Final
Environmental Impact Statement
Volume I

Implementation Agreement, Inadvertent Overrun and Payback Policy, and Related Federal Actions

October 2002

U.S. Department of the Interior
Bureau of Reclamation

LIST OF KEY ACRONYMS

AAC	All-American Canal
AF	Acre-feet
AFY	Acre-feet per year
AQED	Air Quality Division of the Arizona Department of Environmental Quality
BA	Biological Assessment
BCPA	Boulder Canyon Project Act
BO	Biological Opinion
CAP	Central Arizona Project
CAWCD	Central Arizona Water Conservation District
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CRA	Colorado River Aqueduct
CRIT	Colorado River Indian Tribes
CVWD	Coachella Valley Water District
CVWMP	Coachella Valley Water Management Plan
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EPA	United States Environmental Protection Agency
FWS	United States Fish and Wildlife Service
IA	Implementation Agreement
IID	Imperial Irrigation District
IOP	Inadvertent Overrun Policy
ISG	Interim Surplus Guidelines
ITA	Indian Trust Asset
KAFY	Thousand acre-feet per year
MAF	Million acre-feet
MAFY	Million acre-feet per year
MSCP	Multi-Species Conservation Program
MWD	The Metropolitan Water District of Southern California
NEPA	National Environmental Policy Act
PEIR	Program Environmental Impact Report
PPR	Present Perfected Right
PVID	Palo Verde Irrigation District
QSA	Quantification Settlement Agreement
ROD	Record of Decision
SDCWA	San Diego County Water Authority
SIB	Southerly International Boundary
U.S.	United States
USBR	United States Bureau of Reclamation
USDA	United States Department of Agriculture

Note: A complete list of acronyms is provided in Chapter 7.0.

Final Environmental Impact Statement
Implementation Agreement (IA), Inadvertent Overrun and Payback Policy (IOP), and Related Federal Actions
Lower Colorado River and the States of Arizona, California and Nevada

U.S. Department of the Interior, Bureau of Reclamation

This final environmental impact statement (EIS) describes the environmental effects of the proposed execution of an Implementation Agreement (IA) that would commit the Secretary of the Interior (Secretary) to making Colorado River water deliveries in accordance with the terms and conditions of the IA to enable certain Southern California water agencies to implement the proposed Quantification Settlement Agreement (QSA). (The QSA is an agreement in principle among several southern California water agencies. It establishes a framework of conservation measures and water transfers within Southern California for up to 75 years. It provides a substantial mechanism for California to reduce its diversions of Colorado River water in normal years to its 4.4 million acre-feet per year apportionment.) The three major components of the proposed action of the EIS include the following:

- Execution of the IA, wherein the Secretary agrees to changes in the amount and/or location of deliveries of Colorado River water that are necessary to implement the QSA.

- Adoption of an Inadvertent Overrun and Payback Policy (IOP), which establishes requirements for payback of inadvertent overuse of Colorado River water by Colorado River water users in the Lower Division States. The IOP is a condition precedent to the execution of the IA and QSA and must be in place by the time these agreements go into effect.

- Implementation of the biological conservation measures identified in the U.S. Fish and Wildlife Service's *Biological Opinion for Interim Surplus Criteria, Secretarial Implementation Agreements, and Conservation Measures on the Lower Colorado River, Lake Mead to the Southerly International Boundary Arizona, California, and Nevada* to offset potential impacts from the proposed action that could occur to federally listed fish and wildlife species or their associated critical habitats within the historic floodplain of the Colorado River between Parker Dam and Imperial Dam.

In addition to the proposed action, an alternative is considered that would eliminate a provision, under the proposed IOP, to forgive any accumulated amount in an overrun account in a year during which the Secretary makes a flood control or a space building release. Under this alternative, during a flood control or space building release year, the overrun account would be deferred, but not forgiven. Payback would resume in the next year when such releases are not scheduled. A No-Action Alternative is also considered under which no transfers would occur, the IOP would not be adopted, and no biological conservation measures would be implemented.

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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

INTRODUCTION

California has historically been legally diverting more than its normal year apportionment of 4.4 million acre-feet (MAF) of Colorado River water. Prior to 1996, California's demands in excess of 4.4 million acre-feet per year (MAFY) were met solely by diverting unused apportionments of other Lower Division States (Arizona and Nevada) that were made available by the Secretary of the Interior (Secretary). Since 1996, California also has utilized surplus water made available by Secretarial determination. The other Lower Division States are, however, approaching full utilization of their apportionments, and declared surpluses of Colorado River water are expected to diminish in future years. California, therefore, needs to reduce its consumptive use of Colorado River water to its 4.4 MAF apportionment in normal years. In a major step toward achieving this goal, the Colorado River Board of California (CRB) developed California's draft Colorado River Water Use Plan (California Plan). The California water agencies consisting of The Metropolitan Water District of Southern California (MWD), Coachella Valley Water District (CVWD), Imperial Irrigation District (IID), and San Diego County Water Authority (SDCWA) negotiated the Key Terms for Quantification Settlement (Key Terms), and developed a draft Quantification Settlement Agreement (QSA). The QSA, which is described in more detail below and in Chapter 2, establishes a framework of water conservation actions and water transfers between the participating agencies for a period of up to 75 years. These provide an important mechanism for California to reduce its diversions of Colorado River water in normal years to its 4.4 MAF apportionment.

PURPOSE AND NEED

The Secretary, pursuant to the Boulder Canyon Project Act (BCPA) and *Arizona v. California*, 1964 Supreme Court Decree (Decree), proposes to take Federal actions necessary to support the implementation of the QSA. The purpose of the Federal action is to facilitate implementation of the QSA, which incorporates contractual agreements necessary for California to reduce its use of Colorado River water. The need for the Federal action is to assist California's efforts to reduce its use of Colorado River water to a 4.4 MAF apportionment in a normal year. This reduction in California's use of Colorado River water would benefit the entire Colorado River Basin.

DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

This Environmental Impact Statement (EIS) describes the potential environmental impacts of the proposed action, which is the execution of an Implementation Agreement (IA) that would commit the Secretary to making Colorado River water deliveries in accordance with the terms and conditions of the IA to enable implementation of the QSA, and related accounting and environmental actions. The three major components of the proposed action are as follows:

- Execution of the IA, wherein the Secretary agrees to changes in the amount and/or location of deliveries of Colorado River water that are necessary to implement the QSA.

- Adoption of an Inadvertent Overrun and Payback Policy (IOP), which establishes requirements for payback of inadvertent overuse of Colorado River water by Colorado River water users in the Lower Division States. The IOP is a condition precedent to the execution of the IA and QSA and must be in place by the time these agreements go into effect.

- Implementation of biological conservation measures to offset potential impacts from the proposed action that could occur to federally listed fish and wildlife species or their associated critical habitats within the historic floodplain of the Colorado River between Parker Dam and Imperial Dam. These measures were developed and agreed to by the United States Bureau of Reclamation (Reclamation) and the United States Fish and Wildlife Service (FWS) in response to Reclamation's August 2000 *Biological Assessment for Proposed Interim Surplus Criteria, Secretarial Implementation Agreements for California Water Plan Components and Conservation Measures on the Lower Colorado River (Lake Mead to the Southerly International Boundary)* (BA) and were incorporated into the January 2001 *Biological Opinion for Interim Surplus Criteria, Secretarial Implementation Agreements, and Conservation Measures on the Lower Colorado River, Lake Mead to the Southerly International Boundary Arizona, California, and Nevada* (BO).

Execution of the Implementation Agreement

The IA component of the proposed action contains terms and conditions pertaining to delivery of Colorado River water, which enable implementation of the QSA. Execution of the IA reflects the Secretary's approval of the QSA. For purposes of the analysis in this EIS, the IA includes all of the components of the QSA that relate to water transfers and changes in delivery of Colorado River water.

The QSA is an agreement among CVWD, IID, and MWD to budget their portion of California's apportionment of Colorado River water among themselves, and to make available water conserved in the IID service area to SDCWA (these four water agencies are collectively referred to as the participating agencies). The QSA quantifies, by agreement, the amount of Colorado River water available to the participating agencies and calls for specific, changed distribution of that water among the agencies for the next 75 years. This is referred to as the "quantification period" and extends for up to 75 years, from 2002 to 2077. The QSA is a major component of the California Plan (described in section 1.5) and is part of the means by which California would reduce its Colorado River water consumptive use to 4.4 MAF in a normal year. By approving the IA, the Secretary would agree to make Colorado River water deliveries to the participating agencies, which would enable them to implement this changed distribution. The agencies' service areas, as well as the affected portion of the Colorado River, are shown on the project location map (Figure 2.2-1). Table 2.2-1 lists the Federal actions associated with the QSA components and the various NEPA and/or CEQA documents that have been or are being prepared to address impacts of these components.

Implementation of the IA and QSA would not affect the delivery, distribution, and/or use of Colorado River water by the States of Arizona and Nevada; nor would the IA and QSA affect the delivery, distribution, and/or use of Colorado River water by the Upper Division States. Also, the IA and QSA would not affect Colorado River water deliveries to Mexico under the United States–Mexico Water Treaty of 1944 and other applicable agreements and would not

affect the delivery, distribution, and/or use of Colorado River water within Mexico. Within the State of California, the IA and QSA would only affect the delivery, distribution, and/or use of Colorado River water by the participating agencies (CVWD, IID, MWD, and SDCWA). The IA and QSA would not affect the delivery, distribution, and/or use of Colorado River water by other agencies within California that hold rights to Colorado River water under the Seven Party Agreement (i.e., Priorities 1, 2, 3b, 6b, and 7); nor would the IA and QSA affect the delivery, distribution, and/or use of Colorado River water by any present perfected right (PPR) holders (including PPR holders in the States of Arizona and Nevada) as identified in the Decree, and supplemental Decrees.

Adoption of an Inadvertent Overrun and Payback Policy

The IOP component of the proposed action includes adoption of a policy that would identify inadvertent overruns of Colorado River water, establish procedures that account for inadvertent overruns, and define subsequent payback requirements. The IOP would not be materially modified for a 30-year period. The IOP is a condition precedent to the IA and QSA; that is, the IOP must be in place prior to implementation of the IA and QSA. The IOP would be applicable to all lower Basin States' users with quantified entitlements but would not be applicable to Mexico. The complete text of the proposed IOP policy is included as Appendix I.

