

AESO/SE
02-21-04-F-0161

March 4, 2005

Memorandum

To: Regional Director, Fish and Wildlife Service, Albuquerque, New Mexico
(Attn: Luella Roberts) (ARD-ES)

From: Field Supervisor

Subject: Findings and Recommendations Pertaining to Issuance of an Incidental Take Permit
for the Lower Colorado River Multi-Species Conservation Program, Arizona,
California, and Nevada (TE-086834-0)

I. DESCRIPTION OF PROPOSED ACTION

Proposed Action

The Lower Colorado River Multi-Species Conservation Program (LCR MSCP) permit applicants (Appendix A) have applied to the U.S. Fish and Wildlife Service (FWS) for an incidental take permit, pursuant to section 10(a)(1)(B) of the Endangered Species Act (Act). The permit application is for six listed species, two candidate species, and 19 unlisted species that may become listed under the Act in the future (Appendix B). The proposed actions to be covered by the permit are the present and future activities of non-Federal entities within the states of Arizona, California, and Nevada that involve the consumption of water and power resources of the Lower Colorado River (LCR). In addition to the covered activities of the non-Federal LCR MSCP permit applicants; specific present and future actions of six Federal agencies on the LCR are also included in the LCR MSCP. Those Federal agencies are U.S. Bureau of Reclamation (Reclamation), Bureau of Indian Affairs (BIA), National Park Service (NPS), Bureau of Land Management (BLM), Western Area Power Administration (Western) and FWS. The Federal agencies and permit applicants are collectively referred to as the LCR MSCP participants. The covered activities and covered actions for the LCR MSCP participants occur along the LCR in La Paz, Mohave, and Yuma counties, Arizona; Imperial, Riverside, and San Bernardino counties, California; and Clark County, Nevada. The requested duration of the permit and the associated formal section 7 consultation for the Federal agencies is 50 years.

The LCR MSCP participants developed the LCR MSCP Habitat Conservation Plan, (LCR

MSCP HCP) and the LCR MSCP Biological Assessment (LCR MSCP BA), both of which are incorporated herein by reference. These documents describe the covered activities and covered actions, the effects of those activities and actions that may result in incidental take, and the conservation measures that they propose to minimize and mitigate impacts from any expected incidental take of the 27 species proposed to be covered that may result from the implementation of the covered activities and covered actions. The LCR MSCP HCP and LCR MSCP BA were developed in close coordination with us, Arizona Game and Fish Department (AGFD), Nevada Department of Wildlife (NDOW), environmental contractors hired by the LCR MSCP, Reclamation, FWS, and permit applicants. Both AGFD and NDOW are non-Federal permit applicants. The California Department of Fish and Game (CDFG) was involved in the LCR MSCP development process but is not a permit applicant. The California permit applicants are working with CDFG to finalize the California Endangered Species Act (CESA) consultation requirements. The LCR MSCP contractors, in concert with the two lead agencies for the National Environmental Policy Act (NEPA) (Reclamation and FWS) and The Metropolitan Water District of Southern California (Metropolitan) as the lead agency for the California Environmental Quality Act (CEQA), prepared and Environmental Impact Statement/Environmental Impact Report (EIS/EIR) that analyzes the effects of the proposed action on the human environment. For FWS, the EIS evaluates the effects of issuing a section 10(a)(1)(B) permit. For Reclamation, the EIS evaluates the effects of implementing the conservation measures in the LCR MSCP HCP, and for Metropolitan, the EIR evaluates the effects of implementing the conservation measures in the LCR MSCP HCP.

