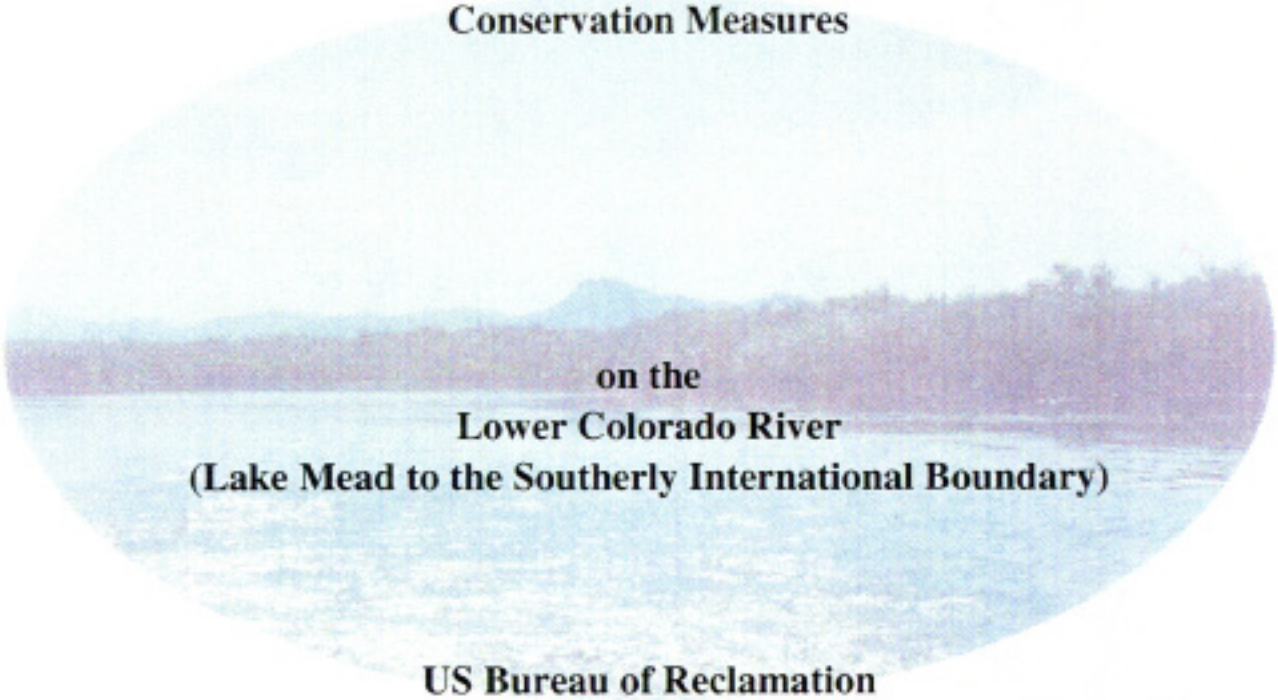
Appendix D

Biological Assessment/
Supplemental Biological Assessment

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)

US Bureau of Reclamation
Lower Colorado Region

08/30/00
Final

Biological Assessment
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Proposed
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I. INTRODUCTION

The Secretary of the Interior (Secretary) serves as Water Master for managing the beneficial use of Colorado River water under a legal framework known collectively as the *Law of the River*. The Secretary is considering the adoption and implementation of proposed water management actions related to the delivery of water in Arizona, California and Nevada. These proposed actions are (1) adoption of Colorado River Interim Surplus Criteria (ISC) (USBR, 2000) and (2) execution of Secretarial Implementation Agreements (SIAs) for those components of California's Colorado River Water Use Plan (CA Plan)(May, 2000) that would require Secretarial approval. Additionally, biological conservation measures are proposed as part of these actions.

The ISC would provide for additional predictability with respect to the prospective existence of surplus conditions and the potential quantity of water available for release from Hoover Dam on an annual basis through 2015. The ISC would also assist planning and operations of the entities that receive surplus Colorado River water pursuant to contracts with the Secretary. The SIAs would provide for a new upstream delivery point for up to 400,000 acre feet (400 kaf) of water annually over the next 75 years. The point of delivery would be moved up stream to Lake Havasu from Imperial Dam. Water transferred under these SIAs will meet needs in the San Diego and Los Angeles basin areas and provide 16,000 acre feet of water for the San Luis Rey Indian Settlement. The associated biological conservation measures, which are described herein, are permanent for the length of the covered projects.

