

APPENDIX G

**California Endangered Species Act, Application  
for an Incidental Take Permit Under  
Section 2081 of the Fish and Game Code for  
Incidental Take of State-Listed Species Along  
the Lower Colorado River**

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This permit application was prepared to support the Imperial Irrigation District's (IID's) application for an Incidental Take Permit (ITP) in conformance with Section 2081 (b) of the California Endangered Species Act (CESA). This permit application describes management actions that will be implemented to mitigate the impacts of any take of state-listed species associated with IID's implementation of the IID/San Diego County Water Authority (SDCWA) Transfer Agreement and Quantification Settlement Agreement (QSA).

## **Applicant's Name, Mailing Address, and Telephone Number:**

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## **List of Species for Which Coverage Is Requested**

IID is seeking authorization under Section 2081 (b) of the CESA for incidental take of state-listed species that could occur along the Lower Colorado River (LCR) (Table APP G-1).

**TABLE APP G-1**  
Species to be Covered by the ITP

<b>Common Name</b>	<b>Scientific Name</b>	<b>Federal Status</b>	<b>State Status</b>
Bonytail	<i>Gila elegans</i>	Endangered	Endangered
Razorback sucker	<i>Xyrauchen texanus</i>	Endangered	Endangered
Arizona Bell's vireo	<i>Vireo bellii arizonae</i>		Endangered
Bald eagle	<i>Haliaeetus leucocephalus</i>	Threatened	Endangered
Brown pelican	<i>Pelecanus occidentalis</i>	Endangered	Endangered
California black rail	<i>Laterallus jamaicensis</i>		Threatened
Elf owl	<i>Micrathene whitneyi</i>		Endangered
Gilded flicker	<i>Colaptes chrysoides</i>		Endangered
Gila woodpecker	<i>Melanerpes uropygialis</i>		Endangered
Peregrine falcon	<i>Falco peregrinus</i>		Endangered
Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	Endangered	Endangered
Western yellow-billed cuckoo	<i>Coccyzus americanus</i>		Endangered
Yuma clapper rail	<i>Rallus longirostris yumanesis</i>	Endangered	Threatened

## Description of the Project

The IID/SDCWA Transfer Agreement is a long-term transaction between IID and SDCWA involving the voluntary conservation by IID of up to 300,000 acre-feet/year (300 KAFY) and the subsequent transfer of all or a portion of the conserved water to SDCWA. The transferred, conserved water is intended for use in SDCWA's service area in San Diego County, California. Under certain circumstances, up to 100 KAFY of the water conserved by IID may be transferred to Coachella Valley Water District (CVWD) and/or Metropolitan Water District (MWD). Key aspects of the project are summarized subsequently. A more detailed description of the proposed project is located in Chapter 1 of the Habitat Conservation Plan (HCP), and Chapter 1 of the Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for the IID Water Conservation and Transfer Project.

Subsequent to execution of the IID/SDCWA Transfer Agreement, a settlement agreement was negotiated by and among IID, CVWD, and MWD, with the participation of the State of California and the Department of the Interior (DOI). The proposed terms of the settlement agreement were incorporated in the QSA. The QSA facilitates several component agreements and actions, which, when implemented, will enhance the certainty and reliability of Colorado River water supplies available to the signatory agencies and will assist these agencies in meeting their water demands within California's normal-year apportionment of Colorado River water. The QSA establishes water budgets for IID, MWD,

and CVWD and sets forth approved parameters of various water transfers and exchanges, including the conservation by IID of up to 300 KAFY for transfer to SDCWA, CVWD, and/or MWD.

The Secretary of DOI, in the role as water master for the LCR, must implement the terms of the QSA by delivering Colorado River water in accord with its terms. The actions required of the secretary are set forth in a proposed Secretarial Implementation Agreement (SIA), which is intended to be effective concurrently with the QSA. As a condition precedent to implementation of the QSA, certain other federal actions are required, including the adoption of interim surplus criteria and the adoption of an inadvertent overrun program to facilitate the payback of inadvertent exceedances by IID or CVWD of their respective priority 3 diversion caps.

