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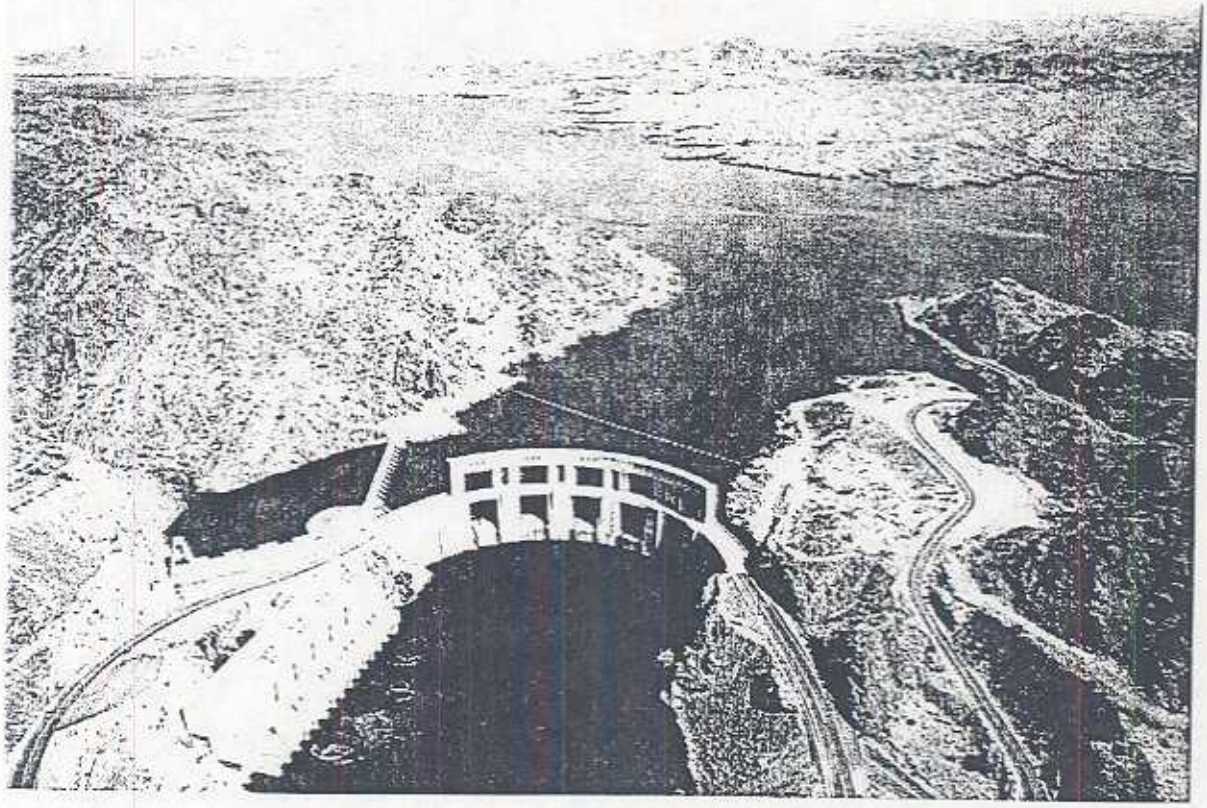
Volume I



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

January 2002

U.S. Department of the Interior
Bureau of Reclamation

Draft 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 draft 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.

For further information regarding this draft EIS, please contact: Mr. Bruce D. Ellis, U.S. Bureau of Reclamation, Phoenix Area Office (PXAO-1500), P.O. Box 81169, Phoenix, AZ 85069-1169, (602) 216-3854.

Comments should be received by: March 12, 2002. Mail comments to: Mr. Bruce D. Ellis, Chief, Environmental Resource Management Division, at the Phoenix Area Office address above. Facsimile number: (602) 216-4006.

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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 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 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 conservation measures 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 Reclamation and the U.S. 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 would commit the Secretary to make Colorado River water deliveries in accordance with the terms and conditions of the IA to enable implementation 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 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 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 U.S.–Mexico Water Treaty 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.

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 fixed 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. 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 U.S.–Mexico Water Treaty 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 on January 1, the payback obligation must be paid back in full within 3 years. The minimum payback that 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 mean sea level on January 1, 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 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 ongoing 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 ongoing water transfer under the IID/MWD 1988 Agreement and subsequent agreements).