Through the *Law of the River*, the Lower Division States of Arizona, California and Nevada are apportioned a total of 7.5 million acre feet (maf) per year of Colorado River water; with California allotted 4.4 maf, Arizona 2.8 maf, and Nevada 300 thousand acre feet (kaf). The proposed ISC would be used annually by the Secretary to determine the availability of Colorado River water in excess of 7.5 maf and available for use by the three States. Entitlements to the variable amounts of surplus water that may be available in any given year have also been divided among the Lower Division States, with 50 percent allocated for use in California, 46 percent for use in Arizona, and 4 percent for use in Nevada. Unused apportionments can be made available to another State by the Secretary on an annual basis. The States divert their allotment of Colorado River water directly from Lake Mead or, following release through Hoover Dam, from existing facilities on the lower Colorado River (Figure 1). Until recently, Arizona and Nevada have not used their entire basic apportionment, and California's annual use of Colorado River water has averaged 5.2 maf, which is above its apportionment.

The water resources of the lower Colorado River are vital to these three Lower Division States. Over twenty million people in the three States benefit from use of this water. Arizona and Nevada have recently developed the need and means to use their full apportionment. Seven counties in southern California, with a current population of about 17 million (more than half the state's population), depend on Colorado River water for municipal, industrial, and agricultural purposes. Use of this water represents about 64 percent of the total water used in southern California.

Within California, an agreement has governed the use of Colorado River water among seven parties having rights to it. Recently, these parties negotiated a *Quantification Settlement Agreement* (QSA) that is consistent with the CA Plan and when fully implemented, would allow California to live within its basic 4.4 maf apportionment. Some of the CA Plan components involve the transfer of water among the California parties, which requires a change in the point at which the Secretary would deliver Colorado River water to the California entities. Under the SIAs, water previously diverted at Imperial Dam would be diverted at Lake Havasu (Figure 1).

This Biological Assessment (BA) has been prepared for compliance with Section 7 of the Endangered Species Act (ESA). It contains a description of the action under consultation, environmental baseline with species ecology and biology, and an analysis of potential effects of the ISC, SIAs, water administration and conservation measures on threatened or endangered species and designated critical habitat along the lower Colorado River, Lake Mead to the Southerly International Boundary (SIB). Additional detail is provided in the following overview.

