The existing surface area of the Sea is approximately 364 square miles. Without the Project, the surface area of the Sea is projected to decrease by 25 square miles to approximately 339 square miles. Impacts associated with a decreasing surface area are discussed in Sections 3.4, Land Use, 3.6, Recreation, 3.7, Air Quality, and 3.11, Aesthetics.

Figures 3.0-1, 3.0-2, 3.0-3 show the predicted elevation, surface area, and salinity of the Salton Sea for the Baseline, Proposed Project, and Alternatives. Figures 3.0-4 and 3.0-5 show the same information for the Proposed Project and Alternatives with the Salton Sea Habitat Conservation Strategy.

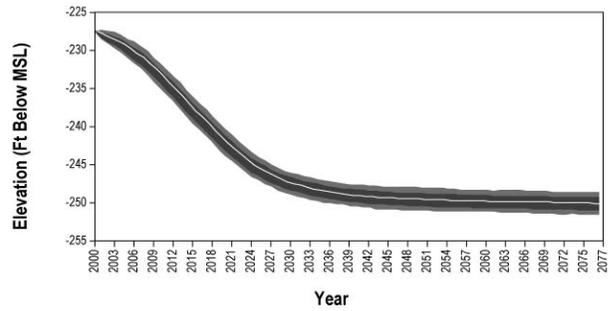
**Project Baseline**

**Proposed Project: 300 KAFY  
All Conservation Measures**

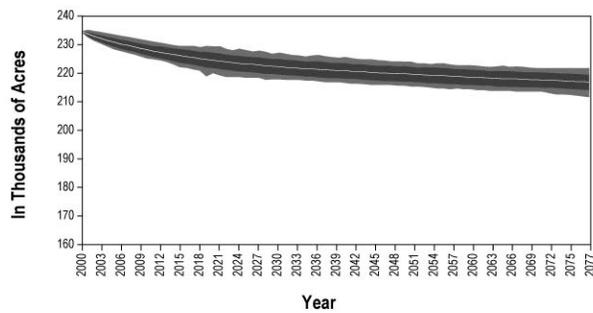
**Surface Elevation**



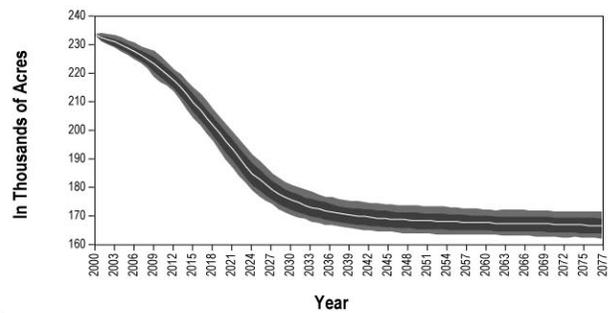
**Surface Elevation**



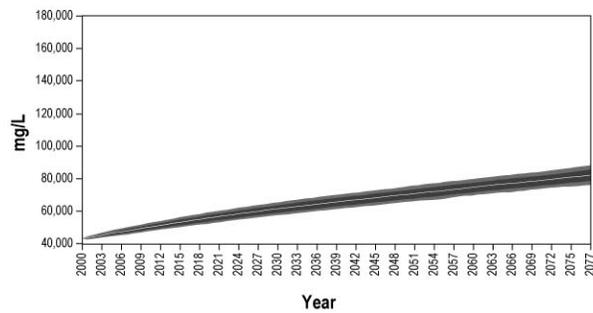
**Surface Area**



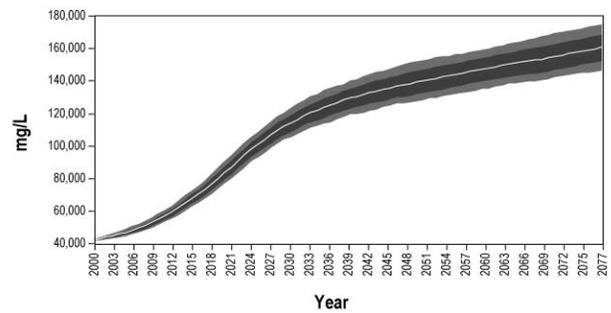
**Surface Area**



**Salinity**



**Salinity**



**Legend:**

- Mean
- +1 Standard Deviation, -1 Standard Deviation
- +95 Percentile, -5 Percentile