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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.

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.

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 existing legal requirements, including the Law of the River, the existing priority system, and Section 5 contracts. 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 diversion of Colorado River water to 4.4 MAFY. 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 Mohave 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 Indian Tribe 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 can be obtained from Reclamation upon request.

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.

3.0 AFFECTED ENVIRONMENT, ENVIRONMENTAL IMPACTS, AND MITIGATION MEASURES

Chapter 3 includes baseline information for each resource potentially affected by the proposed action, as well as a discussion of environmental consequences of the No-Action Alternative and proposed action and alternatives. Mitigation measures are identified as needed for impacts, along with any residual impacts remaining after mitigation. The general methodological approach followed in preparing the discussions of the affected environment and environmental consequences is described below. Due to the nature and extent of the assumptions required to conduct studies associated with this effort, the analysis is more of a comparison of the proposed action and alternative to the No Action rather than a prediction of actual changes that would occur within a particular resource area.

Based on 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.

AFFECTED ENVIRONMENT

For most resources, the description of the affected environment is based on current conditions. Where relevant, however, information is also provided regarding well-defined trends. For example, in section 3.1, Hydrology/Water Quality/Water Supply, data is presented both for current conditions and for the period 1990 to 1999. Hydrologic conditions vary from year to year depending on a variety of factors, and a single year may not be representative of normal conditions. Information also is provided regarding future conditions, where trends are well defined. For example, it is projected that the water level of the Salton Sea will decrease, and the salinity concentration will increase over the life of the proposed action independent of whether or not the proposed action is implemented. This has important implications for water quality and biological resources, as well as local recreation. Since the impacts of the proposed action would be realized over a long period of time, it is appropriate to measure the impacts against both current and projected conditions. Where the potential impacts of the proposed action are measured against more than one baseline, this is noted in the methodology section included under each resource.

The proposed action consists of three related actions: the IA, IOP, and biological conservation measures. Each of these has the potential to affect different geographic areas, and the area affected may differ by resource. Therefore a different geographic region may be described in the affected environment section for each resource.

ENVIRONMENTAL CONSEQUENCES

Many of the environmental impacts associated with the IA and IOP would be a direct result of the following:

- changes in flow from Hoover Dam to the Southerly International Boundary, particularly along the river reach between Parker and Imperial Dams;
- changes in reservoir levels;
- changes in river stage and near-river groundwater elevations; and
- changes in the frequency and magnitude of flood flows.

The analysis performed to determine the extent of these changes for the major components of the proposed action is discussed below.

Implementation Agreement

As discussed in Chapter 2, the water transfers and conservation measures that comprise the IA and QSA would be phased in over a period of approximately 25 years. However, the IA would reduce Colorado River flows in the Parker Dam to Imperial Dam reach by 183 to 388 KAFY. The analysis in this EIS, however, assesses impacts at full implementation in order to address the worst-case scenario.

Inadvertent Overrun and Payback Policy

As discussed in Chapter 2, the IOP would identify inadvertent overruns of Colorado River water and establish procedures for subsequent payback. This analysis assesses the average and maximum (e.g., worst case) changes to river flows during periods when entities have inadvertent overruns and when flow is reduced due to payback conditions. This analysis also assesses the impacts to reservoirs and flood flows resulting from the collective IOP account balance held by potential IOP users (e.g., the amount "borrowed" from the system).

Biological Conservation Measures

The biological conservation measures included as part of the proposed action were developed to fully compensate for impacts of the changes in point of delivery of Colorado River water that would occur as part of the proposed action. As described in Chapter 2, these biological conservation measures were earlier identified in a FWS BO for ISG. At this time, specific construction plans and schedules have not been developed. Site-specific impacts will be addressed in subsequent NEPA evaluations and are analyzed programmatically in this EIS. Given the programmatic nature of this analysis, modeling was not required to evaluate the hydrologic impacts associated with implementation of the biological conservation measures.