An inadvertent overrun is defined as Colorado River water that is diverted, pumped, or received by an entitlement holder in excess of the water user's entitlement for that year. The overrun is termed inadvertent because it is deemed to be beyond the control of the water user. The IOP applies to all quantified Colorado River water entitlements in the Lower Basin and can only be applied to quantified consumptive use entitlements or entitlements that would take the remaining quantity of a State's apportionment. A procedure has not been established for applying the IOP to unquantified Colorado River water entitlements since entitlements, that are not quantified, would have no baseline from which to make a determination that an overage occurred. (Unquantified Colorado River water entitlements are entitlements that specify the diversion of Colorado River water for irrigation of a certain acreage or specific area of land.)

Under the IOP, payback would be required to begin in the calendar year that immediately follows the release date of the Decree Accounting Record that reports inadvertent overruns for a Colorado River water user. Prior to the beginning of the calendar year, the user's water order, along with the payback plan, and the user's existing Reclamation-approved conservation plan would be submitted to Reclamation for review and approval within the normal 43 CFR 417 process. Reclamation would review a user's payback plan solely to assure that the plan would adequately result in water savings equal to their payback requirement. In their payback plan, the user would be required to demonstrate that the extra-ordinary measures are not part of any on-going measures intended to reduce use for a transfer. Under the 43 CFR 417 process, Reclamation would also determine the user's adjusted entitlement (entitlement - transfers - payback requirement) and require a water order that is consistent with the adjusted entitlement.

The IOP includes the following provisions:

- Payback must be made only from water management measures that are above and beyond the normal consumptive use of water; actions must be taken to conserve water that otherwise would not return to the mainstream of the Colorado River and be

available for beneficial consumptive use in the United States or to satisfy the United States–Mexico Water Treaty of 1944 obligation.

- Maximum cumulative inadvertent overrun accounts for individual entitlement holders are 10 percent of an entitlement holder's normal year consumptive use entitlement.

- The number of years within which an overrun, calculated from consumptive uses reported in final Decree Accounting Records, must be paid back, and the minimum payback required for each year shall be as follows:

  – In a year in which the Secretary makes a flood control release[1] or a space building release[2], any accumulated amount in the overrun account would be forgiven.

  – If the Secretary has declared a 70R[3] surplus in the Annual Operating Plan, any payback obligation would be deferred at the entitlement holder's option.

  – When Lake Mead's elevation is between the elevation for a 70R surplus declaration and elevation 1,125 feet above mean sea level (msl) on January 1 of the first year of payback, the payback obligation must be paid back in full within 3 years. The minimum payback the first year would be the greater of 20 percent of the individual entitlement holder's maximum allowable cumulative overrun account amount, or 33.3 percent of the total account balance.

  – When Lake Mead's elevation is at or below elevation 1,125 feet above msl on January 1 of the first year of payback, the total account balance must be paid back in full in that calendar year.

Implementation of Biological Conservation Measures

This component of the proposed action involves implementation of the biological conservation measures identified in the BO. They were developed to fully compensate for impacts of the changes in point of delivery of Colorado River water that would occur under the IA.[4] This EIS addresses these measures programmatically. As detailed plans are developed and specific land disturbing activities are identified, Reclamation will determine and carry out supplemental NEPA compliance evaluations, as appropriate. The conservation measures related to the IA water transfers consist of the following:

1. Reclamation would stock 20,000 razorback suckers, 25 centimeters (cm) or greater in length, into the Colorado River between Parker and Imperial Dams. This would be a continuation of present efforts and would bring the total number of razorbacks of 25 cm

1. Flood control release is a release of water from Lake Mead for the purpose of meeting specific criteria as specified by the U.S. Army Corps of Engineers.
2. Space building release is a release of water from Lake Mead for the purpose of obtaining the required August 1 to January 1 available flood control storage space in Lake Mead as specified by the U.S. Army Corps of Engineers.
3. The "R" Strategy is an operating strategy for distributing surplus water and avoiding spills. The R strategy assumes a particular percentile historical runoff, along with a normal year, or 7.5 MAF delivery to Lower Division States, for the next year. Applying these values to current reservoir storage, the projected reservoir storage at the end of next year is calculated. If the calculated space available at the end of next year is less than the space required by flood control criteria, then a surplus condition is determined to exist.
4. The conservation measures evaluated in this EIS are related to the change in point of delivery of up to 400 KAFY while IA related changes in points of delivery may range up to 388 KAFY.

or greater in length stocked below Parker Dam to 70,000. This would be completed by 2006.

2. Reclamation would restore or create 44 acres of backwaters along the Colorado River between Parker and Imperial Dams. This effort could include restoring existing decadent backwaters for which no on-going effort provides funding or responsibility for restoration, or the creation of new backwaters where water availability, access, and other considerations can be met. Maintenance of these backwaters for native fish and wildlife would be ensured for the life of the water transfers. This would be completed within 5 years of the first water transfers under the IA (excluding the on-going water transfer under the IID/MWD 1988 Agreement and subsequent agreements).

3. Reclamation would provide $50,000 in funding for the capture of wild-born or first generation (F1) bonytails from Lake Mohave to be incorporated into the broodstock for this species and/or to support rearing efforts at Achii Hanyo, a satellite rearing facility of Willow Beach National Fish Hatchery. These efforts would be funded for 5 years.

4. A two-tiered conservation plan has been developed to minimize potential impacts to occupied willow flycatcher habitat that could result due to reduced flows on the Colorado River between Parker and Imperial Dams as water transfers and associated changes in point of delivery are implemented. The details of the Plan may be found below, and in the BO in Appendix E of this EIS.

ALTERNATIVES CONSIDERED

Implementation Agreement Alternatives

Because the purpose of the proposed action is to provide Federal approval of an agreement negotiated among the California parties, no other action alternatives are being considered. The QSA is a consensual agreement among three parties (CVWD, IID, and MWD) that resolves long-standing disputes regarding the priority, use, and transferability of Colorado River water. The proposed IA reflects that consensual agreement. The IA and QSA have been developed in response to the Secretary's 1996 statement that California must implement a strategy to enable the State to limit its use of Colorado River water to 4.4 MAF during a normal year or develop the means to meet its water needs from sources that do not jeopardize the delivery of Colorado River water to other States. Development of a strategy to reduce California's diversions of Colorado River water is considered by the Secretary to be a prerequisite for Secretarial approval of any further cooperative Colorado River water transfers among California agencies. The other Colorado River Basin States are also aware of the implications of the IA and QSA, and are very interested in and supportive of California's progress in reducing its Colorado River water diversions.

Inadvertent Overrun Policy Alternatives

Many alternative concepts and issues were considered in the development of the proposed IOP. Much interest and many ideas were identified during the scoping process and in response to the draft policy published in the Federal Register. As a result of considering public comment,

one additional IOP alternative has been developed, and is considered, along with the proposed action, in this EIS.

No Forgiveness During Flood Releases Alternative

The proposed IOP contains a provision that in a year during which the Secretary makes a flood control release or a space building release, any accumulated amount in an overrun account would be forgiven. The No-Forgiveness Alternative would eliminate that provision. Under this alternative, during a flood control or space building release year, the overrun account would be deferred, but not forgiven. Payback would resume in the next year when such releases are not scheduled. All other provisions would be the same as the proposed IOP.

Alternative Biological Conservation Measures

No alternatives to the biological conservation measures identified in the BO are considered in this EIS. These conservation measures, which were included by Reclamation in its BA, would be implemented by Reclamation as specified in the BO. If Reclamation were unable to implement these measures as proposed, reinitiated consultation with FWS would be required.

NO-ACTION ALTERNATIVE

Under the No-Action Alternative, the IA, IOP, and the biological conservation measures would not be implemented.

No Action for Implementation Agreement

Execution of the IA commits the Secretary to make Colorado River water deliveries to the participating agencies according to the terms and conditions of the IA to enable implementation of the QSA; execution of the IA is a condition precedent to the QSA. Therefore, under the No-Action Alternative, the QSA also would not be implemented. The Secretary would continue to make deliveries of Colorado River water subject to the Law of the River, including the existing priority system, Section 5 contracts, and determinations identified in the ISG ROD and 43 CFR 417. Because the QSA components are interdependent and represent a negotiated compromise of differing agency positions, under the No-Action Alternative it is assumed that none of the QSA components would be jointly and consensually approved, constructed, or implemented by CVWD, IID, and MWD.

Significant unresolved issues would remain regarding how California would divide Colorado River water among the participating agencies so as to limit the State's normal year consumptive use of Colorado River water to 4.4 MAFY. Because Colorado River water diverted by MWD, IID, and CVWD cannot return to the mainstream after it is conveyed away from the river, consumptive use must be reduced by limiting diversions by those three agencies. This would involve a reduction of approximately 600 KAFY from the 1990 to 1999 average Colorado River water diversion for the State of California, as required by the Secretary (pursuant to the Decree, and the Long-Range Operation of Colorado River Reservoirs (LROC), and in accordance with the California Limitation Act). Specific implications of the No-Action Alternative are as follows:

- The IID/MWD 1988 Agreement, IID/MWD/PVID/CVWD 1989 Approval Agreement, and MWD/CVWD 1989 Agreement to Supplement Approval Agreement, which have been implemented, would continue;
- There would be no consensual implementation of the new, cooperative, voluntary management plans or programs for water conservation, exchanges or transfers among the parties to the IA, and additional funding to support further agricultural conservation would be subject to pending disputes;
- The structural projects embodied in the QSA that would help conserve Colorado River water, such as lining the All-American Canal (AAC) and the Coachella Canal, could lose $200 million in State funding and may not be implemented; therefore, there may not be water available from canal lining projects to facilitate implementation of the San Luis Rey Indian Water Rights Settlement Act;
- There would be no consensual agreement between CVWD, IID, and MWD to forego use of water to permit the Secretary to satisfy the water demands of holders of Miscellaneous and Federal PPRs not within the Priorities contained in the Seven Party Agreement, up to the amount of each PPR, whereby satisfaction of PPRs would otherwise reduce the amount of water available to the lowest priority user (which, in a normal year, would be MWD); and,
- In the event that California contractors have not executed the QSA by December 31, 2002, the Interim Surplus determinations identified in the Interim Surplus Guidelines (ISG) Record of Decision (ROD) will be suspended and surplus determinations will be based upon the 70R Strategy, until such time California completes all actions and complies with reductions in water use identified in Section 5(c) of the ISG ROD. Section 5(c) establishes benchmark quantities and dates for reductions in California agricultural usage, and states that in the event California has not reduced its use to meet the benchmark quantities, the Interim Surplus determinations identified in the ISG ROD will be suspended and determinations will be based on the 70R strategy. Section 5(c) also provides conditions regarding reinstatement of ISG surplus determinations if missed benchmarks are later met.