If the QSA is approved and implemented, it would change the project described in the IID/SDCWA Transfer Agreement in certain respects. The QSA would limit the amount of conserved water transferable to SDCWA to a maximum of 200 KAFY and would provide for CVWD's option to acquire up to 100 KAFY of water conserved by IID, in lieu of transfer of this increment of conserved water to SDCWA. The QSA also provides for MWD's option to acquire any portion of the 100 KAFY of conserved water available to, but not acquired by, CVWD.

The EIR/EIS for the IID Water Conservation and Transfer Project addresses the environmental impacts of IID's consensual limit on its priority 3 diversions and the conservation by IID of up to 300 KAFY for transfer pursuant to the IID/SDCWA Water Transfer Agreement and/or the QSA. The accompanying HCP supports the issuance of ITPs under the Federal Endangered Species Act of 1973 (FESA) and CESA for this project in Imperial Valley, the Salton Sea, and along the All American Canal (AAC). This permit application supports issuance of an ITP under 2081(b) of CESA for take of state-listed species that could occur along the LCR between Imperial Dam and Parker Dam as a result of the conservation by IID of up to 300 KAFY for transfer pursuant to the IID/SDCWA Water Transfer Agreement and/or the QSA. Incidental take of federally listed species is covered in the U.S. Bureau of Reclamation's (Reclamation's) *Biological Opinion for the Interim Surplus Criteria (ISC), Secretarial Implementation Agreements (SIAs)* for change in point of diversion of up to 400,000 acre-feet of California apportionment waters within California, and implementation of certain conservation measures on the LCR, Lake Mead to the Southerly International Boundary in Arizona, California and Nevada (U.S. Fish and Wildlife Service [USFWS] 2001). The EIR/EIS for the IID Water Conservation and Transfer Project will satisfy CEQA requirements for issuance of the Section 2081 permit.

## Project Area Location and Affected Environment

The portion of the LCR affected by the proposed project is defined as the mainstem and the 100-year floodplain of the Colorado River from Parker Dam downstream to Imperial Dam. This geographic subregion includes approximately 140 miles. IID currently diverts water from the Colorado River at Imperial Dam, located about 18 miles northeast of Yuma, Arizona.

Habitats supported along the LCR and potentially affected by the proposed project include:

- Riparian communities (e.g., cottonwood-willow, mesquite, salt-cedar)
- Backwaters and marshes
- Mainstem riverine

Table APP G-2 shows the acreage of the various plant communities comprising riparian communities along the LCR. Table APP G-3 summarizes the acreage of riparian communities (all plant communities combined), backwaters, and marshes along the LCR between Parker and Imperial Dams. Additional information on habitats along the LCR is provided in Section 3.2.3.1 of the EIR/EIS.

**TABLE APP G-2**  
Plant Communities in the LCR 100-Year Floodplain

Structure Type	Acres	Percent of Total Vegetation <sup>a</sup>
Cottonwood-willow	1,502	3
Salt cedar–honey mesquite	14,200	24
Salt cedar–screwbean mesquite	5,025	9
Salt cedar	30,840	53
Honey mesquite	3,128	5
Arrowweed	2,773	5
Atriplex	511	<1
Creosote	317	<1
<b>Total</b>	<b>58,296</b>	

<sup>a</sup> Excluding 1,723 acres of agriculture  
Source: CH2M HILL 1999

**TABLE APP G-3**  
Acreage of Habitats Along the LCR Between Parker and Imperial Dams

Habitat	Acreage
Riparian communities	58,296
Backwater (open water portions)	3,955
Marsh	6,710

Source: CH2M HILL, 1999  
Source: Ogden Environmental and Energy Services Geographic Information System

## Project Effects and Proposed Conservation Measures

### Effects on Habitats

The conserved water consists of Colorado River water that otherwise would be diverted by IID for use within IID's service area in Imperial County, California. For conserved water transferred to SDCWA or MWD, IID's annual diversions of Colorado River water at Imperial Dam would be reduced by the amount of the conserved water, and this amount would be diverted at MWD's Whitsett Intake at Parker Dam on the Colorado River for delivery through MWD's Colorado River Aqueduct. For conserved water transferred to CVWD, IID's annual diversions of Colorado River water at Imperial Dam also would be reduced by the amount of the conserved water, and this amount will be diverted into the Coachella Canal from the AAC. The effect of the change in the point of diversion would be to reduce flows in the LCR between Parker and Imperial Dams.