Changes to Colorado River Flow and Reservoir Levels

The IA would not measurably impact river flows between Hoover Dam and Parker Dam. To determine the potential impacts of the IA on the Colorado River reservoirs (Mead and Powell), Reclamation used the Riverware computer framework model of the Colorado River Simulation System. River operation parameters modeled and analyzed include the water entering the river system, storage in the system, reservoir releases from storage, and the water demands of, and deliveries to, the Basin States and Mexico. The model assumed natural flow in the system would be similar to that of the 85-year historic record from 1906 through 1990 from 29 individual inflow points on the system. Future Colorado water demands were based on

demands and depletion projections prepared by the Basin States. The model simulated operation of Glen Canyon Dam, Hoover Dam, and other Colorado River system elements consistent with the LROC. The Colorado River Simulation System modeling assumptions are discussed further in section 3.1 of this EIS.

The Colorado River Simulation System was used to develop the following four operational scenarios:

- No-Action Alternative — this scenario assumes that the ISG described in Chapter 1 would be implemented and that water would not be transferred under the IA.
- Implementation Agreement — this scenario assumes that the ISG and IA would be implemented.
- Baseline for Cumulative Analysis — this scenario assumes that neither the ISG nor the IA are implemented.
- Cumulative Analysis — this scenario assumes that both the ISG and the IA are implemented, and also assumes implementation of the PVID Land Management, Crop Rotation, and Water Supply Program described in Chapter 1.

From these four scenarios, the following two analyses were prepared:

- Evaluation of the potential impacts resulting from the proposed IA water transfers. In this analysis the modeling results of No Action/Baseline and IA are compared and are discussed in section 3.1. This analysis isolates the potential impacts of the implementation of the IA.
- Evaluation of the potential cumulative impacts resulting from the Interim Surplus Guidelines, IA water transfers, and the PVID/MWD Land Management, Crop Rotation, and Water Supply Program. In this analysis the modeling results of the Baseline for Cumulative Analysis and Cumulative Analysis are compared. This methodology and impact discussion is contained in section 4.2, Cumulative Impacts.

Layered onto the results of these analyses are the estimated impacts of the IOP. A spreadsheet analysis was performed by Reclamation to determine the potential impacts of the IOP. The spreadsheet model identified possible users of the IOP and bracketed the potential size of overruns and necessary paybacks based on historic overruns, differences in actual and forecasted water use, and the ability of lower priority users to accurately estimate remaining apportionment.

Changes in River Stage and Near-River Groundwater

In association with the preparation of the BA for the IA, Reclamation (2000a) modeled potential impacts to river stage, near-river groundwater, open water, marsh habitat, and riparian habitat as a result of the potential decrease in flow. Reclamation used a hydrological model coupled with a GIS vegetation database to model potential impacts. Reclamation modeled a change in river flows of over 1,574 KAFY, which is a theoretical maximum cumulative change in flow that

could occur in the future. At that level, substantial hydrologic changes were detected. Reclamation then interpolated these model results to estimate changes resulting from a decrease in flow of between 200 KAFY to 1,574 KAFY (in increments of 100 KAF). Because the range of flows analyzed under the BA (400 KAFY) captures the changes potentially occurring under the proposed project (reduction up to 388 KAFY), the BA analysis is included, where applicable, as part of this section.

Changes in the Frequency and Magnitude of Flood Flows

To estimate the combined impact of the IOP and IA on the frequency and magnitude of excess flows to Mexico, the mean and maximum values of the estimated future overrun account balances were input into Colorado River Simulation System as depletions to Lake Mead. This approach provided a means of identifying the maximum potential impact that could occur in any given flood release year under each of the modeled IOP scenarios.