No Action for Inadvertent Overrun Policy

Under the No-Action Alternative, the IOP would not be adopted, and the Secretary would enforce the obligations under the Decree to ensure that no Colorado River water user exceeds its entitlement amount. Diversions of Colorado River water are reported monthly for most water users, and Reclamation releases a monthly tabulation of the cumulative years diversions and return flows as discussed in section 1.2.3. Under the No-Action Alternative, Reclamation would enforce its obligations under the Decree, which may include reducing deliveries for those water users that would overrun based on diversions to date and projected diversions for the remainder of the year, and/or stopping deliveries for water users that are at their entitlement amount. However, due to the nature of measurement, reporting, and accounting practices, there would continue to be some level of inadvertent overruns. The Secretary may determine at a future date that there is a need for a policy to assure these are addressed in a consistent fashion.

No Action for Biological Conservation Measures

Under the No-Action Alternative, the applicable biological conservation measures identified in the BO would not be implemented. Reconsultation with FWS would be required to effectuate any additional water transfers.

PUBLIC INVOLVEMENT AND SCOPING PROCESS

On January 18, 2001, Reclamation published a *Federal Register* Notice of Public Comment Period on a proposed policy that would identify inadvertent overruns, and define subsequent payback requirements to the Colorado River mainstream. On March 9, 2001, a second *Federal Register* notice was published, extending the public comment period to April 10, 2001. Sixteen letters of comment were received by Reclamation on the proposed IOP. Also on March 9, 2001, Reclamation published in the *Federal Register* a Notice of Intent (NOI) to prepare an EIS and initiation of scoping process for the IA, IOP, and implementation of the biological conservation measures. The scoping comment period also ended April 10, 2001. Six letters of comment were received in response to the NOI. Comments addressed a number of issues including the following:

- Project description (the need for flexibility to accommodate future shifts in water policy and consideration of in-stream and other public interest beneficial uses in long-term water resource planning; the need for detailed descriptions of implementation, monitoring, and enforcement strategies).
- EIS content (the geographic scope of the analysis and the need to identify the relationship of the proposed action to all major proposed and related Federal and State actions along the lower portion of the Colorado River; specific resources to be analyzed; the need for a detailed mitigation plan; the need to include sufficient information and analysis from documents incorporated by reference; the need for an appropriate baseline and no-action scenario).
- Expansion of the range of project alternatives.
- The need for compliance with the Endangered Species Act.

On April 26, 2001, a separate letter was sent to 55 Indian Tribal representatives, initiating government-to-government coordination pursuant to CEQ Regulations for Implementing the Procedural Provisions of the NEPA (40 CFR 1500-1508, § 1501.7); the National Historic Preservation Act (§ 101[d][2]) (16 U.S.C. § 470f), the new Section 106 regulations, "Protection of Historic Properties" (36 CFR Part 800.2[c][2]); and Executive Order 13175 of November 6, 2000, pertaining to consultation and coordination with Indian tribal governments. The only comment letter received in response to this letter was from the Fort Mojave Indian Tribe, which requested that it be placed on the distribution list for the EIS. No concerns or issues were raised in this letter.

On February 15, 2001, Reclamation staff met with members of seven interested environmental groups at their request to discuss the proposed IOP. In addition, informal discussions and a meeting on March 22, 2001, were held with representatives of the Colorado River Basin States to discuss the technical details of the proposed IOP. A conference call to discuss these technical aspects was held with the same seven environmental groups on April 3, 2001. Coordination

with the FWS pursuant to the Fish and Wildlife Coordination Act was initiated in April 2001, and several meetings and informal discussions were carried out. Extensive coordination with the FWS had been previously conducted pursuant to the Section 7 consultation on ISG and the IA. In August and September 2001, Reclamation met with the United States Bureau of Indian Affairs (BIA) and Colorado River Indian Tribes (CRIT) to review the impacts to power generation from the proposed water transfers. In addition, numerous meetings were held with the four affected California agencies regarding coordination of NEPA and CEQA compliance, and on July 26, 2001, Reclamation met with U.S. Environmental Protection Agency (EPA) staff to provide an overview of the proposed action. On November 7, 2001, Reclamation met with the Torres Martinez Band of Desert Cahuilla Indians to discuss potential impacts to the Salton Sea.

A scoping summary report was prepared to provide a synopsis of the scoping process conducted for the proposed action. The scoping summary report identifies efforts made to notify interested agencies, organizations, and individuals about the proposed action and to obtain input from those entities regarding the range of alternatives to be evaluated and the issues to be addressed in the EIS. The report also presents the major points made in the public comments received during the scoping process. The scoping summary report is available on Reclamation's Lower Colorado River Operations website at http://www.lc.usbr.gov.

The draft EIS was filed with the EPA on January 4, 2002, and the EPA's NOA for the draft EIS was published in the *Federal Register* on January 15, 2002. The EPA's NOA initiated a 60-day public review of the draft EIS. Reclamation agreed to extend the public review period by 14 days. An NOA for the public review extension was published in the *Federal Register* on March 15, 2002. Public hearings were held in Blythe, California; Henderson, Nevada; and Los Angeles, California on February 5, 6, and 7, 2002, respectively. Forty-one people attended the public hearing in Blythe, 14 in Henderson, and six in Los Angeles. Issues of concern presented during the public hearings included confusion over the project description, the IOP process, potential impacts to biological resources, and the water agreement between the U.S. and Mexico. The public review and comment period ended on March 26, 2002. Comment letters received during the public review period and responses to those comments are provided in Chapter 11 of this EIS.

Summary of Potential Impacts

The potential impacts of the execution of the IA, adoption of the IOP, and implementation of biological conservation measures are evaluated for the following resources in this EIS: Hydrology/Water Quality/Water Supply, Biological Resources, Hydroelectric Power, Land Use, Recreational Resources, Agricultural Resources, Socioeconomics, Environmental Justice, Cultural Resources, Tribal Resources, Air Quality, and Transboundary Impacts. Based on a detailed resource-specific analysis, Reclamation has determined that implementation of the proposed action would result in negligible impacts to the following resource areas: geology, soils and mineral resources, noise, aesthetics, and public services. Therefore, these resource areas are not specifically addressed in this EIS. However, to the extent that an aspect of any of these resource areas may impact another resource, discussion has been incorporated.

Table ES-1 summarizes, by resource area, the potential impacts for each component of the proposed action.

Table ES-1. Summary of Potential Impacts of the Execution of the IA, Adoption of the IOP, and Implementation of Biological Conservation Measures (Page 1 of 32)

Resource/Issue	*No Action*	*Impacts of Proposed Action/Alternatives*
HYDROLOGY/WATER QUALITY/WATER SUPPLY		
Implementation Agreement		
Potential impacts to Colorado River flows from transfers authorized by the IA.	Projected Average Annual Flow (MAFY): Glen Canyon to Hoover Dam: 8.23 to 10 Hoover Dam to Parker Dam: 8.54 to 9.72 Parker Dam to Imperial Dam: *At Headgate Rock Dam:* 6.72 to 6.8 *Below Palo Verde Diversion Dam*: 6.02 to 6.16	Primary impacts are in the reach between Parker Dam and Imperial Dam. Below Parker Dam, due to transfers authorized by the IA, average annual flows would decrease by a little as 138 KAF to as much as 388 KAF. This could result in lowering of median annual surface water levels by up to 0.4 feet in this reach.
Potential impacts to reservoir levels from transfers authorized by the IA.	Lake Powell levels are expected to be lower than historic levels due to increased Upper Basin depletions. Median Lake Powell levels are expected to decline for a number of years and then stabilize. In the short term (years 2002-2010), Lake Mead levels would be greater than that needed to produce electricity. However, after year 2011, there would be a 44% probability that Lake Mead would fall below 1083 feet msl. Through 2017, modeling results show that Lake Mead levels would exceed that needed for operation of Southern Nevada Water Authority's (SNWA) original intake (1050 feet msl), after 2017, reservoir levels would decline and there would be a 40% probability that Lake Mead would be lower than 1050 feet mean sea level (msl). During years 2002 through 2049, modeling shows that Lake Mead levels would be greater than necessary to operate SNWA)'s second water intake (1000 feet msl). But after 2049 there would be a 6% probability that Lake Mead elevation would be below elevation 1000 feet msl.	Lake Powell and Lake Mead water surface elevations would decline under No Action and this trend would continue with implementation of the IA. The IA would not cause a significant change relative to No Action in the anticipated lake levels.

Table ES-1. Summary of Potential Impacts of the Execution of the IA, Adoption of the IOP, and Implementation of Biological Conservation Measures (Page 2 of 32)

Resource/Issue	*No Action*	*Impacts of Proposed Action/Alternatives*
HYDROLOGY/WATER QUALITY/WATER SUPPLY		
Potential impacts to water quality from transfers authorized by the IA.	Under No Action and without further additional salinity controls, salinity concentrations below Hoover, Parker, and Imperial Dams would reach and then exceed the Water Quality Standards for Salinity in the Colorado River Basin by the year 2006. Continued implementation of the Colorado River Basin Salinity Control Program would ensure that the standards are maintained. Long-term, average salinities would be maintained at or below the numeric criteria levels.	Under the IA, projected salinity is similar to that of No Action. Below Hoover Dam and Parker Dam, projected salinity under the IA is no more than 1 mg/L higher than would be expected under No Action. At Imperial Dam, salinity is no more than 8 mg/L higher than would occur under No Action. However, these impacts would be fully offset by the continued implementation of the authorized Colorado River Basin Salinity Control Program. There would be increased selenium and salt concentrations in the New River, Alamo River and IID drains resulting from IID water conservation actions. These increased concentrations complicate the ability to meet proposed TMDL's for selenium in the Alamo River and IID drains and the TMDL for salt in the Salton Sea. There would be increased selenium in CVWD drainage water, increased salinity in the CVWD Upper Valley aquifer and near groundwater recharge areas, and the potential introduction of perchlorate into CVWD groundwater.
Potential impacts to groundwater from transfers authorized by the IA.	In the valleys below Parker, it is estimated that for every 1 unit in drop in river elevation, groundwater under irrigated fields will drop by half a unit. In a non-irrigated reach, groundwater elevation drop is assumed to be equal to the river drop.	The decline in median river stage could result in similar declines in median groundwater levels (as much as 0.4 feet) relative to the No-Action Alternative. Reduction in groundwater elevation would be greatest in non-irrigated areas and less severe in irrigated areas.