**Notes:**

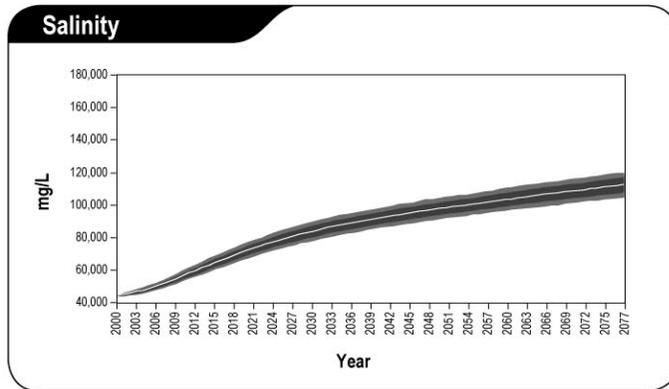
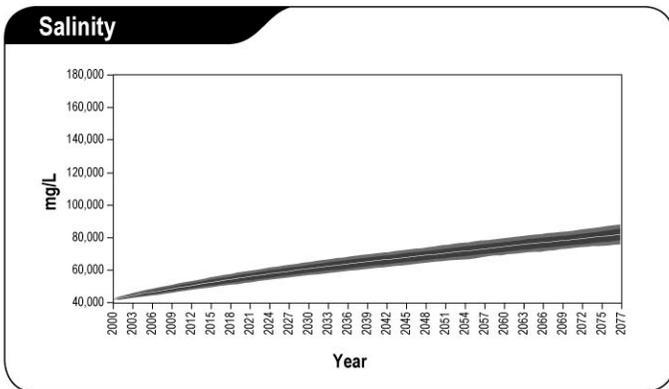
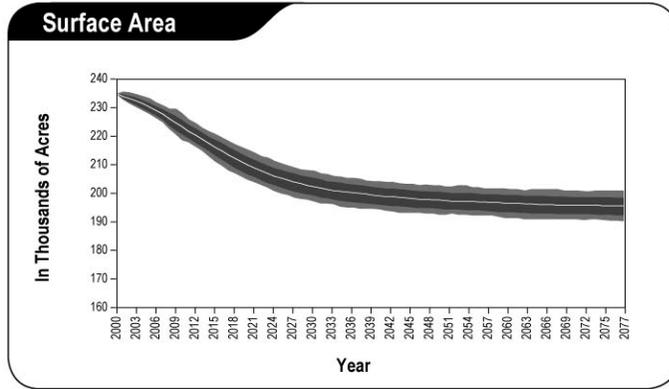
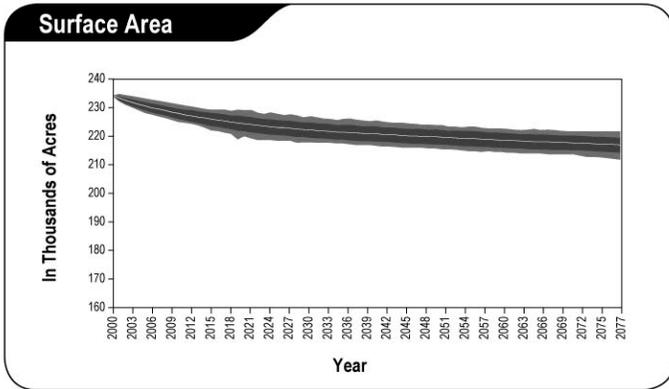
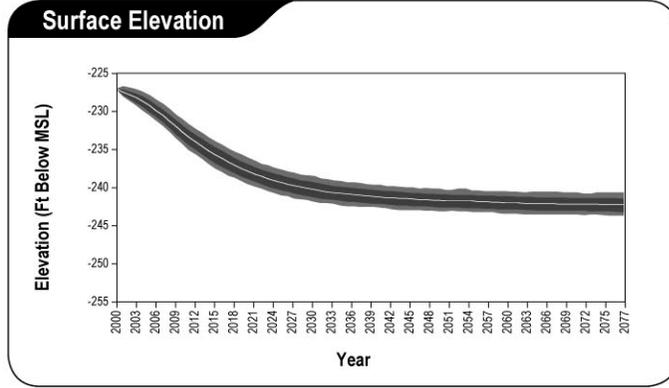
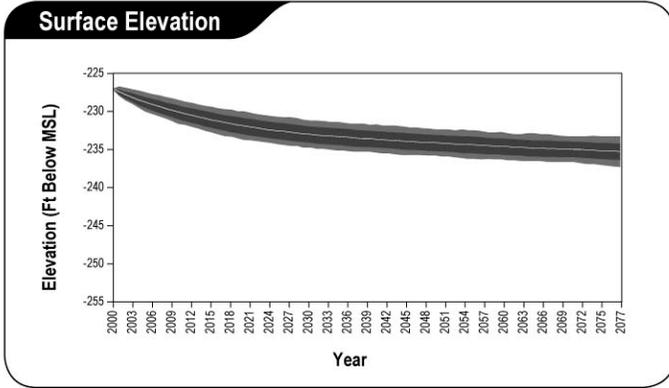
Mean: Mean of all traces  
 95 Percentile: 95 percent of all model traces resulted in values less than or equal to the indicated values  
 5 Percentile: 5 percent of all model traces resulted in values less than or equal to the indicated values  
 -1 Standard Deviation: Values representing one standard deviation below the mean  
 +1 Standard Deviation: Values representing one standard deviation above the mean