3.10 TRIBAL RESOURCES

3.10.1 Affected Environment

Introduction

This section outlines potential impacts to tribal resources associated with the implementation of the proposed action. Tribal resources include all potential impacts to tribal lands and resources, including the specific category referred to as Indian Trust Assets (ITAs). ITAs are legal assets associated with rights or property held in trust by the United States for the benefit of federally recognized Indian Tribes or individuals. The United States, as trustee, is responsible for protecting and maintaining rights reserved by, or granted to, Indian Tribes or individuals by treaties, statutes, and executive orders. All Federal bureaus and agencies share a duty to act responsibly to protect and maintain ITAs. In accordance with Environmental Compliance Memorandum (ECM) 97-2, Reclamation's policy is to protect ITAs from impacts resulting from its programs and activities whenever possible. Reclamation, in cooperation with Tribe(s) potentially impacted by a given project, must inventory and evaluate assets, and then mitigate, or compensate, for impacts to the asset. While most ITAs are located on a reservation, they can also be located off-reservation. Examples of ITAs include lands, minerals, water rights, and hunting and fishing rights. ITAs include property in which a Tribe has legal interest. For example, tribal entitlements to Colorado River water rights established in each of the Basin States pursuant to water rights settlements are considered trust assets, although the reservations of these Tribes may or may not be located along the River. A Tribe may also have other off-reservation interests and concerns that must be taken into account. Reclamation has entered into government-to-government consultations with potentially affected Tribes to identify and address concerns for ITAs. These include Tribes along the lower portion of the Colorado River and other Tribes within the study area in California and Arizona. Based on meetings and discussions among the Tribes, BIA, and Reclamation staff, the following describes all tribal resources (i.e., ITAs, water quality, biological resources, land uses, cultural resources, and hydroelectric power generation) that have the potential to be directly impacted by the proposed Federal action. A description of tribal entities within the project study area and resources affecting multiple Tribes along the lower Colorado River are provided below. Indirect effects related to local actions that would be generated by non-Federal entities in California, such as conservation measures undertaken to conserve water to be transferred, are outside the control of Reclamation. These indirect effects, which would occur within the service areas of the participating non-Federal agencies, have not been evaluated. Potential impacts associated with specific conservation measures (including impacts to tribal resources) that would be undertaken by IID pursuant to an HCP approved by the FWS are described in the IID Water Conservation and Transfer EIR/EIS.

Tribal Entities within the Project Study Area

Fort Mohave Indian Tribe

The Fort Mohave Indian Reservation is located in the Lower Basin of the Colorado River where Nevada, Arizona, and California meet. The Tribe possesses PPRs (water rights based upon diversion and beneficial use prior to the effective date of the BCPA [June 25, 1929]) from the

mainstem of the Colorado River in all three of the States that contain reservation land, pursuant to the Decree and supplemental Decrees (1979 and 1984). Since the original Decree was entered in 1964, 1,102 acres of land have been added to the reservation, along with rights to 6.464 acre-feet of water per acre of land as specified in the 1979 Decree. The amounts, including added lands, priority dates, and State where the water rights are perfected are as follows:

Amount (AFY)	*Acreage*	*Priority Date*	*State*
27,969	4,327	September 18, 1890	Arizona
75,566	11,691	February 2, 1911	Arizona
103,535	16,018		Arizona subtotal
13,698	2,119	September 18, 1890	California
12,534	1,939	September 18, 1890	Nevada
129,767	**20,076**		**Total**

The Fort Mohave Indian Tribe has diverted in excess of its water right in California. In its June 19, 2000 Opinion, the United States Supreme Court accepted the Special Master's uncontested recommendation and approved the proposed settlement of the dispute respecting the Fort Mohave Indian Reservation. Under the settlement, the Tribe is awarded the lesser of an additional 3,022 acre-feet of water or enough water to supply the needs of 468 acres.

Chemehuevi Tribe

The Chemehuevi Indian Reservation is located in Southern California on the plateau above the shoreline of Lake Havasu. The Tribe possesses PPRs from the mainstem of the Colorado River pursuant to the Decree and supplemental Decrees (1979 and 1984). The amounts, priority dates, and State where the rights are perfected are as follows:

Amount (AFY)	*Acreage*	*Priority Date*	*State*
11,340	1900	February 2, 1907	California

Colorado River Indian Tribes (CRIT)

The Colorado River Indian Reservation is located in southwestern Arizona and Southern California south of Parker, Arizona. CRIT occupies approximately 269,000 acres and 45 miles of River frontage. The Tribes possess PPRs from the mainstem of the Colorado River pursuant to the Decree and supplemental Decrees (1979 and 1984). The amounts, priority dates, and State where the rights are perfected are as follows:

Amount (AFY)	*Acreage*	*Priority Date*	*State*
358,400	53,768	March 3, 1865	Arizona
252,016	37,808	November 22, 1873	Arizona
51,986	7,799	November 16, 1874	Arizona
662,402	99,375		Arizona subtotal
10,745	1,612	November 22, 1873	California
40,241	6,037	November 16, 1874	California
3,760	564	May 15, 1876	California
54,746	8,213		California subtotal
717,148	**107,588**		**Total**

Quechan Indian Tribe

The Fort Yuma Indian Reservation (Quechan Tribe) is located in southwestern Arizona and Southern California near Yuma, Arizona. The Tribe possesses PPRs from the mainstem of the Colorado River pursuant to the Decree and supplemental Decrees (1979 and 1984). The amounts, priority dates, and State where the rights are perfected are as follows:

Amount (AFY)	*Acreage*	*Priority Date*	*State*
51,616	7,743	January 9, 1884	California

A Supreme Court decision issued on June 19, 2000 allows the Tribe to proceed with litigation to claim rights to an additional 9,000 acres of irrigable lands. Proving this claim would increase the water rights for the reservation.