Table ES-1. Summary of Potential Impacts of the Execution of the IA, Adoption of the IOP, and Implementation of Biological Conservation Measures (Page 3 of 32)

Resource/Issue	*No Action*	*Impacts of Proposed Action/Alternatives*
HYDROLOGY/WATER QUALITY/WATER SUPPLY		
Implementation Agreement/Inadvertent Overrun Policy		
Potential impacts to Colorado River flood releases from inadvertent overruns and payback policy.	None.	In the evaluation of the comparison of the differences in the observed flood flows between the No Action and the IA that considered an average Lower Basin Overrun Account Balance of 66 KAFY modeled conditions, in approximately 16 percent of instances where differences were observed, the differences were positive which represented an increase in the magnitude of flows. However, for the 75-year period of analysis, the average of the differences was a reduction of 35,811 AF. In the evaluation of the comparison of the differences in the observed flood flows between the No Action and the IA that considered a Lower Basin Overrun Account Balance of 331 KAFY modeled conditions, in approximately 11.7 percent of instances where differences were observed, the differences were positive which represented an increase in the magnitude of flows. However, for the 75-year period of analysis, the average of the differences was a reduction of 219,539 AF. No Forgiveness Alternative: Same as the proposed project.
Potential impacts to Colorado River flows from inadvertent overruns and payback policy.	Without passage of the IOP, the Secretary would be required to enforce the provisions of the Decree. The Secretary would continue with the existing policy of not delivering water in excess of a State's, water district's, or entity's entitlement. No impact on flow.	Proposed IOP: With implementation of the IOP, the average increase in annual flow during overruns in the Hoover to Parker River reach would be approximately 90 KAF. An increase of 90 KAF to annual flow represents an increase from historic average annual flows of 0.8 percent and an increase

Table ES-1. Summary of Potential Impacts of the Execution of the IA, Adoption of the IOP, and Implementation of Biological Conservation Measures (Page 4 of 32)

Resource/Issue	*No Action*	*Impacts of Proposed Action/Alternatives*
HYDROLOGY/WATER QUALITY/WATER SUPPLY		
Potential impacts to Colorado River flows from inadvertent overruns and payback policy (cont.).		over flows under No Action as great as 1.1 percent[1]. The average decrease in flow due to paybacks would be roughly 72 KAF, or 0.6 percent less than average annual historic flows and 0.8 percent less than under No Action. Assuming the largest anticipated overrun, annual flows from Hoover Dam to Parker Dam could be augmented by overruns by as much as 313 KAF and diminished by payback as great as 206 KAF. However, this represents the largest overrun and payback scenario anticipated. With implementation of the IOP, the average increase in annual flow in the Parker to Imperial River reach would be approximately 90 KAF. An increase of 90 KAF to annual flow represents an increase from historic average annual flows of 0.9 percent and an increase over flows under No Action as great as 1.3 percent[2]. The average decrease in flow would be roughly 63 KAF, or 0.7 percent less than average annual historic flows and 0.9 percent less than under No Action. Assuming the largest anticipated overrun, annual flows below Parker Dam could be augmented by overruns by as much as 313 KAF and diminished by payback as great as 176 KAF. However, this represents the largest overrun and payback scenario anticipated.

1 Increased and decreased flows resulting from implementation of the IOP were compared to estimated flows under No Action at Havasu National NWR.
2 Increased and decreased flows resulting from implementation of the IOP were compared to estimated flows under No Action at Headgate Rock Dam.

Table ES-1. Summary of Potential Impacts of the Execution of the IA, Adoption of the IOP, and Implementation of Biological Conservation Measures (Page 5 of 32)

Resource/Issue	*No Action*	*Impacts of Proposed Action/Alternatives*
HYDROLOGY/WATER QUALITY/WATER SUPPLY		
Potential impacts to Colorado River flows from inadvertent overruns and payback policy (cont.).		The potential elevation change from combined IOP and IA impacts is anticipated to be within the historic fluctuation and the fluctuation that would be seen under No Action. No Forgiveness Alternative: Similar to proposed IOP, except would have more extended payback periods which would result in lower flow a greater percentage of the time.
Biological Conservation Measures		
The potential impacts to hydrology resulting from the biological conservation measures.	None.	Potentially minor reduction in river flows.
The potential impacts to water quality resulting from the biological conservation measures.	None.	Potential impacts to water quality during construction activities.
BIOLOGICAL RESOURCES-VEGETATION		
Implementation Agreement		
Colorado River. Potential loss of vegetation from decreased water levels (and associated drop in groundwater level) of the Colorado River between Parker Dam and Imperial Dam.	No change to vegetation would occur.	Drop in groundwater levels may impact riparian and marsh vegetation with shallow roots, such as cottonwood and willow trees. Full mitigation of these impacts would be accomplished through implementation of the biological conservation measures.
Imperial Irrigation District. Potential loss of native vegetation from construction and operation of water conservation measures.	There is a potential for water conservation measures to be implemented in the IID service area even if the IA were not implemented. This could result in impacts comparable to the proposed IA.	Construction activities have the potential to cause both temporary and permanent losses of native vegetation, depending on the exact location and extent of such activities. Conservation measures could result in a reduction of flow and changes in water quality within drain water, which may reduce emergent marsh and riparian vegetation.

Table ES-1. Summary of Potential Impacts of the Execution of the IA, Adoption of the IOP, and Implementation of Biological Conservation Measures (Page 6 of 32)

Resource/Issue	*No Action*	*Impacts of Proposed Action/Alternatives*
BIOLOGICAL RESOURCES-VEGETATION		
Coachella Valley Water District. Potential loss of native vegetation from construction and operation of new facilities and from increased groundwater levels.	Some facilities considered under the IA may still be constructed as part of the CVWMP, resulting in impacts to biological resources that are similar to the IA.	Construction activities have the potential to cause both temporary and permanent losses of native vegetation, depending on the exact location and extent of such activities. Increased groundwater levels would increase the levels of drain water, which is expected to maintain current riparian and marsh vegetation in the drains even if water conservation measures are implemented.
Metropolitan Water District. No new construction or changes in the operation of existing facilities.	No change to vegetation would occur.	None.
San Diego County Water Authority. No new construction or changes in the operation of existing facilities.	No change to vegetation would occur.	None.
Salton Sea. Potential loss of marsh and riparian vegetation from decreased water levels of the Salton Sea.	The impacts identified for the IA would occur, but at a slower rate.	The potential for a more rapidly declining Sea level has the potential to result in the loss of marsh and riparian vegetation, especially in the southern portion of the Sea. The declining sea level could impact wetland and riparian vegetation along the drains, rivers and streams entering the Sea, as well as the confluence of the fresh waters with the Sea.
Inadvertent Overrun Policy		
Potential impact to riparian and aquatic vegetation from increases and decreases in the Colorado River flow during select portions of the 75-year time period.	No change to vegetation would occur.	Proposed IOP: Any yearly changes within the River flow would be within the historical hydrological parameters of the River and are not expected to impact riparian and aquatic vegetation. No Forgiveness Alternative: Similar to proposed IOP.

Table ES-1. Summary of Potential Impacts of the Execution of the IA, Adoption of the IOP, and Implementation of Biological Conservation Measures (Page 7 of 32)

Resource/Issue	*No Action*	*Impacts of Proposed Action/Alternatives*
BIOLOGICAL RESOURCES-VEGETATION		
Biological Conservation Measures		
Potential impact to native and non-native vegetation from restoration or creation of 44 acres of backwaters along the Colorado River between Parker Dam and Imperial Dam.	No change to vegetation would occur.	Construction may disrupt native and non-native vegetation, but this disruption would be temporary and it is anticipated that additional, better quality vegetation would be established once restoration is completed (beneficial impact). It is likely that areas where vegetation is removed would contain primarily introduced species, and native vegetation would be removed only on an incidental basis.
Potential impact to native and non-native vegetation from restoration or creation of up to 1,116 acres of southwestern willow flycatcher habitat along the Colorado River.	No change to vegetation would occur.	Construction may disrupt native and non-native vegetation, but this disruption would be temporary and it is anticipated that additional, better quality vegetation would be established once restoration is completed (beneficial impact). It is likely that areas where vegetation is removed would contain primarily introduced species, and native vegetation would be removed only on an incidental basis.
BIOLOGICAL RESOURCES-FISH AND WILDLIFE		
Implementation Agreement		
Colorado River. Potential impact to fish and wildlife from decreased water levels (and associated drop in groundwater level) of the Colorado River between Parker Dam and Imperial Dam and associated loss of vegetation habitat.	No change to fish and wildlife would occur.	A negligible adverse impact to sport fisheries would occur from lower river flows between Parker and Imperial dams. Drop in groundwater may reduce wetland and riparian habitat along the Colorado River, which is used by amphibians, reptiles, riparian and marsh obligate birds, and mammals. Full mitigation of these impacts would be accomplished through implementation of the biological conservation measures.

Table ES-1. Summary of Potential Impacts of the Execution of the IA, Adoption of the IOP, and Implementation of Biological Conservation Measures (Page 8 of 32)

Resource/Issue	*No Action*	*Impacts of Proposed Action/Alternatives*
BIOLOGICAL RESOURCES-FISH AND WILDLIFE		
Imperial Irrigation District. Potential impact to fish and wildlife from construction and operation of water conservation measures.	There is a potential for water conservation measures to be implemented in the IID service area even if the IA were not implemented. This could result in impacts comparable to the proposed IA.	Any loss of marsh and riparian habitat resulting from reduced flow in the drains could adversely impact bird and amphibian species using that habitat. Loss of native vegetation from construction activities, while not expected to be substantial, could impact common and typical wildlife species using those habitats.
Coachella Valley Water District. Potential impact to fish and wildlife from construction and operation of new facilities and from increased groundwater levels.	Some facilities considered under the IA may still be constructed as part of the CVWMP, resulting in impacts to biological resources that are similar to the IA.	Construction of new facilities may impact wildlife habitat, but it is anticipated that these areas would be primarily in disturbed areas such as roadways or adjacent to existing facilities.
Metropolitan Water District. No new construction or changes in the operation of existing facilities.	No change to fish and wildlife would occur.	None.
San Diego County Water Authority. No new construction or changes in the operation of existing facilities.	No change to fish and wildlife would occur.	None.
Salton Sea. Potential impact to fish and wildlife from decreased water levels and water quality of the Salton Sea.	The impacts identified for the IA would occur, but at a slower rate.	The acceleration of the increase in Sea salinity would result in an earlier decline of sport fisheries, non-game fish, and fish-eating bird populations.
Inadvertent Overrun Policy		
Potential impact to fish and wildlife from increases and decreases in the Colorado River flow during select portions of the 75-year time period.	No change to fish and wildlife would occur.	Proposed IOP: Any yearly changes within the River flow would be within the historical hydrological parameters of the River and are not expected to adversely impact fish and wildlife. No Forgiveness Alternative: Similar to proposed IOP.