The USFWS (2001) evaluated the impact on federally listed species of changes in points of diversion for 400 KAFY of California allocation water in its *Biological Opinion for the Interim Surplus Criteria (ISC), Secretarial Implementation Agreements (SIAs)* for change in point of diversion of up to 400,000 acre-feet of California apportionment waters within California, and implementation of certain conservation measures on the LCR, Lake Mead to the Southerly International Boundary in Arizona, California and Nevada. Reclamation also is currently preparing a programmatic EIS (PEIS) addressing these actions. The 300 KAFY of water that IID would conserve and transfer under the IID/SDCWA Transfer Agreement and QSA is encompassed by the 400 KAFY contained in Reclamation's project. Therefore, the analyses conducted for the biological opinion and PEIS are used for the analysis of effects of this project on state-listed species.

The change in the points of diversion would reduce flows in the LCR between Parker and Imperial Dams. This flow reduction would decrease the amount of open water habitat and/or change the characteristics (e.g., depth, velocity) of open water habitat in the mainstem and in backwaters. Lower water levels in marsh habitat in backwater areas would be expected to reduce the extent of marsh vegetation or change the plant species composition. Riparian communities in some locales would experience reduced groundwater and surface water levels, a change that could alter the amount and characteristics of the affected communities.

Table APP G-4 summarizes the acreage and potential effects on these habitats as a result of the proposed project, based on analyses conducted for the biological opinion and the PEIS. As explained in more detail in Section 3.2 of the EIR/EIS, the acreages in Table APP G-4 were derived from the biological opinion by assuming the acreage affected was proportional to the amount of water transferred from IID and diverted at Parker Dam.

**TABLE APP G-4**  
Acreage of Each Habitat Potentially Affected by the Proposed Project

Habitat	Acreage	Comments
Riparian (occupied by Southwestern willow flycatcher)	279	Acreage predicted to experience reduced groundwater and surface water levels. Actual changes in acreage, plant species composition, and structure cannot be predicted and are uncertain.
Backwater (open water)	12	
Marsh	21	Acreage predicted to experience reduced groundwater and surface water levels. Actual changes in acreage, plant species composition, and structure cannot be predicted and are uncertain.
Mainstem riverine	26	

Under the biological opinion, Reclamation committed to certain actions to mitigate impacts to federally listed species as a result of the change in the points of diversion of 400 KAFY. These conservation measures are as follows.

- Monitor 372 acres of occupied habitat that could be affected by the change in the point of diversion for 400 KAFY of water.
- Restore and maintain 372 acres of new replacement willow flycatcher habitat along the LCR within 5 years of execution of the SIA that provides federal approval for the water transfer actions.
- Restore and maintain additional habitat (up to 744 acres) if monitored habitat is found to be affected.
- Restore 44 acres of backwater habitat (marsh and open water combined) along the LCR between Parker and Imperial Dams.
- Re-introduce and monitor 20,000 sub-adult razorback suckers below Parker Dam.
- Continue the ongoing study on Lake Mead for an additional 4 years to determine reasons for persistence of adult razorback suckers in the reservoir.
- Fund the capture of wild-born or F1-generation bonytail chubs from Lake Mohave to be incorporated into the broodstock for this species.

The first four measures compensate for potential impacts to marsh, backwater (open water), and riparian habitat, while the last three measures address the net reduction in open water in the mainstem. These measures address the impacts associated with the change in the points of diversion for 400 KAFY of water and encompass the impacts associated with IID's proposed project. The following analysis considers impacts on state-listed species in the context of the conservation measures to be implemented by Reclamation.

## Effects on Listed Species

### Razorback Sucker

Razorback suckers inhabit the mainstem and backwater habitats along the LCR. Detailed information on the range, distribution, abundance, and habitat requirements of this species is presented in Appendix A of the HCP, the biological assessment for the ISC/SIA (Reclamation 2000), and associated biological opinion (USFWS 2001).

Potential effects to razorback suckers attributable to the proposed project consist of projected reductions in backwater habitat (33 acres) and mainstem riverine habitat (26 acres). These reductions have the potential to take a razorback sucker. The construction of 44 acres of backwater habitat by Reclamation would offset the projected reduction in this habitat. Further, Reclamation would re-introduce razorback suckers below Parker Dam and continue funding an ongoing study of this species at Lake Mead. These measures would mitigate potential effects on razorback suckers from the small change in the amount of mainstem riverine habitat. With the conservation measures to be implemented by Reclamation, any take of razorback suckers resulting from a change in the point of diversion of the 300 KAFY of water conserved by IID would be fully mitigated. No additional mitigation is necessary.