Cocopah Indian Tribe

The Cocopah Indian Reservation is located in southwestern Arizona near Yuma, Arizona. The Tribe possesses PPRs from the mainstem of the Colorado River pursuant to the Decree and supplemental Decrees (1979 and 1984). The amounts, priority dates, and State where the rights are perfected are as follows:

Amount (AFY)	*Acreage*	*Priority Date*	*State*
7,681	1,206	September 27, 1917	Arizona
2,026	318	June 24, 1974	Arizona
1,140	190	1915	Arizona
10,847	**1,714**		**Total**

The rights listed above include only that water diverted directly from the Colorado River at Imperial Dam. In addition to these rights, the Tribe has numerous well permits that divert groundwater that may be connected to the Colorado River within the boundaries of the United States (studies are ongoing). The 1974 PPR for the Cocopah Indian Reservation is unique because of its more recent priority date. The 1979 supplemental Decree in *Arizona v. California* specifies that in the event of a determination of insufficient mainstream water to satisfy PPRs pursuant to Article II (B) (3) of the 1964 Decree, the PPRs set forth in paragraphs (1) through (5) of Article II (D) of the Decree must be satisfied first. The 1984 supplemental Decree in *Arizona v. California* recognized the PPR for the Cocopah Indian Reservation dated June 24, 1974, and amended paragraph (5) of Article II (D) of the Decree to reflect this 1974 right. The Tribe is involved in litigation to claim rights to a total of 2,400 acres of irrigable lands. Proving this claim would further increase the water rights for the reservation.

La Jolla, Rincon, San Pasqual, Pauma, Pala Bands of Mission Indians

The reservations of the La Jolla, Rincon, San Pasqual, Pauma, and Pala Bands of Mission Indians are located in northern San Diego County. As described in section 1.5.1, the San Luis Rey Indian Water Rights Settlement Act (Title I of P.L. 100-675) enacted by Congress in 1988 and amended by the Act of October 27, 2000, and Public Law 106-377, authorizes a settlement of water rights claims to San Luis Rey River water among the above-listed bands of Mission

Indians and the City of Escondido, the Escondido Mutual Water Company (which is no longer in existence), and Vista Irrigation District.

The Act authorizes the Secretary to arrange for development of a water supply for the benefit of the bands of not more than 16 KAFY and authorizes the Secretary to use water conserved from the works authorized by Title II of the same Act for this purpose. The IA provides that the Secretary deliver Priority 3a water conserved from the All-American and Coachella Canal lining projects to MWD and/or IID and make water available for the benefit of the San Luis Rey Indian Water Rights Settlement Parties. The October 27, 2000 Amendment states the Secretary shall permanently furnish annually 16 KAF of the water conserved by the works authorized by Title II for the benefit of the San Luis Rey Indian Water Rights Settlement Parties in accordance with the settlement agreement. The settlement agreement is under negotiation.

Resources Affecting Multiple Tribes along the Lower Colorado River

Hydroelectric Power Generation

Headgate Rock Dam and Powerplant (Headgate) is owned and operated by the BIA. BIA supplies energy generated by Headgate's three turbines to CRIT and the Fort Mohave Indian Tribe. The Western Area Power Administration (Western) markets any excess energy on the open market. Headgate is a run-of-the-river hydroplant, which means it is dependent on River flow to generate power. For this reason, it is unable to store water in excess of the amount that can flow through the generator turbines or through CRIT's diversion facilities. Any water that is not diverted by CRIT or used by the generators is spilled downstream. Section 3.3 provides a more detailed description of hydroelectric power generation.