Table ES-1. Summary of Potential Impacts of the Execution of the IA, Adoption of the IOP, and Implementation of Biological Conservation Measures (Page 9 of 32)

Resource/Issue	*No Action*	*Impacts of Proposed Action/Alternatives*
BIOLOGICAL RESOURCES-FISH AND WILDLIFE		
Biological Conservation Measures		
Potential impact to fish and wildlife from restoration or creation of 44 acres of backwaters along the Colorado River between Parker Dam and Imperial Dam.	No change to fish and wildlife would occur.	Construction may disrupt vegetation and create short-term impacts on fish and wildlife species during the period of restorations. Sedimentation during dredging may also impact aquatic organisms. Removal of vegetation during the nesting season may impact nesting bird species.
Potential impact to fish and wildlife from restoration or creation of up to 1,116 acres of southwestern willow flycatcher habitat along the Colorado River.	No change to fish and wildlife would occur.	Construction may disrupt vegetation and create short-term impacts on fish and wildlife species during the period of restorations. Sedimentation during dredging may also impact aquatic organisms. Removal of vegetation during the nesting season may impact nesting bird species.
BIOLOGICAL RESOURCES-SENSITIVE SPECIES		
Implementation Agreement		
Colorado River. Potential impact to sensitive plants, fish, and/or wildlife from decreased water levels (and associated drop in groundwater level) of the Colorado River between Parker Dam and Imperial Dam.	No change to sensitive species would occur.	Drop in groundwater may reduce wetland and riparian habitat along the Colorado River, which may impact sensitive species, such as razorback suckers, bonytail chub, Yuma clapper rail, California black rail, southwestern willow flycatcher, and yellow-billed cuckoo. Impacts and mitigations were addressed in the 2001 FWS Biological Opinion.
Imperial Irrigation District. Potential impact to sensitive plants, fish, and/or wildlife from construction and operation of water conservation measures.	There is a potential for water conservation measures to be implemented in the IID service area even if the IA were not implemented. This could result in impacts comparable to the proposed IA.	A Habitat Conservation Plan (HCP) has been prepared for the IID Water Conservation and Transfer Project. The HCP addresses both plant and fish and wildlife species within the IID service area and the Salton Sea. Construction of conservation projects, potential reduced flow and changed water quality in the drains, possible impacts on Salton Sea, and the potential for fallowing as a conservation method are all addressed in the HCP. If IID's proposed HCP is not implemented,

Table ES-1. Summary of Potential Impacts of the Execution of the IA, Adoption of the IOP, and Implementation of Biological Conservation Measures (Page 10 of 32)

Resource/Issue	*No Action*	*Impacts of Proposed Action/Alternatives*
BIOLOGICAL RESOURCES-SENSITIVE SPECIES		
Imperial Irrigation District. Potential impact to sensitive plants, fish, and/or wildlife from construction and operation of water conservation measures (cont.).		Reclamation has developed a proposed species conservation plan as an alternative means of providing incidental take authorization for IID's water conservation actions (USBR 2002b).
Coachella Valley Water District. Potential impact to sensitive plants, fish, and/or wildlife from construction and operation of new facilities and from increased groundwater levels.	Some facilities considered under the IA may still be constructed as part of the Coachella Valley Water Management Plan (CVWMP), resulting in impacts to biological resources that are similar to the IA.	None expected. Construction activities within any native plant community areas that could contain sensitive species would be evaluated for such species prior to the work. Potential impacts from increased flow in the drains will be addressed in the Coachella Valley Multi-Species Habitat Conservation Plan (CVMSHCP).
Metropolitan Water District. No new construction or changes in the operation of existing facilities.	No change to sensitive species would occur.	None.
San Diego County Water Authority. No new construction or changes in the operation of existing facilities.	No change to sensitive species would occur.	None.
Salton Sea. Potential impact to sensitive plants, fish, and/or wildlife from decreased water levels and water quality of the Salton Sea.	The impacts identified for the IA would occur, but at a slower rate.	Potential impacts to some of the more notable species of concern include the desert pupfish, Yuma clapper rail, and brown and white pelicans. The desert pupfish could be impacted by the more rapid reduction in water surface elevation of the Sea and potential isolation of drain habitats. The Yuma clapper rail and California black rail could be impacted by the loss or decline in productivity of the marshes near the Salton Sea. Fish-eating birds, such as the California brown pelican and white pelican, would be impacted sooner, since the fish that are food sources for these species would decline sooner.

Table ES-1. Summary of Potential Impacts of the Execution of the IA, Adoption of the IOP, and Implementation of Biological Conservation Measures (Page 11 of 32)

Resource/Issue	*No Action*	*Impacts of Proposed Action/Alternatives*
BIOLOGICAL RESOURCES-SENSITIVE SPECIES		
Inadvertent Overrun Policy		
Potential impact to sensitive plants, fish, and/or wildlife from increases and decreases in the Colorado River flow during select portions of the 75-year time period.	No change to sensitive species would occur.	Proposed IOP: Any yearly changes within the River flow would be within the historical hydrological parameters of the River and are not expected to adversely impact sensitive species. No Forgiveness Alternative: Similar to proposed IOP.
Biological Conservation Measures		
Potential impact to sensitive plants, fish, and/or wildlife from restoration or creation of 44 acres of backwaters along the Colorado River between Parker Dam and Imperial Dam.	No change to sensitive species would occur.	Construction would disrupt vegetation and cause sedimentation, which may create short-term impacts on sensitive species, such as the razorback sucker, Yuma clapper rail, and southwestern willow flycatcher. These impacts would be temporary and would lead to enhanced habitat for sensitive fish and wildlife species (beneficial impact).
Potential impact to sensitive plants, fish, and/or wildlife from restoration or creation of up to 1,116 acres of southwestern willow flycatcher habitat along the Colorado River.	No change to sensitive species would occur.	Construction would disrupt vegetation and cause sedimentation, which may create short-term impacts on sensitive species, such as the razorback sucker, Yuma clapper rail, and southwestern willow flycatcher. These impacts would be temporary and would lead to enhanced habitat for sensitive fish and wildlife species (beneficial impact).
HYDROELECTRIC POWER		
Implementation Agreement		
Colorado River. Potential impact to hydroelectric power.	None.	Regarding potential impacts to energy, Hoover and Davis Dams would not be measurably impacted. Power produced at Parker and Headgate Rock Dams would be reduced by about 5 percent. MWD could be economically impacted because the reduction in energy would mean less Federal power to pump Colorado River water through the Colorado River Aqueduct. Parker-Davis Project (P-

Table ES-1. Summary of Potential Impacts of the Execution of the IA, Adoption of the IOP, and Implementation of Biological Conservation Measures (Page 12 of 32)

Resource/Issue	*No Action*	*Impacts of Proposed Action/Alternatives*
HYDROELECTRIC POWER		
Colorado River. Potential impact to hydroelectric power (cont.).		DP) preference customers would potentially be impacted through the loss of or a percentage of loss of excess energy, potential increase in rates, and a reduction in future contract resources. A reduction in energy at Headgate Rock Dam could impact BIA's ability to meet new tribal energy demands.
Imperial Irrigation District. Potential impact to hydroelectric power.	None.	The energy production at the hydroelectric power facilities operated by IID could be impacted.
Coachella Valley Water District. Potential impact to hydroelectric power.	None.	None.
Metropolitan Water District. Potential impact to hydroelectric power.	None.	MWD could be economically impacted because the reduction in energy would mean less Federal power to pump Colorado River water through the Colorado River Aqueduct.
San Diego County Water Authority. Potential impact to hydroelectric power.	None.	None.
Salton Sea. Potential impact to hydroelectric power.	None.	None.
Inadvertent Overrun Policy		
Potential impact to hydroelectric power from increases and decreases in the Colorado River flow during select portions of the 75-year time period.	None.	Proposed IOP: The IOP would have positive impacts on power production during overrun years and negative impacts during payback years. Power production at Hoover, Davis, Parker, and Headgate Rock Dams would be impacted. No Forgiveness Alternative: Similar to the proposed IOP.

Table ES-1. Summary of Potential Impacts of the Execution of the IA, Adoption of the IOP, and Implementation of Biological Conservation Measures (Page 13 of 32)

Resource/Issue	*No Action*	*Impacts of Proposed Action/Alternatives*
HYDROELECTRIC POWER		
Biological Conservation Measures		
Potential impact to hydroelectric power from restoration or creation of habitat along the Colorado River between Parker Dam and Imperial Dam.	None.	None.
LAND USE		
Implementation Agreement		
Colorado River. Potential changes to land use patterns from decreased water levels of the Colorado River between Parker Dam and Imperial Dam.	If the IA were not implemented, no significant substantive land use changes in the project study area or conflicts with existing policies are expected to occur. The reliability of Colorado River water supplies would not be increased for CVWD, MWD, and SDCWA under this alternative, but these agencies might undertake other actions to increase their overall water supply reliability. None of these actions would be likely to impact development patterns or land use trends.	None.
Imperial Irrigation District. Potential changes to land use patterns from construction and operation of water conservation measures.	See Colorado River.	The conservation measures would be implemented on agricultural land and would not change land use patterns. The proposed water conservation measures would not result in any substantive land use impacts.
Coachella Valley Water District. Potential changes to land use patterns from construction of new facilities.	See Colorado River.	Pipelines would be placed mainly in existing streets, pump stations would be in agricultural areas, and recharge basins would be in open space, where they would not interfere with surrounding land uses. No substantive alteration of land use in this area is expected.
Metropolitan Water District. No new construction or changes in the operation of existing facilities.	See Colorado River.	None.

Table ES-1. Summary of Potential Impacts of the Execution of the IA, Adoption of the IOP, and Implementation of Biological Conservation Measures (Page 14 of 32)

Resource/Issue	*No Action*	*Impacts of Proposed Action/Alternatives*
LAND USE		
San Diego County Water Authority. No new construction or changes in the operation of existing facilities.	See Colorado River.	None.
Salton Sea. Potential decline in recreational use from decreased water levels and increased salinity of the Salton Sea.	None.	Recreational use of the area, including sport fishing, is likely to decline sooner, given the acceleration of impacts to fish that would result from the increased salinity. This potential decrease in recreational activities would eventually occur whether or not the water transfers were implemented since salinity levels of the Sea would increase independently of implementation of the IA and QSA. The lands of the Torres Martinez Reservation, some of which underlie the existing Sea, would be exposed sooner and to a greater extent than under No Action.
Inadvertent Overrun Policy		
Potential changes to land use patterns from increases and decreases in the Colorado River flow during select portions of the 75-year time period.	None.	Proposed IOP: None. No Forgiveness Alternative: None.
Biological Conservation Measures		
Potential changes to land use patterns from restoration or creation of 44 acres of backwaters along the Colorado River between Parker Dam and Imperial Dam.	None.	Habitat restoration could result in a change from agricultural use to backwaters.
Potential changes to land use patterns from restoration or creation of up to 1,116 acres of southwestern willow flycatcher habitat along the Colorado River.	None.	Habitat restoration could result in a change from agricultural use to cottonwood-willow habitat.