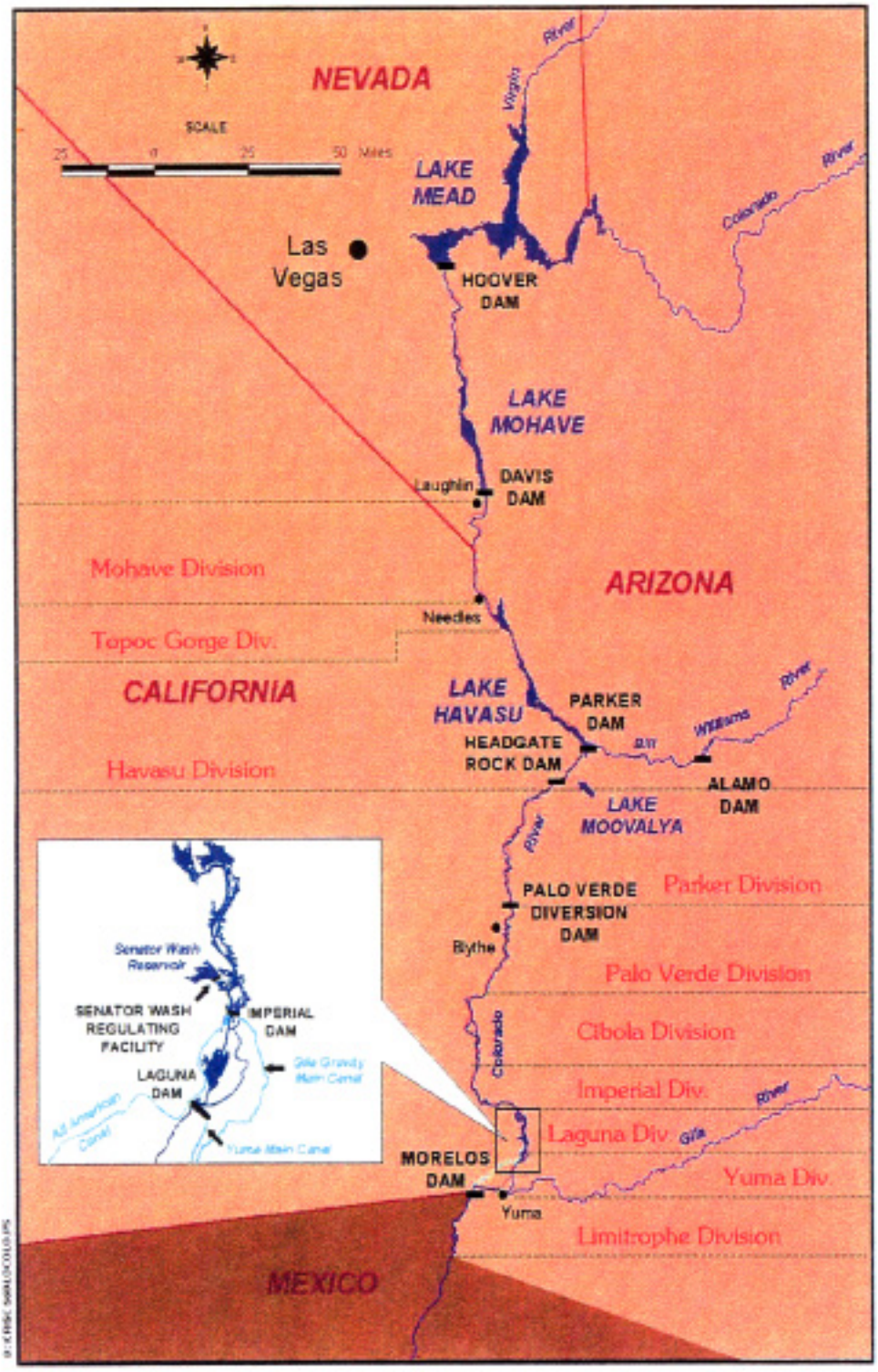

Figure 1. Overview Map of the Colorado River Dams and Divisions.

II. BIOLOGICAL ASSESSMENT OVERVIEW

This BA provides an analysis of impacts to special status and federally-listed threatened and endangered species and critical habitat from Reclamation's discretionary actions implementing the ISC for the lower Colorado River and SIAs with Southern California entities. The physical impacts which are under analysis include:

1. Change in point of diversion (CPD) of up to 400 kaf of water annually from Imperial Dam to Parker Dam.

2. Change in median levels of Lakes Mead and Powell of up to 24 and 21 feet respectively which may result from releasing water at various elevations determined by the ISC.

3. Reduction in probability of flood flow releases from Lake Mead as a result of implementing the ISC.

Specific ISC are being proposed pursuant to Article III(3)(b) of the *Criteria for Coordinated Long-Range Operation of the Colorado River Reservoirs Pursuant to the Colorado River Basin Project Act of September 30, 1968* (Long-Range Operating Criteria [LROC]). The ISC would be used annually to determine whether the conditions exist under which the Secretary may declare the availability of surplus water, as defined, for use within the states of Arizona, California and Nevada. The criteria must be consistent with both the Decree entered by the U.S. Supreme Court in 1964 in the case of *Arizona v. California* (Decree) and the LROC. The ISC would remain in effect for a period of 15 years, subject to five-year reviews, concurrent with the LROC reviews, and applied each year as part of the Annual Operating Plan. Presently 4 alternatives have been proposed for these criteria. The analysis contained in this BA focuses on the California Alternative (not to be confused with the CA Plan) because it is the most liberal of the probable criteria to be adopted. Specifics and a description of the criteria is found in "Colorado River Interim Surplus Criteria Draft Environmental Impact Statement" (ISC DEIS) (USBR, 2000).

The SIAs are for various Components of the CA Plan and associated QSA which require the Secretary of the Interior's approval. These SIA's are intended to be in force for a period of 75 years. The purpose of the CA Plan is to provide Colorado River water users with a framework by which programs, projects and other activities will be coordinated and cooperatively implemented, allowing California to most effectively satisfy its annual water supply needs within its annual apportionment of Colorado River water. The framework specifies how California will transition and live within its annual basic apportionment of 4.4 million acre feet of Colorado River water.