Cultural Resources

Tribes with traditional and historic ties to the reach of the Colorado River from Hoover Dam/Lake Mead area to the SIB include CRIT and the Southern Paiute, Hualapai, Mohave, Chemehuevi, Yavapai, Quechan, Cocopah, Hopi, Zuni, and Navajo tribes. As described in this section, the cultural resources of the project area have not been extensively inventoried, although a number of prehistoric and historic sites are known to exist.

Biological Resources

As discussed in section 3.2, the study area contains sensitive fisheries and wildlife resources, especially in the River itself; backwaters; and other marsh areas and within the riparian woodland areas. A substantial portion of this habitat is located on tribal lands along the River.

3.10.2 Environmental Consequences

Impact Assessment Methodology

The proposed action and alternatives were reviewed to determine whether the direct effects of the components of the Federal actions would have an adverse impact on tribal resources, including ITAs. As part of this analysis, Reclamation consulted with the BIA, potentially

impacted Tribes within the project study area, and Tribes who may not be specifically located within the study area but are associated with relevant tribal resource issues.

No-Action Alternative

No Action for Implementation Agreement

There would be no impacts to tribal resources along the lower Colorado River under this alternative, including ITAs. Tribal water rights would remain unchanged under the No-Action Alternative. All Colorado River tribal water rights would continue to be satisfied prior to those of lower priority water rights holders. No substantive changes to hydrology or water quality along the Colorado River would occur, nor would changes to biological resources, land use, cultural resources, or hydropower generation. Thus, tribal resources along the lower Colorado River would not be impacted by this alternative.

The structural projects embodied in the QSA that would help conserve Colorado River water, such as lining the All-American Canal 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.

No Action for Inadvertent Overrun and Payback Policy

Under this alternative, there would be no changes to hydrology/water rights, water quality, biological resources, cultural resources, land use, or hydroelectric power. No impacts to tribal resources would occur.

No Action for Biological Conservation Measures

If biological conservation measures were not implemented, there would be no conversion of land to habitat along the River. Under this alternative, there would be no changes to hydrology/water rights, water quality, biological resources, cultural resources, land use, or hydropower. No impacts to tribal resources would occur.

Proposed Action

Implementation Agreement

INDIAN TRUST ASSETS

There would be no significant adverse impact to ITAs from execution of the IA. Hunting and fishing rights, tribal lands and tribal water rights would not be impacted. The water transfers would impact only users with lower priority water rights; all tribal water rights would continue to be satisfied in the same manner as under the No-Action Alternative. The IA would facilitate the SLR Indian Water Rights Settlement. Given its implementation, transfers of water conserved by lining a section of the All-American Canal are expected to begin in 2005, with full implementation in 2007. Transfers of water conserved by lining the unlined portion of the Coachella Canal are expected to begin in 2003, with full implementation in 2006.

Reclamation has concluded the power projected at Headgate is not an ITA and Reclamation does not propose to mitigate or compensate for the reduced opportunity to produce power that results from the water transfers. A noted in section 3.3, power production has the lowest priority in terms of Colorado River operations, and is the result of water releases to meet water orders. Representatives from CRIT and the Fort Mohave Indian Tribe have suggested the California parties benefiting from the water transfers should compensate the tribes for the loss. There is concern about the precedent such compensation would create.

Water Quality

The IA would result in changes to water quality as described in section 3.1. The results of the analysis indicate that salinity levels at Imperial Dam would increase by approximately 8 mg/L compared to the No-Action Alternative. This change in salinity would impact tribal lands located along the Colorado River between Parker Dam and Imperial Dam. However, this increase falls within the normal range of fluctuations that occur along the reach. Further, mitigation in the form of additional salinity control projects would ensure that water quality targets established by the Salinity Control Forum would not be exceeded.

Biological Resources

Some of the anticipated impacts to wetland and riparian habitats described in section 3.2 would occur along the River, which includes tribal land. The fluctuations in water levels that would occur under the proposed action would impact existing biological communities within the River's floodplain between Parker and Imperial Dams. As noted in the Cultural Resources discussion, the riparian and marsh resources along the River are important to many Native American tribes. CRIT has an ongoing riparian restoration program along the River and has expressed concern that the potential reduction in Colorado River water surface elevation could impact its ability to divert water for the restoration program. As stated in section 3.1 of this EIS, the fluctuation in water surface elevations that would result from changes in the points of diversion would be within the historic variations experienced on the River. For this reason, CRIT's ability to divert water from the River should not vary from what has occurred in the past. It is anticipated that the conservation measures identified to reduce the impact to sensitive species and riparian /aquatic habitats, some of which could be implemented on tribal lands if agreed to by the Tribe, would also mitigate any impact to biological resources within tribal lands.