Table ES-1. Summary of Potential Impacts of the Execution of the IA, Adoption of the IOP, and Implementation of Biological Conservation Measures (Page 15 of 32)

Resource/Issue	*No Action*	*Impacts of Proposed Action/Alternatives*
RECREATIONAL RESOURCES		
Implementation Agreement		
Colorado River. Potential changes to recreational facilities from decreased water levels of the Colorado River between Parker Dam and Imperial Dam.	None.	The water level of the River would change slightly, but the change would be within the normal range of variability, and no recreational facilities would be impacted. No changes are anticipated that would impact any recreational activities that are dependent upon fish or wildlife.
Imperial Irrigation District. Potential changes to recreational resources from construction and operation of water conservation measures and from reduction in drainage water.	None.	The proposed conservation measures would be located in remote farm areas and would not impact recreational resources.
Coachella Valley Water District. Potential changes to swimming and fishing in the Coachella Valley Stormwater Channel from increases in water flow, potential impacts to golf courses from use of Colorado River water instead of groundwater, and potential changes to recreational resources from construction of new facilities.	None.	Increase in flows to the Coachella Valley Stormwater Channel would have no substantial impact on swimming or fishing, but fish may be able to move further upstream than is currently possible. There would have no substantial impact on golf courses or other recreational resources.
Metropolitan Water District. No new construction or changes in the operation of existing facilities.	None.	None.
San Diego County Water Authority. No new construction or changes in the operation of existing facilities.	None.	None.

Table ES-1. Summary of Potential Impacts of the Execution of the IA, Adoption of the IOP, and Implementation of Biological Conservation Measures (Page 16 of 32)

Resource/Issue	*No Action*	*Impacts of Proposed Action/Alternatives*
RECREATIONAL RESOURCES		
Salton Sea. Potential decline in recreational use from decreased water levels and increased salinity of the Salton Sea.	Decreased water levels and increased salinity of the Sea would impact recreational uses. The increase in salinity would result in a substantive impact to sport fishing opportunities. The reduction in the Sea elevation would also substantively impact boat launching and mooring facilities once it receded below –230 feet since they would no longer have direct access to the water. Bird watching and waterfowl hunting also would likely decline since fewer birds would be present. Land-based recreational activities, such as camping, would likely decline due to the aesthetic degradation of the area.	Decreased surface area of the Sea would reduce the area that could be used for water-based recreational activities such as fishing and boating. The increase in exposed playa would provide more area for land-based recreation, including camping and picnicking, but may necessitate relocating facilities and trails that are currently near the water. It may also be necessary to remove exposed footings and other features that are currently under water for safety and aesthetic considerations. Increased salinity of the Sea would also impact sport-fishing opportunities, hunting, and wildlife viewing. Land-based recreational activities, such as camping, would likely decline due to the aesthetic degradation of the area.
Inadvertent Overrun Policy		
Potential decline in recreational use from potential payback requirements.	None.	Proposed IOP: Recreational resources would not be substantively impacted. No Forgiveness Alternative: Similar to the proposed IOP.
Biological Conservation Measures		
Potential impact to recreational resources on or near the Colorado River from restoration or creation of 44 acres of backwaters along the Colorado River between Parker Dam and Imperial Dam.	There would be no impact to recreational resources, but the benefits to passive recreational activities (such as bird watching) related to the creation of new habitat along the Colorado River would not be realized.	Establishing additional habitat along the River would benefit passive recreational activities because it would add to the total acreage of wildlife and fish habitat along the Colorado River mainstem (beneficial impact).
Potential impact to recreational resources on or near the Colorado River from restoration or creation of up to 1,116 acres of southwestern willow flycatcher habitat along the Colorado River.	There would be no impact to recreational resources, but the benefits to passive recreational activities (such as bird watching) related to the creation of new habitat along the Colorado River would not be realized.	Establishing additional habitat along the River would benefit passive recreational activities because it would add to the total acreage of wildlife and fish habitat along the Colorado River mainstem (beneficial impact).

Table ES-1. Summary of Potential Impacts of the Execution of the IA, Adoption of the IOP, and Implementation of Biological Conservation Measures (Page 17 of 32)

Resource/Issue	*No Action*	*Impacts of Proposed Action/Alternatives*
AGRICULTURAL RESOURCES		
Implementation Agreement		
Colorado River. Potential changes to agricultural land from decreased water levels of the Colorado River between Parker Dam and Imperial Dam.	Water use would have to be consistent with existing legal entitlements, although the manner in which this would occur is uncertain. The reliability of Colorado River water supplies would not be increased for CVWD, MWD, and SDCWA under this alternative, but these agencies might undertake other actions to increase their overall water supply reliability. This could impact the amount of water available for agricultural uses.	Any changes in River elevation would be minor and within current fluctuations and would not impact agricultural land.
Imperial Irrigation District. Potential reduction in agricultural production and/or decrease in the amount of land farmed from construction and operation of water conservation measures.	See Colorado River.	If fallowing were used as a conservation measure, it could be either rotational fallowing or permanent fallowing or a combination of the two. Rotational fallowing would be consistent with planned land uses and would not result in the reclassification of any prime or statewide important farmlands; therefore, no impact to agricultural resources would occur. However, permanent fallowing of agricultural land could be used to conserve water for transfer, which would result in the permanent fallowing of up to about 50,000 acres of land. This represents up to about 11 percent of the total net acreage in agricultural production within the IID water service area. Assuming all acreage included in the water conservation program was permanently fallowed, and thus reclassified, this would represent an adverse, unavoidable impact to the agriculture resources of the IID water service area.
Coachella Valley Water District. Potential changes to agricultural resources from more reliance on Colorado River and SWP water and from construction of new facilities.	See Colorado River.	Colorado River water has good infiltration characteristics, which would benefit some agricultural uses (beneficial impact). Construction of new facilities would not convert farmland to non-agricultural use.

Table ES-1. Summary of Potential Impacts of the Execution of the IA, Adoption of the IOP, and Implementation of Biological Conservation Measures (Page 18 of 32)

Resource/Issue	*No Action*	*Impacts of Proposed Action/Alternatives*
AGRICULTURAL RESOURCES		
Metropolitan Water District. No new construction or changes in the operation of existing facilities.	See Colorado River.	None.
San Diego County Water Authority. No new construction or changes in the operation of existing facilities.	See Colorado River.	None.
Salton Sea. Potential changes to agricultural resources from decreased water levels and increased salinity of the Salton Sea.	The Salton Sea itself does not contain agricultural resources and therefore no impact would occur.	The Salton Sea itself does not contain agricultural resources and therefore no impact would occur.
Inadvertent Overrun Policy		
Potential decline in crop selection for water users that must meet potential payback requirements.	This could impact short-term productivity on agriculture, but would not have long-term impacts and would not result in the loss of agricultural land or conflict with Williamson Act contracts.	Proposed IOP: Water users that are required to pay back water due to an inadvertent overrun may experience a short-term impact on agricultural productivity during payback years. No Forgiveness Alternative: Similar to proposed IOP.
Biological Conservation Measures		
Potential conversion of agricultural land to habit from the restoration or creation of 44 acres of backwaters along the Colorado River between Parker Dam and Imperial Dam.	None.	Creating backwaters could potentially occur on Prime or Unique Farmland or Farmland of Statewide Importance, but the acreage proposed for habitat restoration is relatively small (44 acres) and would not result in significant reduction in agricultural production within California or Arizona.
Potential conversion of agricultural land to habitat from restoration or creation of up to 1,116 acres of southwestern willow flycatcher habitat along the Colorado River.	None.	Creating cottonwood-willow habitat could potentially occur on Prime or Unique Farmland or Farmland of Statewide Importance, but the acreage proposed for habitat restoration is relatively small (up to 1,116 acres) and would not result in significant reduction in agricultural production within California or Arizona.

Table ES-1. Summary of Potential Impacts of the Execution of the IA, Adoption of the IOP, and Implementation of Biological Conservation Measures (Page 19 of 32)

Resource/Issue	*No Action*	*Impacts of Proposed Action/Alternatives*
	SOCIOECONOMICS	
Implementation Agreement		
Colorado River. Potential for change to population, housing or socioeconomics from decreased water levels of the Colorado River between Parker Dam and Imperial Dam.	The reliability of Colorado River water supplies for CVWD, MWD, and SDCWA would not increase, and there is a potential for the need for extreme water conservation or water rationing programs during drought years. These actions would not result in changes to population, employment, or housing trends; however, it is likely that the cost of water would increase due at least in part to the legal challenges and litigation that are expected if other water transfers are attempted. The precise economic impacts will depend on future decisions and legal actions; impacts are likely to be negative, but they cannot be determined at this time.	None.
Imperial Irrigation District. Potential for decrease in employment or adverse impacts to population and housing from construction and operation of water conservation measures.	See Colorado River.	Construction of the water conservation measures is not anticipated to result in a substantive reduction in agricultural production or the amount of land farmed, and therefore would not adversely impact employment. Construction and operation of new facilities would be located in agricultural areas, and this minor amount of construction would not impact population or housing. If the reduction in water use in the IID service area was accomplished solely through land fallowing, Imperial County could experience a net loss of 1,400 jobs, mostly in the agricultural sectors. Such a change would comprise just under 3 percent of the Year 2000 county employment level. Net agricultural sector job losses would total 1,300, representing about 12 percent of the total county agricultural employment. The net decrease in the value of business output is estimated to be $98 million. This represents approximately 2 percent of the estimated $4.8 billion total value of business output for Imperial County.