### Bonytail

Bonytail are presently found in Lakes Mohave and Havasu. Detailed information on the range, distribution, abundance, and habitat requirements of this species is presented in Appendix A of the HCP, the biological assessment for the ISC/SIA (Reclamation 2000), and associated biological opinion (USFWS 2001).

The change in the point of diversion for 300 KAFY of water conserved and transferred by IID would not affect the operation of those lakes (Reclamation 2000). Because bonytail do not currently inhabit the LCR between Parker and Imperial Dams, no take of this species is expected over the short term with implementation of the proposed project. However, efforts are under way to re-introduce bonytail to the LCR below Parker Dam. Depending on when bonytail are re-introduced relative to the ramp-up for water conservation by IID, re-introduced fish could experience a small decline in backwater habitat and mainstem riverine habitat. The conservation measures implemented by Reclamation to construct replacement backwater habitat and contribute to maintenance of broodstock for this species would fully mitigate any take caused by a change in the point of diversion. Therefore, no additional mitigation is necessary.

### Arizona Bell's Vireo

The Arizona Bell's vireo is a summer breeding resident along the LCR. This species uses riparian habitats similar to the southwestern willow flycatcher. Additional information on the range, distribution, abundance, and habitat requirements of this species is presented in Appendix A of the HCP.

A change in point of diversion of 300 KAFY of water under the proposed project could affect 279 acres of riparian habitat occupied by southwestern willow flycatchers. Given their similar habitat associations, this acreage also represents habitat potentially occupied by Arizona Bell's vireo. Thus, impacts on the Arizona Bell's vireo would be generally similar to

those described for the southwestern willow flycatcher in the biological opinion. No information is available on the number of occupied territories that may be affected by the loss of 372 habitat acres. However, a reduction in riparian habitat could cause take of Arizona Bell's vireo through displacement of adults, reduced productivity, or reduced survivorship of adults and/or young.

Conservation measures implemented by Reclamation for the change in the points of diversion for 400 KAFY of water would consist of restoring 372 acres of riparian habitat and monitoring and restoring up to an additional 744 acres, if monitoring shows an impact on riparian habitat. With these measures, Reclamation would at least replace any affected riparian habitat. Thus, these measures would encompass and fully mitigate any take of Arizona Bell's vireo potentially resulting from the change in the point of diversion of 300 KAFY under IID's proposed project. No additional mitigation measures are necessary.

### **Bald Eagle**

Information on the range, distribution, abundance, and habitat requirements of this species is presented in Appendix A of the HCP and the biological assessment for the ISC/SIA (Reclamation 2000). In its biological assessment, Reclamation concluded that implementation of the ISC/SIA (including the change in the points of diversion of 400 KAFY) would not likely adversely affect the food resources, foraging opportunities, or nesting habitat of the bald eagle. The USFWS concurred with Reclamation's determination that Reclamation's proposed action is not likely to adversely affect bald eagles (USFWS 2001).

Based on Reclamation's and USFWS' evaluations, no take of bald eagles is expected. Any take that did occur as a result of a change in the point of diversion for the 300 KAFY of water conserved by IID would be fully mitigated by Reclamation's conservation measures. No additional mitigation measures are necessary.

### **California Brown Pelican**

Along the Colorado River, the brown pelican is a rare but annual post-breeding wanderer from Mexico in late summer and early fall (Reclamation 2000). It is most frequently seen around Imperial Dam, but individuals have occurred north to Davis Dam and Lake Mead. Virtually all records are of lone immature birds, likely dispersing from breeding colonies in the Gulf of California or perhaps via the Salton Sea (Reclamation 2000). Along the river, they prefer large open-water areas near dams. Additional information on the range, distribution, abundance, and habitat requirements of this species is presented in Appendix A of the HCP and the biological assessment for the ISC/SIA (Reclamation 2000).