Source: Reclamation 2001c.

**Figure 3.0-1  
 Predicted Effects at the Salton Sea:  
 Baseline and Proposed Project  
 IID Water Conservation and Transfer Project Final EIR/EIS**

**Alternative 1: No Project**

**Alternative 2: 130 KAFY  
On-Farm Irrigation System Improvements Only**



**Legend:**

- Mean
- +1 Standard Deviation, -1 Standard Deviation
- +95 Percentile, -5 Percentile

**Notes:**

- Mean: Mean of all traces
- 95 Percentile: 95 percent of all model traces resulted in values less than or equal to the indicated values
- 5 Percentile: 5 percent of all model traces resulted in values less than or equal to the indicated values
- 1 Standard Deviation: Values representing one standard deviation below the mean
- +1 Standard Deviation: Values representing one standard deviation above the mean

Source: Reclamation 2001c.

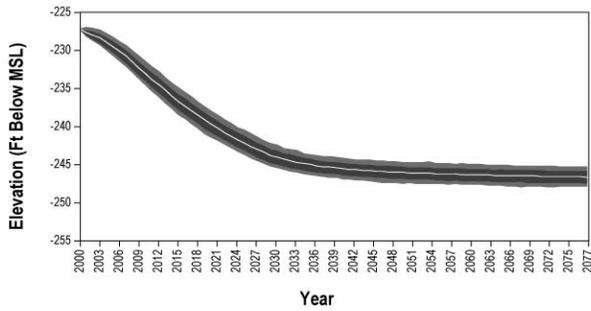
**Figure 3.0-2  
Predicted Effects at the Salton Sea:  
Alternatives 1 and 2**

IID Water Conservation and Transfer Project Final EIR/EIS

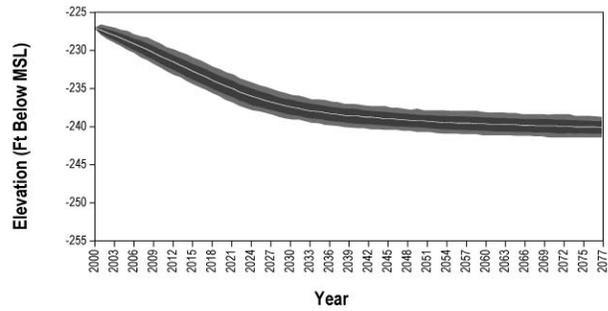
**Alternative 3: 230 KAFY  
All Conservation Measures**