Table ES-1. Summary of Potential Impacts of the Execution of the IA, Adoption of the IOP, and Implementation of Biological Conservation Measures (Page 20 of 32)

Resource/Issue	*No Action*	*Impacts of Proposed Action/Alternatives*
SOCIOECONOMICS		
Coachella Valley Water District. Potential for adverse impacts to population trends and employment from an increased water supply to the CVWD service area and from construction and operation of new facilities.	See Colorado River.	The increased water supply to the CVWD service area would be used to offset the existing groundwater overdraft and would not change population trends or 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 impact population or housing.
Metropolitan Water District. No new construction or changes in the operation of existing facilities.	See Colorado River.	None.
San Diego County Water Authority. No new construction or changes in the operation of existing facilities.	See Colorado River.	None.
Salton Sea. Potential for adverse impacts to population trends and employment from decreased water levels and water quality of the Salton Sea.	Decreased water levels and increased salinity of the Sea would have negative impacts to the area's biological and recreational resources, which could adversely impact the local economy.	Decrease in water levels and decline in water quality would impact the fisheries and other recreational resources of the Sea, which may indirectly impact employment opportunities in the area. It could possibly lead to a reduction in population, depending on the severity of the impact. This potential loss of employment opportunities, while having social consequences, would not constitute a substantive change to the environment.
Inadvertent Overrun Policy		
Potential for change to population, housing or socioeconomics from potential payback requirements.	This alternative would not impact housing or population. Reclamation would enforce its obligations under the Decree, which may include reduced deliveries for those diverters that are projected to overrun based on their diversion rate and projected diversions for the remainder of the year, and/or stop deliveries for diverters that are at their entitlement amount. This could result in a short-term reduction in agricultural productivity,	Proposed IOP: This policy would impact agricultural uses in the IID service area. Payback measures could include fallowing in the IID service area, which could have a short-term impact on agricultural productivity, employment, and revenue during payback years. Given the comparatively small amount of water to be paid back, the overall impact would be minor. CVWD would likely reduce its recharge efforts during payback years,

Table ES-1. Summary of Potential Impacts of the Execution of the IA, Adoption of the IOP, and Implementation of Biological Conservation Measures (Page 21 of 32)

Resource/Issue	*No Action*	*Impacts of Proposed Action/Alternatives*
	SOCIOECONOMICS	
Potential for change to population, housing or socioeconomics from potential payback requirements (cont.).	with associated economic impacts, in the IID service area, the extent of which is dependent upon the amount of water involved.	which would not impact the service area's economy. No aspects of the IOP would impact population or housing. No Forgiveness Alternative: Similar to proposed IOP.
Biological Conservation Measures		
Potential for change to population, housing or socioeconomics from restoration or creation of 44 acres of backwaters along the Colorado River between Parker Dam and Imperial Dam.	None.	Constructing or restoring backwaters would create a small, short-term increase in employment opportunities. This measure potentially could result in the loss of 44 acres of agricultural land, depending on the site(s) selected. This could result in the loss of some agricultural employment opportunities.
Potential for change to population, housing or socioeconomics from restoration or creation of up to 1,116 acres of southwestern willow flycatcher habitat along the Colorado River.	None.	Constructing or restoring habitat would create a small, short-term increase in employment opportunities. This measure potentially could result in the loss of up to 1,116 acres of agricultural land, depending on the site(s) selected. This could result in the loss of some agricultural employment opportunities.
	ENVIRONMENTAL JUSTICE	
Implementation Agreement		
Colorado River. Potential for a disproportionate impact on any low-income and minority populations from decreased water levels of the Colorado River between Parker Dam and Imperial Dam.	None.	A slight lowering of the surface water elevation along the Colorado River between Parker and Imperial Dams would have an impact on biological resources. These changes would occur throughout this reach of the River, impacting each community in an approximately equal fashion, and would not have a disproportionate impact on any low-income and minority populations.

Table ES-1. Summary of Potential Impacts of the Execution of the IA, Adoption of the IOP, and Implementation of Biological Conservation Measures (Page 22 of 32)

Resource/Issue	*No Action*	*Impacts of Proposed Action/Alternatives*
ENVIRONMENTAL JUSTICE		
Imperial Irrigation District. Potential for a disproportionate impact on any low-income and minority populations from construction and operation of water conservation measures.	None.	Fallowing would result in job losses in the farm production and services sector, which would disproportionately impact minority and low-income people.
Coachella Valley Water District. Potential for a disproportionate impact on any low-income and minority populations from construction and operation of new facilities.	None.	None.
Metropolitan Water District. No new construction or changes in the operation of existing facilities.	None.	None.
San Diego County Water Authority. No new construction or changes in the operation of existing facilities.	None.	None.
Salton Sea. Potential for a disproportionate impact on any low-income and minority populations from decreased water levels and water quality of the Salton Sea.	None.	Windblown dust from exposed Salton Sea sediments would disproportionately affect Hispanic populations within one mile of the Salton Sea and also throughout the Salton Sea Air Basin.
Inadvertent Overrun Policy		
Potential for a disproportionate impact on any low-income and minority populations from potential payback requirements.	None.	Proposed IOP: Under the currently proposed policy, entities with Colorado River water diversion entitlements would not be eligible to take advantage of the IOP. The proposed policy does not, however, encroach upon those with diversion entitlements. Those with diversion entitlements could seek to enter into a consumptive use contract with Reclamation should they desire to utilize the IOP. No Forgiveness Alternative: Impacts would be as described for the proposed action.

Table ES-1. Summary of Potential Impacts of the Execution of the IA, Adoption of the IOP, and Implementation of Biological Conservation Measures (Page 23 of 32)

Resource/Issue	*No Action*	*Impacts of Proposed Action/Alternatives*
ENVIRONMENTAL JUSTICE		
Biological Conservation Measures		
Potential for a disproportionate impact on any low-income and minority populations from restoration or creation of 44 acres of backwaters along the Colorado River between Parker Dam and Imperial Dam.	None.	The locations of restoration sites have not yet been determined; however, the site locations would be determined based on hydrological and biological feasibility and the availability of the land. Because of the increased biological, aesthetic, and recreational values associated with habitat restoration, the primary impact of restoration activities would be beneficial. There would be no disproportionate impact on low-income and minority populations.
Potential for a disproportionate impact on any low-income and minority populations from restoration or creation of up to 1,116 acres of southwestern willow flycatcher habitat along the Colorado River.	None.	The locations of restoration sites have not yet been determined; however, the site locations would be determined based on hydrological and biological feasibility and the availability of the land. Because of the increased biological, aesthetic, and recreational values associated with habitat restoration, the primary impact of restoration activities would be beneficial. There would be no disproportionate impact on low-income and minority populations.
CULTURAL RESOURCES		
Implementation Agreement		
Impacts on historic properties between Parker and Imperial Dams within the River channel and in backwaters, lakes, and marshy areas having a direct connection to the River.	None.	The IA would not impact cultural resources.

Table ES-1. Summary of Potential Impacts of the Execution of the IA, Adoption of the IOP, and Implementation of Biological Conservation Measures (Page 24 of 32)

Resource/Issue	*No Action*	*Impacts of Proposed Action/Alternatives*
CULTURAL RESOURCES		
Inadvertent Overrun Policy		
Impacts on historic properties along the lower portion of the River; the precise area of potential impacts is to be determined at a later date.	None.	Proposed IOP: Impacts of the IOP are considered part of ongoing River operations. No Forgiveness Alternative: Impacts would be as described for the proposed action.
Biological Conservation Measures		
Impacts on historic properties within the historic floodplain of the River between Parker and Imperial Dams.	None.	Impacts of the biological conservation measures are to be determined at a later date, when site-specific information is available.
TRIBAL RESOURCES		
Implementation Agreement		
Colorado River. The IA could impact Tribal resources along the lower Colorado River through impacts on hydrology/water rights, water quality, biological resources, cultural resources, land use, or hydroelectric power.	Tribal Resources along the lower Colorado River would not be impacted. The structural projects embodied in the QSA that would help conserve Colorado River water, such as lining the AAC and the Coachella Canal, could lose $200 million in State funding and may not be implemented; therefore, there may not be water available from canal lining projects to facilitate implementation of the San Luis Rey Indian Water Rights Settlement Act.	The IA would facilitate the San Luis Rey Indian Water Rights Settlement, resulting in a beneficial impact to the La Jolla, Rincon, San Pasqual, Pauma, and Pala Bands of Mission Indians. Increased salinity levels at Imperial Dam would impact tribal lands located along the Colorado River between Parker Dam and Imperial Dam, but this increase falls within the normal range of fluctuations that occur along the reach. In addition, this impact would be fully mitigated by implementation of authorized salinity control projects. Impacts to biological resources would be avoided through implementation of the proposed biological conservation measures. Regarding hydroelectric power, a reduction in Headgate energy could impact BIA's ability to meet new Tribal energy demands. Reclamation has concluded that the water appropriated to non-CRIT entities, that flows through Headgate Rock Dam and generates power, is not an ITA, and Reclamation does not propose to mitigate or compensate for this reduced opportunity to produce power.

Table ES-1. Summary of Potential Impacts of the Execution of the IA, Adoption of the IOP, and Implementation of Biological Conservation Measures (Page 25 of 32)

Resource/Issue	*No Action*	*Impacts of Proposed Action/Alternatives*
	TRIBAL RESOURCES	
Coachella Valley Water District. Potential for adverse impacts to tribal resource from groundwater recharge.	No additional Colorado River water would be provided to CVWD, and overdrafted groundwater conditions would continue.	Groundwater recharge with Colorado River water is anticipated to have an adverse impact on the quality of groundwater extracted near the recharge basins in the Lower Coachella Valley because Colorado River water typically has higher concentrations of TDS and other chemical constituents than the local groundwater currently does. Recharge with Colorado River water could introduce low levels of perchlorate into the groundwater near the recharge basins. Groundwater recharge would affect the groundwater supply of the Torres Martinez Band of Desert Cahuilla Indians and the Agua Caliente Band of Cahuilla Indians. CVWD would work with the Tribes to bring the drinking water supply of the Tribes into compliance by either providing domestic water service or by providing appropriate well-head treatment should recharge of Colorado River water cause any drinking water well to exceed any recognized health based water quality standard.
Salton Sea. Potential for adverse impacts to tribal resources from decreased water levels and water quality of the Salton Sea.	Decreased water levels and increased salinity of the Sea would have negative impacts to the area's biological and recreational resources, and would expose currently inundated lands of the Torres Martinez Reservation.	Lowered water surface elevation of the Salton Sea would result in the exposure of Torres Martinez Band of Desert Cahuilla Indians' tribal land that is currently inundated by the Salton Sea. These exposed lands contain natural and cultural resources that are considered by the Tribe to be ITAs. Exposure could result in adverse impacts on cultural resources from vandalism and erosion. Flowage easements held over these lands by CVWD and IID would severely limit most economic development opportunities. The Tribe is quite concerned with any impact to the fishery resource or recreational economy. The Tribe also has expressed concern about increases in wind-blown dust from the exposure of lands previously inundated by the Salton Sea.