In its biological assessment for the ISC/SIA project, 4.4. Plan, Reclamation made a finding of no effect for the brown pelican because the action would not change the character of aquatic habitat potentially used by this species (Reclamation 2000). The USFWS concurred with this determination. Based on Reclamation's and USFWS' evaluations, no take of brown pelicans is expected. Any take that did occur as a result of a change in the point of diversion for the 300 KAFY of water conserved by IID would be fully mitigated by Reclamation's conservation measures. No additional mitigation measures are necessary.

### **California Black Rail**

The California black rail is associated with marsh habitats along the LCR. Information on the range, distribution, abundance, and habitat requirements of this species is presented in Appendix A of the HCP and the biological assessment for the ISC/SIA (Reclamation 2000).

A change in point of diversion of 300 KAFY of water under the proposed project could affect an estimated 21 acres of marsh habitat in backwater areas. Given their similar habitat associations, impacts on the California black rail would be generally similar to those described for the Yuma clapper rail in the biological opinion. A reduction in marsh habitat could cause take of California black rails through displacement of adults, reduced productivity, or reduced survivorship of adults and/or young.

Conservation measures implemented by Reclamation for the change in the points of diversion for 400 KAFY of water would consist of restoring 44 acres of backwater habitat (open water and marsh combined). With this measure, Reclamation would replace any impacted marsh habitat. Thus, these measures would encompass and fully mitigate any take of California black rail resulting from the change in the point of diversion of 300 KAFY under IID's proposed project. No additional mitigation measures are necessary.

### **Elf Owl**

The elf owl is a very rare and local summer resident in riparian habitats along the LCR, which lies at the western edge of its range (Rosenberg et al. 1991). Historically, it occurred south of Yuma. Elf owls are not known to use riparian habitats along the LCR for breeding. Additional information on the range, distribution, abundance, and habitat requirements of the elf owl is presented in Appendix A of the HCP.

A change in point of diversion of 300 KAFY of water under the proposed project could affect 279 acres of riparian habitat. Because elf owls are very rare and not known to breed along the LCR, the potential for take of elf owls because of these potential habitat effects is very low. Nonetheless, conservation measures implemented by Reclamation for the change in the points of diversion for 400 KAFY of water would consist of restoring 372 acres of riparian habitat and monitoring and restoring up to an additional 744 acres, if monitoring shows an impact on riparian habitat. With these measures, Reclamation would at least replace any affected riparian habitat. Thus, these measures would encompass and fully mitigate any take of elf owls resulting from the change in the point of diversion of 300 KAFY under IID's proposed project. No additional mitigation measures are necessary.

### **Gilded Flicker**

The gilded flicker occurs along the LCR Valley in southern Arizona and southeastern California (Rosenberg et al. 1991). In California, an estimated 40 individuals were found along the LCR in 1984 (Hunter 1984; California Department of Fish and Game [CDFG] 1991); but during 1986 surveys, there were no gilded flickers observed in this area. Rosenberg, et al. (1991) reported "scattered pairs" between Imperial and Laguna Dams. The preferred nesting substrate for this species is saguaros; however, they also use mature cottonwood-willow riparian forests to a more limited degree. Additional information on the range, distribution, abundance, and habitat requirements of this species is presented in Appendix A of the HCP.

A change in point of diversion of 300 KAFY of water under the proposed project could affect 279 acres of riparian habitat occupied by southwestern willow flycatchers. This acreage also represents habitat potentially occupied by the gilded flicker. Thus, impacts on the gilded flicker would be generally similar to those described for the southwestern willow flycatcher in the biological opinion. No information is available on the number of occupied territories that could be affected by changes in the amount or characteristics of 279 acres of riparian habitat. However, a reduction in riparian habitat could cause take of a gilded flicker through displacement of adults, reduced productivity, or reduced survivorship of adults and/or young.

Conservation measures implemented by Reclamation for the change in the points of diversion for 400 KAFY of water would consist of restoring 372 acres of riparian habitat and monitoring and restoring up to an additional 744 acres, if monitoring shows an impact on riparian habitat. With these measures, Reclamation would at least replace any affected riparian habitat. Thus, these measures would encompass and fully mitigate any take of the gilded flicker resulting from the change in the point of diversion of 300 KAFY under IID's proposed project. No additional mitigation measures are necessary.