The geographical area included in this BA includes Lake Powell to the SIB (Figure 1). On the lower Colorado River, the area includes the River's 100-year flood plain and Lakes Mead, Mohave, and Havasu to full pool elevations.

Any off-river effects in the United States attributable to the actions will obtain ESA compliance through either the consultation or permit provisions of section 7 of ESA for Federal actions and/or section 10 permitting provision of ESA for non-Federal actions. Such compliance would be effected prior to implementation of specific projects. This concept of providing ESA compliance for off-river effects, prior to site specific implementation, has been discussed with two Fish and Wildlife Service regions.

III. FEDERAL ENVIRONMENTAL COMPLIANCE FOR PROPOSED ACTIONS

While the proposed ISC and SIAs are distinct water actions they are also important components of the CA Plan and QSA that address southern California's short- and long-term water use of Colorado River water. The proposed ISC also affect surplus water deliveries to Arizona and Nevada. These and related conservation actions require compliance with the ESA and the National Environmental Policy Act (NEPA). The Bureau of Reclamation (USBR) is the lead Federal agency for compliance with these environmental laws.

The regulatory provision of ESA provides for the recognition of non-Federal applicants, who are parties that initiate the proposed action that requires formal approval by the Federal action agency (USBR). For purposes of the SIAs portion of this section 7 consultation, Coachella Valley Water District (CVWD), Imperial Irrigation District (IID), Metropolitan Water District of Southern California (MWD), San Diego County Water Authority (SDCWA), and the San Luis Rey Tribes (SLR) are considered applicants.

The NEPA process for the Secretary's adoption of ISC involves the preparation of an Environmental Impact Statement (EIS). The ISC DEIS was released for public review on July 7, 2000. Appropriate portions of analyses from that document are referenced in this BA.

SIAs are proposed as a means to approve components of the CA Plan and QSA that involve a new point of delivery of Colorado River water by Reclamation. The water involved is California's allotment and the SIAs would approve a new point of delivery for diversion by California. The specific components of the CA Plan requiring secretarial approval are summarized in Table 1. This table also provides a column that indicates the level of NEPA/CEQA documentation, if any, that is necessary for each identified action. An Environmental Assessment (EA) and EIS/EIR(s) are being prepared for the SIAs concurrent with preparation of this BA.

Entities responsible for implementing components of the CA Plan and QSA are also responsible for complying with State environmental laws -- the California Environmental Quality Act (CEQA) and California Endangered Species Act (CESA). Therefore, environmental compliance for components of the CA Plan and QSA that also require Federal action can involve preparation of a combined CEQA and NEPA document, which may be an Environmental Impact Report and EIS (EIR/EIS), or an EIR and EA (EIR/EA). For components where it is not possible to analyze site-specific impacts of proposed actions, the type of impacts that may occur are more generally discussed. In these instances, programmatic documents are prepared, such as a Programmatic Environmental Assessment and/or EIR (PEA and/or PEIR). Programmatic documents will be followed by additional analyses when more specific plans are proposed. It is the purpose of this BA to effect Federal ESA compliance for proposed ISC and SIAs, including related water administration and conservation actions.

It is not the purpose of this BA to provide for any non-Federal compliance with ESA, or California State requirements of the CEQA or CESA. However, the information herein can be used, as appropriate, to help effect compliance with the California environmental acts.

Figure 2 illustrates some of the principal components and sub-components of the California Plan and how those with a Federal nexus, i.e., requiring SIAs, will undergo NEPA and ESA compliance. A complete listing of the CA Plan components is provided in Appendix C.

This BA will serve as a combined assessment of the effects of ISC and SIAs actions, and related conservation measures on listed species and critical habitat.