Land Use

Implementation of the IA would impact Colorado River water levels between Parker Dam and Imperial Dam. This change in elevation would be within the normal fluctuations that occur along the River in a typical year and would not impact land use along this reach. As noted above, biological conservation measures could be implemented on tribal lands with tribal consent.

Cultural Resources

As noted in section 3.9, no impacts to cultural resources are anticipated as a result of implementation of the IA.

HYDROELECTRIC POWER GENERATION

Section 3.3 of this EIS describes hydroelectric power impacts associated with implementation of the proposed project. Power generation at Headgate Rock Dam, which is owned and operated by BIA for the purpose of satisfying tribal power needs, was included in this analysis. Energy from this facility is estimated to potentially be reduced by an average rate of 5.37 percent over the 75-year study period, with a maximum potential reduction of 6.3 percent. Although Headgate currently generates more energy than is used by CRIT, this reduction in Headgate energy could impact BIA's ability to meet future tribal energy demands, which would mean that the reduced increment of power would have to be purchased on the open market. In addition, excess Headgate energy is currently purchased by the Fort Mohave Indian Tribe. If the open market rate is higher than that charged by BIA, there would be an adverse economic impact to those tribes. BIA could also be impacted by having less surplus power to sell, resulting in a reduction in revenue to cover Headgate's operation and maintenance costs.

Adoption of Inadvertent Overrun and Payback Policy

INDIAN TRUST ASSETS

Adoption of the IOP would not result in a significant impact to ITAs. Tribal water rights would continue to be satisfied consistent with the existing priorities on the River. As noted in the Environmental Justice section (section 3.8), the process cannot be applied to a diversion entitlement (common with tribal entities), because diversion contracts do not provide a quantified volume of use from which to measure the quantity of overrun, and from which to monitor payback. However, neither does the policy infringe on diversion entitlements. A party with a diversion entitlement seeking to utilize the IOP could undertake to work with Reclamation to alter its entitlement to a consumptive use contract, thereby providing sufficient technical basis to administer the IOP.

WATER QUALITY

The adoption of the IOP in itself would not result in a substantive adverse impact to water quality. Therefore, no water quality impacts to tribal resources are anticipated.

BIOLOGICAL RESOURCES

No adverse impacts to biological resources are anticipated from adoption of the IOP in addition to execution of the IA and implementation of the QSA, as discussed in section 3.2. The overall flows in the River are not expected to substantially change from the present conditions; any yearly changes would be within the historical hydrological parameters of the river. Therefore, there would be no impact to biological resources associated with the tribes, or to the diversion used by CRIT for its riparian restoration program.

LAND USE

As described in section 3.4 of this EIS, no land use impacts, including impacts to tribal land uses, are expected with adoption of the IOP.

Cultural Resources

As noted in section 3.9, Reclamation has committed to entering into consultation under Section 110 of the NHPA with SHPOs in Arizona, California, and Nevada, the Council, and other interested parties concerning how its on-going operation of the lower portion of the Colorado River might be impacting historic properties. As a part of this effort Reclamation will seek and consider the views of all the consulting parties with respect to the impacts of its ongoing operation of the lower Colorado River. Reclamation has therefore deferred assessment of the potential impacts to historic properties that might result from the adoption of an IOP to this larger Section 110 consultation effort.

Hydroelectric Power Generation

The analysis of the potential impacts of the IOP indicate that during the 75-year study period, on average, the estimated impact of the IOP to Headgate (in addition to the IA) would be a 1.5 percent increase in energy (1,167 MWh) during payback years or a 1.1 percent decrease in energy (817 MWh) during overrun years. The analysis also indicated that the maximum increase in energy produced at Headgate is anticipated to be 5.4 percent (4,060 MWh), which would occur during a payback year (this is in addition to the impacts of the IA). The maximum decrease in energy produced at Headgate is anticipated to be 3.0 percent (2,283 MWh), which would occur during an overrun year (this also is in addition to the impacts of the IA).