Table ES-1. Summary of Potential Impacts of the Execution of the IA, Adoption of the IOP, and Implementation of Biological Conservation Measures (Page 26 of 32)

Resource/Issue	*No Action*	*Impacts of Proposed Action/Alternatives*
TRIBAL RESOURCES		
Inadvertent Overrun Policy		
The IOP could impact Tribal resources along the lower Colorado River through impacts on hydrology/water rights, water quality, biological resources, cultural resources, land use, or hydroelectric power.	None.	Proposed IOP: Impacts to cultural resources are to be evaluated separately from this EIS. Regarding hydroelectric power, the IOP would have positive impacts on power production during overrun years and negative impacts during payback years. Power production at Hoover, Davis, Parker, and Headgate Rock Dams would be impacted. No Forgiveness Alternative: Impacts would be as described for the proposed action.
Biological Conservation Measures		
The Biological Conservation Measures could impact Tribal resources along the lower Colorado River through impacts on hydrology/water rights, water quality, biological resources, cultural resources, land use, or hydroelectric power.	None.	There could be a short-term impact to water quality associated with construction of habitat restoration sites. Potential short-term impact to biological and cultural resources could occur depending on the locations selected to implement the conservation measures. Regarding hydroelectric power, implementation of the biological conservation measures would have no impact on power generation.
AIR QUALITY		
Implementation Agreement		
Colorado River. Potential for increase in windblown fugitive dust emissions from decreased water levels of the Colorado River between Parker Dam and Imperial Dam.	None.	The amount of land exposed by decreased water levels is relatively small and some may become revegetated. Potential for increase in windblown fugitive dust emissions from these periodically dry lands would be minimal.

Table ES-1. Summary of Potential Impacts of the Execution of the IA, Adoption of the IOP, and Implementation of Biological Conservation Measures (Page 27 of 32)

Resource/Issue	*No Action*	*Impacts of Proposed Action/Alternatives*
	AIR QUALITY	
Imperial Irrigation District. Potential air quality impacts from construction and operation of water conservation measures.	There is a potential for water conservation measures to be implemented in the IID service area even if the IA and QSA were not implemented. This could result in air quality impacts that are similar to those described in the proposed action.	The impact of emissions from construction of on-farm water conservation measures and water treatment/reuse systems would not exceed any ambient air quality standard. Fugitive dust emissions from soil disturbances are considered to be within the realm of typical farm operations. Conservation measures also could include fallowing, which could result in a decrease in combustive emissions. Fallowed lands would no longer be subject to plowing and other agricultural activities that would create windblown dust, but the exposed area of the fallowed lands could in itself create some windblown dust.
Coachella Valley Water District. Potential air quality impacts from construction and operation of new facilities.	There is the likelihood that some of the facilities considered in the proposed action may still be constructed in the CVWD service area to accommodate other elements of the CVWMP not directly related to the IA and QSA. This could result in air quality impacts that are similar to those described in the proposed action. CVWD might undertake other actions to increase their overall water supply reliability. These actions might include increased water conservation, increased reliance on other water supplies, such as the State Water Project (SWP) or groundwater, or further development of new supplies through recycling or desalination. Some of these actions might require construction, which would have air quality impacts.	The impact of emissions from construction of new facilities would cause temporary impacts to local air quality and could exceed air emission thresholds established by the South Coast Air Quality Management District (SCAQMD) within the South Coast Air Basin (SCAB) project region. Mitigation measures for this impact will be identified in the Programmatic Environmental Impact Report (PEIR) being prepared by CVWD for the CVWMP or in project-level documents prepared for the construction of specific program components. Operation of facilities associated with implementation of the IA and QSA within the CVWD service area would have minimal impacts on air quality.

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Resource/Issue	*No Action*	*Impacts of Proposed Action/Alternatives*
	AIR QUALITY	
Metropolitan Water District. No new construction or changes in the operation of existing facilities.	The reliability of Colorado River water supplies would not be increased for MWD under this alternative, and this agency might undertake other actions to increase their overall water supply reliability. These actions might include increased water conservation, increased reliance on other water supplies, such as the SWP or groundwater, or further development of new supplies through recycling or desalination. Some of these actions might require construction, which would have air quality impacts.	None.
San Diego County Water Authority. No new construction or changes in the operation of existing facilities.	The reliability of Colorado River water supplies would not be increased for SDCWA under this alternative, and this agency might undertake other actions to increase their overall water supply reliability. These actions might include increased water conservation, increased reliance on other water supplies, such as the SWP or groundwater, or further development of new supplies through recycling or desalination. Some of these actions might require construction, which would have air quality impacts.	None.
Salton Sea. Potential increase in dust emissions from decreased water levels of the Salton Sea and potential increase in odorous emissions from decreased water quality of the Sea.	The Salton Sea is expected to decline from its current elevation under the No-Action Alternative (i.e., no water transfers). The soils along the Salton Sea shoreline have a moderate potential for wind-blown dust. Dust emissions from these areas would in part be due to the level of human disturbances, such as vehicle activities, or from subsequent wind erosion. The reduction of water flow into the Salton Sea could increase odorous emissions in proximity to this body of water.	IID would undertake conservation actions that have the potential to reduce inflows to the Salton Sea. Depending on how the conservation is accomplished, the impact on inflows from IID could range from essentially no change to a substantial reduction. Under most scenarios, the Salton Sea would shrink at a faster rate than under No Action. IID determined that the project would produce significant amounts of windblown dust from the exposed shoreline of the Salton Sea. IID proposes to implement a program to mitigate dust emissions that could occur from the exposed shorelines. IID

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Resource/Issue	*No Action*	*Impacts of Proposed Action/Alternatives*
AIR QUALITY		
Salton Sea. Potential increase in dust emissions from decreased water levels of the Salton Sea and potential increase in odorous emissions from decreased water quality of the Sea (cont.).		indicates that a level of uncertainty would remain regarding whether or not the mitigation program would reduce short-term and long-term impacts from dust emissions that could occur from the exposed Salton Sea shorelines. This impact, therefore, remains potentially significant and unavoidable. Given the complexity of the interrelationship of phosphate inputs, water quantity, and water quality, it is not possible to quantify the effect the proposed action would have on odorous emissions in the Salton Sea. However, compared to the existing conditions and projected continuation of eutrophication conditions at the Salton Sea, the effects of the proposed action on odors is expected to be minimal.
Inadvertent Overrun Policy		
Potential air quality impacts from increases and decreases in the Colorado River flow during select portions of the 75-year time period.	None.	Proposed IOP: Implementation of the IOP would produce minimal air quality impacts to this region. If the IOP resulted in the need to fallow fields in the IID service area in order to conserve water to payback an overrun, this impact would generally produce a beneficial impact to air quality, as the elimination of cultivation from these areas would reduce the amount of fugitive dust generated from these areas; unless the fallowed soils were treated with a soil stabilizer, however, they would generate some windblown dust. No Forgiveness Alternative: Impacts would be as described for the proposed action.

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Resource/Issue	*No Action*	*Impacts of Proposed Action/Alternatives*
AIR QUALITY		
Biological Conservation Measures		
Potential increase in combustive emissions due to the use of fossil fuel-fired construction equipment and increase in fugitive dust emissions due to ground-disturbing activities from restoration or creation of 44 acres of backwaters along the Colorado River between Parker Dam and Imperial Dam.	None.	It is expected that the impact of emissions from construction activities would not exceed any ambient air quality standard. Implementation of fugitive dust control measures would effectively minimize PM10 emissions from these activities.
Potential increase in combustive emissions due to the use of fossil fuel-fired construction equipment and increase in fugitive dust emissions due to ground-disturbing activities from restoration or creation of up to 1,116 acres of southwestern willow flycatcher habitat along the Colorado River.	None.	It is expected that the impact of emissions from construction activities would not exceed any ambient air quality standard. Implementation of fugitive dust control measures would effectively minimize PM10 emissions from these activities.
TRANSBOUNDARY IMPACTS		
Implementation Agreement		
Potential changes to the probability and magnitude of excess flows to Mexico.	Hydrology. From years 2002 to 2026, the probability of excess flows varies from 20 to 25 percent. After 2030, the probability of flood flows decreases to 10 to 15 percent. The magnitude of flood flows varies from 0 to over 6 MAF, with large flood flows (over 250 KAF) anticipated approximately 20 percent of the time and flood flows over 1 MAF less than 15 percent of time.	Hydrology. The probability and magnitude of excess flows to Mexico is similar but occasionally higher under the IA.
Potential impacts to habitat and species in Mexico.	Biological Resources**.** It is anticipated that flood flow frequency and quantities would be reduced under the No-Action Alternative. This may result in some reduction of wildlife habitat through the reduction in flows reaching the Delta area. It is expected, however, that much of the existing habitat would remain as it is since most of the riparian habitat is composed of salt cedar, which would be fed by groundwater. No measurable impact is expected to sensitive marine species.	Biological Resources**.** The IA would result in a flood flow probability and magnitude that are generally equal to, or somewhat greater than, the No-Action Alternative. Therefore, this action would have no potential impact on any federally listed species in Mexico.

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Resource/Issue	*No Action*	*Impacts of Proposed Action/Alternatives*
	TRANSBOUNDARY IMPACTS	
Inadvertent Overrun Policy		
Potential changes to the probability and magnitude of excess flows to Mexico.	See *Hydrology* above.	Hydrology. Proposed IOP: The inadvertent overrun and payback policy does not apply to Mexico. However, actions undertaken by IOP users could affect excess flows to Mexico. The overall impact of the IOP would be to decrease both the probability of a flood release and the magnitude of a flood release. Combined, the IA and IOP reduce probability of a flood release by 1.2 to 3.5 percent in some of the years modeled. In the evaluation of the comparison of the differences in the observed excess flows below Morelos Dam between the No Action and the IA that considered an average Lower Basin Overrun Account Balance of 66 KAFY modeled conditions, in approximately 16 percent of instances where differences were observed, the differences were positive which represented an increase in the magnitude of excess flows. However, for the 75-year period of analysis, the average of the differences was a reduction of 35,811 AF. In the evaluation of the comparison of the differences in the observed excess flows below Morelos Dam between the No Action and the IA that considered a Lower Basin Overrun Account Balance of 331 KAFY modeled conditions, in approximately 11.7 percent of instances where differences were observed, the differences were positive which represented an increase in the magnitude of excess flows. However, for the 75-year period of analysis, the average of the differences was a reduction of 219,539 AF. No Forgiveness Alternative: Impacts would be as described for the proposed action.

Table ES-1. Summary of Potential Impacts of the Execution of the IA, Adoption of the IOP, and Implementation of Biological Conservation Measures (Page 32 of 32)

Resource/Issue	*No Action*	*Impacts of Proposed Action/Alternatives*
	TRANSBOUNDARY IMPACTS	
Potential impacts to habitat and species in Mexico.	See *Biological Resources* above.	Biological Resources**.** No substantive impacts to vegetation are anticipated. It is anticipated that impacts to fish and wildlife species within the Delta area and within the Sea of Cortez would be negligible or nonexistent. Habitat is expected to remain much as it is today, and there would be no appreciable change in habitat quality for fish and wildlife. The IOP would have no impact on special status species.
Biological Conservation Measures		
No biological conservation measures would be implemented downstream of Imperial Dam; thus, they would not impact water resources in Mexico.	None.	None.

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