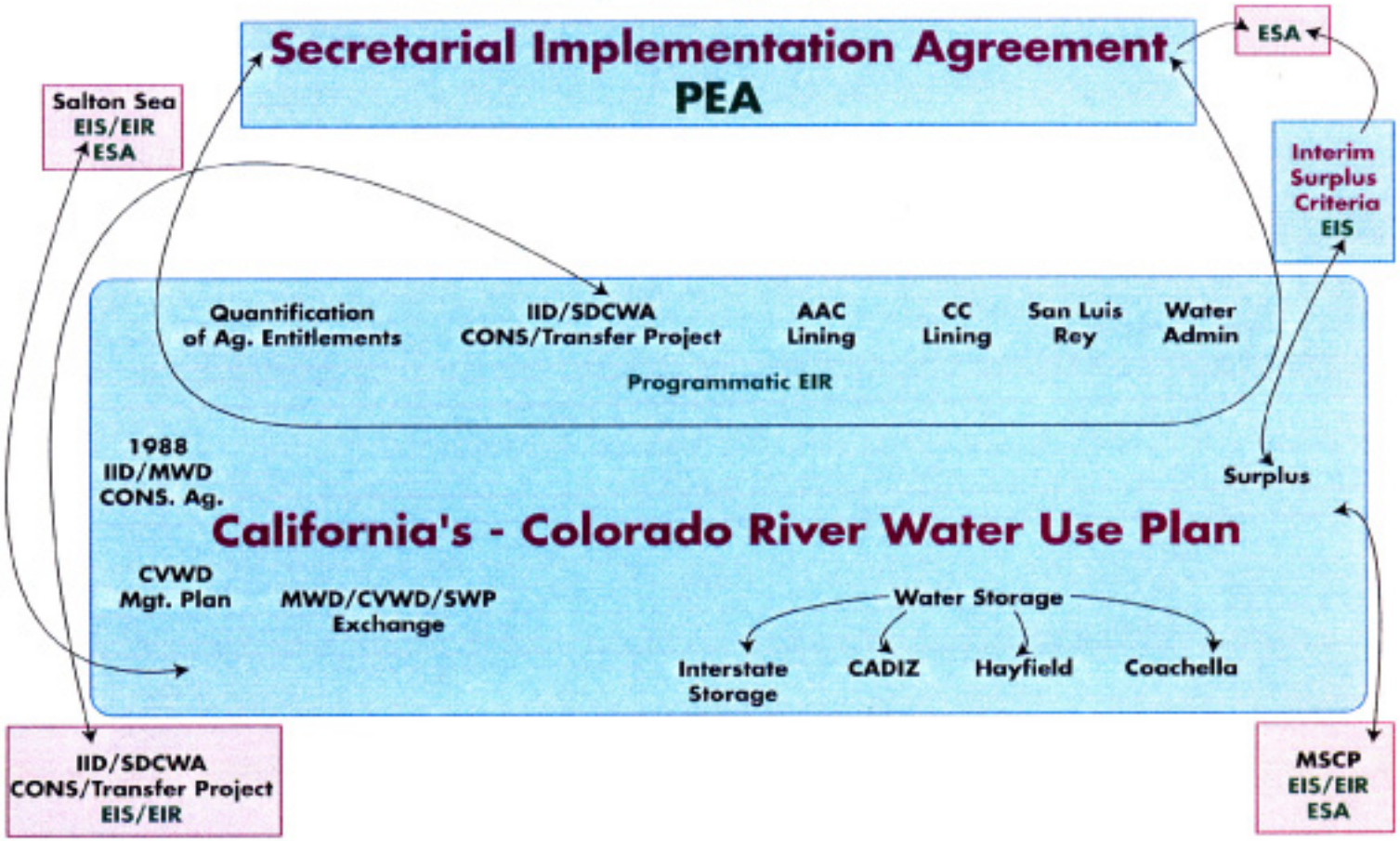

Figure 2. Relationships of Various components of California's Colorado River Water Use Plan covered by this Biological Assessment and Reclamation NEPA documents.

Table 1 - Components of California's Colorado River Water Use Plan That Are Subject to SIAs and Are Undergoing NEPA Compliance Actions.

Type of Component	Specific Components Requiring Secretarial Approval	Type of CEQA/NEPA Documentation
Water Transfers	• IID/SDCWA Water Conservation and Transfer Program • IID/CVWD/MWD Water Conservation and Transfer Program • MWD/CVWD Exchange	• EIR/EIS
Other Integrated Sources of User Supply	• All-American Canal Lining Project • Coachella Canal Lining Project	• Final EIS/EIR • EIS/EIR
Water Supply to Others (Non-Colorado River Water Rights Users)	• San Luis Rey Indian Water Right Settlement Parties	• Separate EA
Improved River and Reservoir Management and Operations	• Colorado River Interim Surplus Criteria	• EIS

IID - Imperial Irrigation District; SDCWA - San Diego County Water Authority; CVWD - Coachella Valley Water District; MWD - Metropolitan Water District