### **Gila Woodpecker**

Gila woodpeckers are known to occur between the Laguna and Imperial Dams along the LCR. In 1984, an estimated 200 individuals occurred in California along the LCR (CDFG 1991). The total population along the LCR is estimated at about 1,000 individuals (Rosenberg et al. 1991). While saguaros are a commonly used nesting substrate for the species, in California, the Gila woodpecker primarily uses mature riparian habitat. Gila woodpeckers appear to need large blocks of riparian habitat for nesting; isolated patches of riparian habitat less than 50 acres in size do not support the species (Rosenberg et al. 1991). Additional information on the range, distribution, abundance, and habitat requirements of this species is presented in Appendix A of the HCP.

A change in point of diversion of 300 KAFY of water under the proposed project could affect 279 acres of riparian habitat occupied by southwestern willow flycatchers. This acreage also represents habitat potentially occupied by the Gila woodpecker. Thus, impacts on the Gila woodpecker would be generally similar to those described for the southwestern willow flycatcher in the biological opinion. No information is available on the number of occupied territories that could be affected by changes in the amount or characteristics of 279 acres of riparian habitat. However, a reduction in riparian habitat could cause take of a Gila woodpecker through displacement of adults, reduced productivity, or reduced survivorship of adults and/or young.

Conservation measures implemented by Reclamation for the change in the points of diversion for 400 KAFY of water would consist of restoring 372 acres of riparian habitat and monitoring and restoring up to an additional 744 acres, if monitoring shows an impact on riparian habitat. With these measures, Reclamation would at least replace any affected riparian habitat. Thus, these measures would encompass and fully mitigate any take of the Gila woodpecker resulting from the change in the point of diversion of 300 KAFY under IID's proposed project. No additional mitigation measures are necessary.

## **Peregrine Falcon**

Peregrine falcons occur in a wide range of open country habitats. The presence of tall cliffs is the most characteristic feature of the peregrine's habitat and is considered a limiting factor for the species. Nearby waterbodies or wetlands that support abundant prey of small to medium-size birds are another common habitat feature and influence the species distribution and abundance (Johnsgard 1990). These habitat features are present in the project area, and the species may use areas affected by the water diversion for both foraging and nesting. Information on the range, distribution, abundance, and habitat requirements of this species is presented in Appendix A of the HCP.

Nesting habitat for this species would not be affected by the proposed project. Potential impacts on 279 acres of riparian habitat and 21 acres of marsh habitat could affect the abundance and distribution of prey species of the peregrine falcon. However, given this species' mobility and the abundant prey base in the river corridor, it is unlikely that any take of peregrine falcons would occur. In the unlikely event that take of peregrine falcons did occur from these habitat changes, the conservation measures implemented by Reclamation would fully mitigate the take.

## **Southwestern Willow Flycatcher**

The southwestern willow flycatcher is associated with riparian habitats. The majority of southwestern willow flycatchers found during the past 5 years of surveys on the LCR have been in saltcedar, or a mixture of saltcedar and native cottonwood and willow, especially Goodings willow, coyote willow, and Fremont cottonwood (Reclamation 2000). In 1998, 64 nesting attempts were documented on the LCR from southern Nevada to Needles, California (Reclamation 2000). Additional information on the range, distribution, abundance, and habitat requirements of this species is presented in Appendix A of the HCP, the biological assessment for the ISC/SIA (Reclamation 2000), and the associated biological opinion (USFWS 2001).

A change in point of diversion of the 300 KAFY of water conserved and transferred by IID could degrade or reduce the amount of willow flycatcher habitat by lowering river and groundwater elevations (USFWS 2001 and Reclamation 2000). An estimated 279 acres of occupied southwestern willow flycatcher habitat could be affected. A reduction in occupied habitat could cause take of a southwestern willow flycatcher through displacement of adults, reduced productivity, or reduced survivorship of adults and/or young.

Conservation measures implemented by Reclamation for the change in the points of diversion for 400 KAFY of water would consist of restoring 372 acres of riparian habitat and monitoring and restoring up to an additional 744 acres, if monitoring shows an impact on riparian habitat. With these measures, Reclamation would at least replace any affected riparian habitat. These measures would encompass and fully mitigate any take of southwestern willow flycatchers resulting from the change in the point of diversion of 300 KAFY under IID's proposed project. Therefore, no additional mitigation measures are necessary.