**Alternative 4: 300 KAFY  
Following Only**

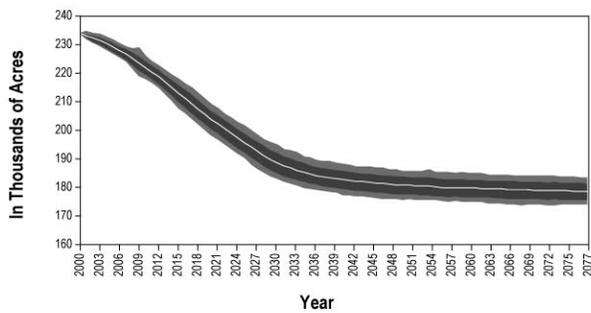
**Surface Elevation**



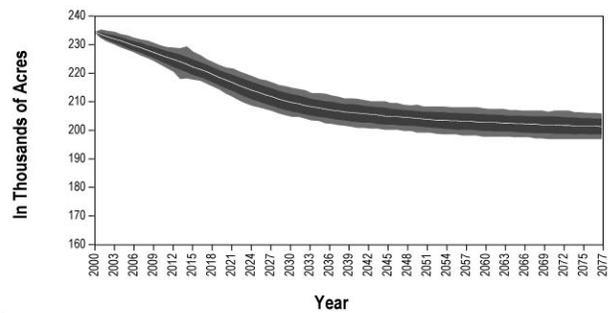
**Surface Elevation**



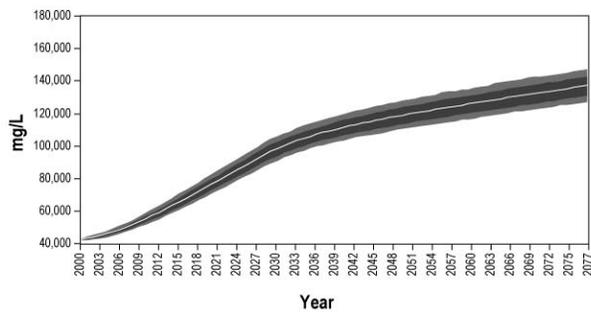
**Surface Area**



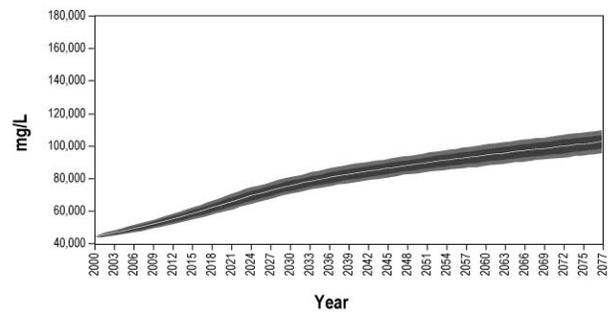
**Surface Area**



**Salinity**



**Salinity**



**Legend:**

- Mean
- +1 Standard Deviation, -1 Standard Deviation
- +95 Percentile, -5 Percentile

**Notes:**

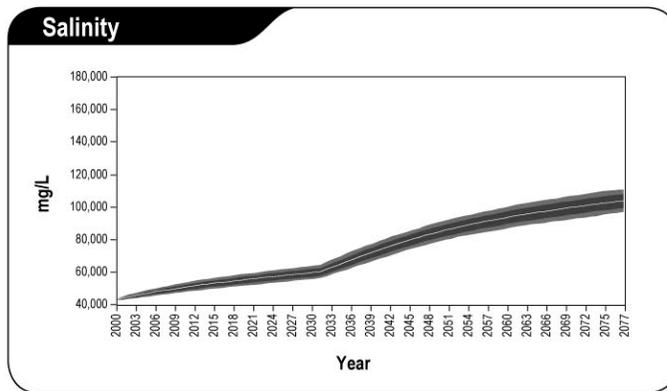
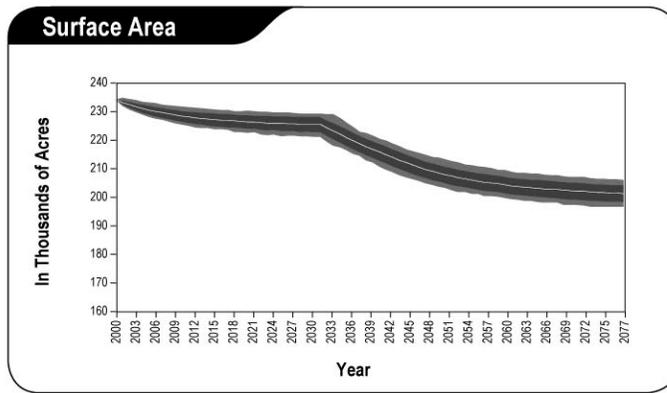
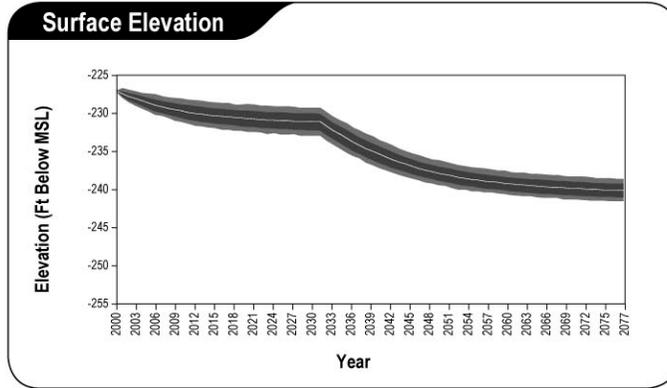
- Mean: Mean of all traces
- 95 Percentile: 95 percent of all model traces resulted in values less than or equal to the indicated values
- 5 Percentile: 5 percent of all model traces resulted in values less than or equal to the indicated values
- 1 Standard Deviation: Values representing one standard deviation below the mean
- +1 Standard Deviation: Values representing one standard deviation above the mean