The above analysis is an estimate based on a maximum overrun amount in one year, an average overrun based on an average of all modeled overruns for both the one-year and three-year payback scenarios, maximum payback amount in one year, and an average payback based on an average of all paybacks for both the one-year and three-year payback scenarios, and should not be considered estimates of potential yearly impacts of the IOP.

Implementation of Biological Conservation Measures

These measures would only potentially impact Tribes along the Colorado River.

Indian Trust Assets

Specific locations for the construction and maintenance of biological conservation measures along the Colorado River have not yet been determined. Conservation measures would not be located on tribal lands without the express consent and desire by the tribe(s). To the degree that tribes desire to have riparian areas restored, enhanced, or created on tribal lands, and/or would experience improved hunting or fishing opportunities, this would be a potential beneficial impact to ITAs. Willing tribes that have suitable sites upon which conservation measures are ultimately located would be compensated for use of the land; this would provide an economic benefit. The source of water to implement the biological conservation measures (i.e., for irrigation of revegetative areas) has not yet been identified, since this is site-dependent; however, implementation of the biological conservation measures would not impact existing tribal water rights. No significant impacts to ITAs would result from implementation of this component of the proposed action.

Water Quality

Construction of biological conservation measures has the potential for short-term, localized water quality impacts associated with construction of habitat restoration sites. Although these impacts could occur on tribal lands (with the Tribe's approval), they would not be substantive and would be short-term. Any work conducted in Waters of the U.S. would comply with sections 402 and 404 of the Clean Water Act. These measures would only have the potential to impact tribal lands along the Colorado River.

Biological Resources

There is a potential that some of the sites where conservation measures would be implemented could be on tribal lands. As described in section 3.2, there may be short-term impacts to vegetation, fish, and wildlife during the construction phase of the project. It is expected that there would be a long-term enhancement of the habitat due to the implementation of these conservation measures.

Land Use

Implementing biological conservation measures could convert some lands from agricultural use to backwaters or cottonwood-willow habitat. These habitat areas could be constructed on tribal lands. However, because the lands would only be provided by willing landowners, this conversion would not be an adverse impact to tribal land uses.

Cultural Resources

As noted in section 3.9, specific locations have yet to be identified for implementation of the biological conservation measures associated with execution of the IA; thus, it is not possible at this time to assess the impacts of these actions on historic properties. As specific locations are identified and planning begins for implementation of the biological conservation measures, each project would be subject to individual NEPA compliance and Section 106 consultation. Reclamation thus is deferring the assessment of the impacts of the implementation of biological conservation measures associated with execution of an IA to these future consultation efforts.

Hydroelectric Power Generation

Implementation of the biological conservation measures would have no impact on hydroelectric power generation.

Mitigation Measures

No mitigation measures specific to tribal resources are required.

Residual Impacts

There would be a residual impact of about a 5 percent reduction in power production at Headgate Rock Dam. The water transfers would reduce the opportunity to produce power downstream of Parker Dam as a result of more water being diverted from Lake Havasu and less at Imperial Dam.

Alternative to the Inadvertent Overrun and Payback Policy

This alternative would only potentially impact Tribes along the Colorado River.

No Forgiveness During Flood Release Alternative

INDIAN TRUST ASSETS

There would be no change to any ITAs under this alternative. Tribal water rights would remain unchanged and no changes to hunting or fishing rights would occur. This alternative would not have a significant impact on ITAs.

WATER QUALITY

Impacts to tribal resources related to water quality would be the same as those described for implementation of the IA. Some fluctuations to water quality would occur in the portion of the Colorado River between Parker and Imperial Dams.

BIOLOGICAL RESOURCES

As described for the proposed action, no adverse impacts to biological resources on tribal lands would occur if this alternative were implemented.

LAND USE

No land use impacts, including impacts to tribal land uses would occur under this scenario.

CULTURAL RESOURCES

Impacts to cultural resources would be the same as the proposed IOP. Potential impacts to cultural resources would be indistinguishable from those associated with the ongoing operation of the lower portion of the Colorado River.

HYDROELECTRIC POWER GENERATION

Impacts of this alternative would be the similar to those discussed for the proposed action.

Mitigation Measures

No mitigation measures specific to tribal resources are required.

Residual Impacts

No residual impacts would occur.