### **Western Yellow-Billed Cuckoo**

Mature stands of cottonwood-willow provide the primary habitat for western yellow-billed cuckoos. In the LCR area, cuckoos have been detected as far south as Gadsden and Imperial National Wildlife Refuge (Reclamation 2000). Additional information on the range, distribution, abundance, and habitat requirements of this species is presented in Appendix A of the HCP and the biological assessment for the ISC/SIA (Reclamation 2000).

A change in point of diversion of 300 KAFY of water under the proposed project could affect 279 acres of riparian habitat occupied by southwestern willow flycatchers. This acreage also represents habitat potentially occupied by western yellow-billed cuckoos. Thus, impacts on the western yellow-billed cuckoo would be generally similar to those described for the southwestern willow flycatcher in the biological opinion. No information is available on the number of occupied territories that could be affected by changes in the amount or characteristics of 372 habitat acres. However, a reduction in riparian habitat could cause take of a western yellow-billed cuckoo through displacement of adults, reduced productivity, or reduced survivorship of adults and/or young.

Conservation measures implemented by Reclamation for the change in the points of diversion for 400 KAFY of water would consist of restoring 372 acres of riparian habitat and monitoring and restoring up to an additional 744 acres, if monitoring shows an impact on riparian habitat. With these measures, Reclamation would at least replace any affected riparian habitat. These measures would encompass and fully mitigate any take of western yellow-billed cuckoos potentially resulting from the change in the point of diversion of 300 KAFY under IID's proposed project. Therefore, no additional mitigation measures are necessary.

### **Yuma Clapper Rail**

The Yuma clapper rail is associated with marsh habitats along the LCR. Information on the range, distribution, abundance, and habitat requirements of this species is presented in Appendix A of the HCP, the biological assessment for the ISC/SIA (Reclamation 2000), and associated biological opinion (USFWS 2001).

A change in point of diversion of 300 KAFY of water under the proposed project could affect an estimated 21 acres of marsh habitat in backwater areas. A reduction in marsh habitat could cause take of Yuma clapper rails through displacement of adults, reduced productivity, or reduced survivorship of adults and/or young. Conservation measures implemented by Reclamation for the change in the points of diversion for 400 KAFY of water would consist of restoring 44 acres of backwater habitat (open water and marsh combined). With this measure, Reclamation would replace any affected marsh habitat. These measures would encompass and fully mitigate any take of Yuma clapper rail potentially resulting from the change in the point of diversion of 300 KAFY under IID's proposed project. Therefore, no additional mitigation measures are necessary.

## Incidental Take Determinations and Jeopardy Analysis

### Razorback Sucker

The USFWS determined that all razorback suckers inhabiting the 44 acres of backwater habitat affected by the change in the points of diversion for 400 KAFY could be taken, but determined that this level of take would not jeopardize the species. IID's proposed project is encompassed by the USFWS' determination and therefore would have a lower level of take and would not jeopardize the species.

### Bonytail

No bonytail are present in reach of the LCR from Parker to Imperial Dams. Take of bonytail is not expected in the short term but could occur if bonytail are re-introduced in the LCR in the future. The USFWS determined that implementation of Reclamation's ISC/SIA project, 4.4 Plan would not result in jeopardy to bonytail. IID's proposed project is encompassed by the USFWS' determination on this project and therefore would have a lower level of take if any and would not jeopardize the species.

### Arizona Bell's Vireo

This species is not federally listed and was not covered in the biological assessment or biological opinion for the ISC/SIA. Consistent with the USFWS determination for the southwestern willow flycatcher, all Arizona Bell's vireos inhabiting the 279 acres of riparian habitat potentially affected by the proposed project could be taken. With implementation of the conservation measures, this level of take is not likely to result in jeopardy to the species.

### Bald Eagle

No take of bald eagles is expected. With implementation of the conservation measures, any take of bald eagles that did occur would not result in jeopardy to the species.

### California Brown Pelican

No take of California brown pelicans is expected. With implementation of the conservation measures, any take of brown pelicans that did occur would not result in jeopardy to the species.

### California Black Rail

The California black rail is not a federally listed species and was not addressed in the USFWS Biological Opinion. However, Reclamation addressed the species in their biological assessment and concluded the project effects on this species would be the same as for the Yuma clapper rail (Reclamation 2000). Impacts on 21 acres of marsh habitat under the proposed project could result in take of the California black rail inhabiting these areas. However, with implementation of the conservation measures, this potential take is not likely to result in jeopardy to the species.