Source: Reclamation 2001c.

**Figure 3.0-3  
Predicted Effects at the Salton Sea:  
Alternatives 3 and 4**

IID Water Conservation and Transfer Project Final EIR/EIS

Alternative 4/Proposed Project: 300 KAFY



Legend:

- Mean
- +1 Standard Deviation, -1 Standard Deviation
- +95 Percentile, -5 Percentile

Notes:

- Mean: Mean of all traces
- 95 Percentile: 95 percent of all model traces resulted in values less than or equal to the indicated values
- 5 Percentile: 5 percent of all model traces resulted in values less than or equal to the indicated values
- 1 Standard Deviation: Values representing one standard deviation below the mean
- +1 Standard Deviation: Values representing one standard deviation above the mean

Source: Reclamation 2001c.

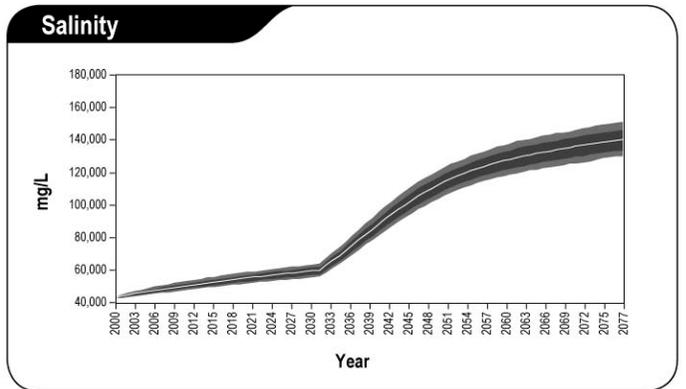
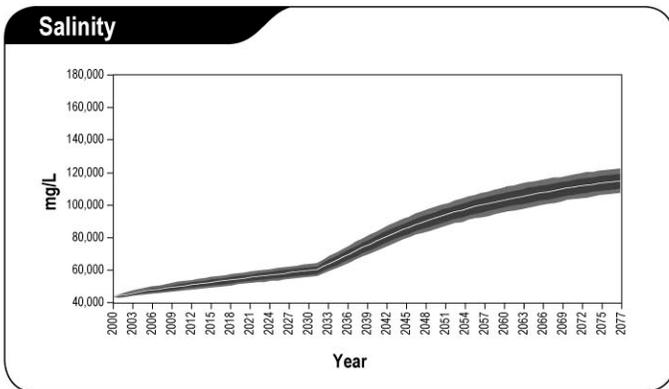
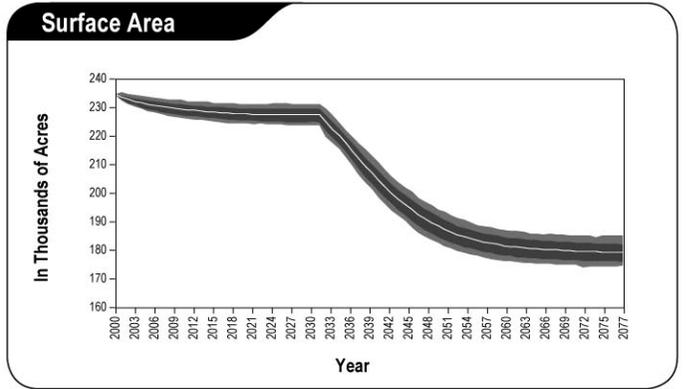
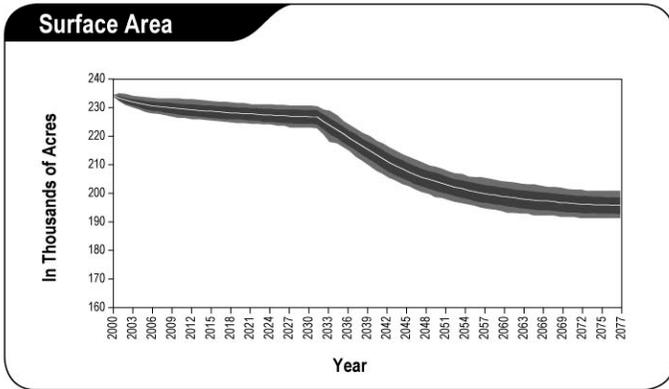
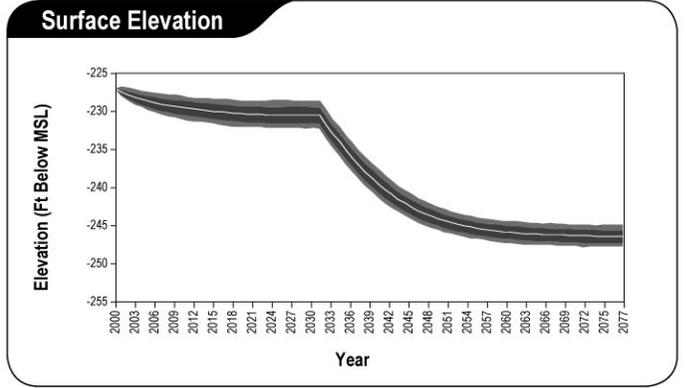
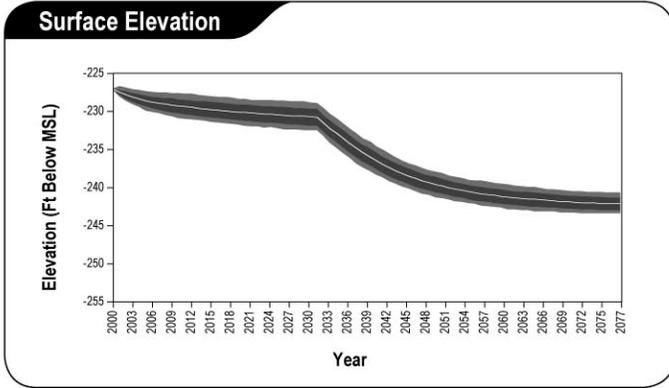
Note: Proposed Project shown with the Salton Sea Habitat Conservation Strategy assumes that the Proposed Project is implemented using following as method to conserve water for transfer.

**Figure 3.0-4**  
**Predicted Effects at the Salton Sea:**  
**Alternative 4/Proposed Project**  
**(With Implementation of Salton Sea**  
**Habitat Conservation Strategy)**

IID Water Conservation and Transfer Project Final EIR/EIS

**Alternative 2: 130 KAFY**

**Alternative 3: 230 KAFY**



**Legend:**

- Mean
- +1 Standard Deviation, -1 Standard Deviation
- +95 Percentile, -5 Percentile

**Notes:**

Mean: Mean of all traces  
 95 Percentile: 95 percent of all model traces resulted in values less than or equal to the indicated values  
 5 Percentile: 5 percent of all model traces resulted in values less than or equal to the indicated values  
 -1 Standard Deviation: Values representing one standard deviation below the mean  
 +1 Standard Deviation: Values representing one standard deviation above the mean

Source: Reclamation 2001c.

**Figure 3.0-5  
 Predicted Effects at the Salton Sea:  
 Alternatives 2 and 3  
 (With Implementation of Salton Sea  
 Habitat Conservation Strategy)**

IID Water Conservation and Transfer Project Final EIR/EIS