## **Elf Owl**

Because this species is not federally listed, it was not covered in the biological opinion for the ISC/SIA. Take of this species is not expected. Nonetheless, a very low level of take could occur as a result of the potential effects of the proposed project on riparian habitat. With implementation of the conservation measures, the very low level of take potentially occurring is not likely to result in jeopardy to the species.

## **Gilded Flicker**

The gilded flicker is not federally listed and was not covered in the biological assessment or biological opinion for the ISC/SIA. Consistent with the USFWS determination for the southwestern willow flycatcher, all gilded flickers inhabiting the 279 acres of riparian habitat potentially affected by the IID's proposed project could be taken. With implementation of the conservation measures, this level of take is not likely to result in jeopardy to the species.

## **Gila Woodpecker**

The gila woodpecker is not federally listed and was not covered in the biological assessment or biological opinion for the ISC/SIA. Consistent with the USFWS determination for the southwestern willow flycatcher, all gila woodpeckers inhabiting the 279 acres of riparian habitat potentially affected by the IID's proposed project could be taken. With implementation of the conservation measures, this level of take is not likely to result in jeopardy to the species.

## **Peregrine Falcon**

No take of peregrine falcons is expected. With implementation of the conservation measures, any take of peregrine falcons that did occur would not result in jeopardy to the species.

## **Western Yellow-Billed Cuckoo**

This species is not federally listed and was not covered in the biological opinion for the ISC/SIA. Consistent with the USFWS determination for the southwestern willow flycatcher, all western yellow-billed cuckoos inhabiting the 279 acres of riparian habitat affected by IID's proposed project could be taken. With implementation of the conservation measures, this potential take of yellow-billed cuckoos is not likely to result in jeopardy to the species.

## **Yuma Clapper Rail**

The USFWS determined that impacts on 28 acres of marsh habitat with the change in the points of diversion for 400 KAFY could harm Yuma clapper rails (USFWS 2001) and could adversely affect the habitat use of approximately 100 clapper rails in the Parker Dam to Imperial Dam reach of the LCR. The level of take that would occur is uncertain. However, with implementation of the conservation measures by Reclamation, the USFWS determined that the potential take was not likely to result in jeopardy to the species (USFWS 2001). IID's proposed project is encompassed by USFWS' determination and therefore would have a lower level of take and would not jeopardize the species.

## **Southwestern Willow Flycatcher**

The USFWS determined that all southwestern willow flycatchers inhabiting the 372 acres of riparian habitat affected by the change in the points of diversion for 400 KAFY could be taken, but this take would not jeopardize the species. IID's proposed project is encompassed by USFWS' determination and therefore would have a lower level of take and would not jeopardize the species.

## **Compliance Monitoring and Funding Assurances**

Responsibility for funding and implementing the conservation measures associated with the ISC/SIA project, 4.4 Plan was assumed by Reclamation and five designated applicants through their consultation with the USFWS under Section 7 of the Federal Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.). No additional mitigation is necessary to meet the permit requirements for incidental take authorization of state-listed species on the LCR for IID's proposed project.

## References

- California Department of Fish and Game. 1991. *1990 Annual Report on the Status of California's State Listed Threatened and Endangered Plants and Animals*.
- CH2M HILL. 1999. *1997 Vegetation Mapping and GIS Development*. Report prepared for Bureau of Reclamation, Boulder City, Nevada.
- Hunter, W. C. 1984. *Status of Nine Bird Species of Special Concern Along the Lower Colorado River*. Non-Game Wildlife Investigations, Wildlife Management Branch, Administrative Report 84-2, California Department of Fish and Game, Sacramento.
- Rosenberg, K. V., R. D. Ohmart, W. C. Hunter, and B. W. Anderson. 1991. *Birds of the Lower Colorado River Valley*. University of Arizona Press, Tucson.
- United States Bureau of Reclamation. 2000. *Draft Biological Assessment for Interim Surplus Criteria, Secretarial Implementation Agreements, Water Administration, and Conservation Measures on the Lower Colorado River, Lake Mead to the Southerly International Boundary*. Boulder City, Nevada.
- United States Fish and Wildlife Service. 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*. Phoenix, AZ.