The FWS considered four alternatives to issuing a section 10(a)(1)(B) permit in the EIS/EIR, including a no action alternative where no permit would be issued, and Reclamation and Metropolitan would not implement the LCR MSCP HCP. The other three alternatives described different levels or manners of implementation of the LCR MSCP HCP. The “listed-species only” alternative would involve issuance of an incidental take permit for the six listed species only (Appendix B) with implementation of all conservation measures for those species contained in the LCR MSCP HCP. The “off-site” alternative would involve issuance of an incidental take permit for all 27 covered species with the habitat creation components for cottonwood-willow, honey mesquite, and marsh contained in the LCR MSCP HCP accomplished in three areas (Virgin and Muddy rivers, Bill Williams River, and Gila River) that are not inside the LCR MSCP planning area (the LCR and its historical floodplain in the United States from the full-pool elevation of Lake Mead to the Southerly International Boundary (SIB) with Mexico). All other conservation measures would be implemented as in the preferred alternative. The preferred alternative is issuance of an incidental take permit in conjunction with implementation of the LCR MSCP as described in the LCR MSCP HCP. Draft and final versions of the EIS/EIR, LCR MSCP HCP, and LCR MSCP BA were forwarded to the Regional Director under separate cover. The notice of availability for the final LCR MSCP documents was published in the Federal Register on December 17, 2004. No comments requiring additional review of the documents were received.

Reclamation operates the LCR for the Secretary of the Interior in her role as Watermaster in accordance with a suite of laws, regulations, court decisions, and policies known collectively as

the Law of the River. Through the Law of the River, Reclamation takes both discretionary and non-discretionary actions to address water storage and releases, hydropower generation, and maintenance of the river channel and various facilities needed to provide for those actions. The water and power users in the three states have discretionary authority with regard to their actions in diverting water and contracting for hydropower. The orchestrated management of the LCR is the result of this combination of Federal and non-Federal discretionary and non-discretionary activities, which prevents a separate analysis of the Federal and non-Federal components. Given the combination of Federal actions, both discretionary and non-discretionary, and non-Federal actions carried out in the Lower Division of the Colorado River, without a comprehensive approach such as the LCR MSCP, it is not clear which parties would have specific responsibility under section 9 of the Act for any potential take of listed species. To eliminate any uncertainty regarding which method of take authorization, section 7 or section 10, is more appropriate in this situation, the LCR MSCP participants will request that the FWS authorize take under both sections 7 and 10.

In addition to the water, power, and river-management programs included in the covered activities, the BIA and NPS are including specific land management and recreational activities in the covered actions for the consultation. The BLM only included ordering, diversion, and return flows associated with their LCR entitlements. For the FWS, the covered actions are the ordering, diversion, and return flow for the Havasu, Bill Williams River, Cibola, and Imperial National Wildlife Refuges.

The LCR MSCP HCP, LCR HCP BA, and EIS/EIR fully describe the LCR MSCP planning area and the covered actions for the incidental take permit and the formal consultation. The proposed action for the FWS is the issuance of the incidental take permit for the LCR MSCP permit applicants. For Reclamation, the proposed action is the full implementation of the conservation measures contained in the LCR MSCP HCP. The incidental take permit will require the permittees to fully meet all of their obligations under the LCR MSCP HCP, IA and FMA. Chapter 5 of the LCR MSCP HCP, and Chapter 3 of the EIS/EIR describe the conservation measures and results of their implementation in detail; pertinent information is summarized below.

A draft Record of Decision (ROD) has been developed in cooperation with Reclamation and the FWS Regional Office and will be provided to the Regional Director by separate cover. The ROD selects the preferred alternative with the off-site mitigation option contained in Alternative 4 for implementation based on a variety of environmental and social factors, including potential impacts and benefits to covered species and their habitat, the extent and effectiveness of minimization and mitigation measures, and social and economic considerations. It also concludes that the selected alternative is the environmentally preferable alternative because it surpasses other alternatives in realizing the full range of environmental goals including contributions to the recovery of some species covered by the LCR MSCP.

Proposed Mitigation

The LCR MSCP HCP describes the measures to minimize and mitigate adverse effects of any expected incidental take. The LCR MSCP permit applicants and USBR are committed to implementing the LCR MSCP HCP, including all conservation measures. The Final Draft Implementing Agreement (IA) and Funding and Management Agreement (FMA) have been provided to the Regional Director by separate cover. The final versions of these two documents that will be signed in conjunction with permit issuance will be available shortly and will be provided to the Regional Director by separate cover. All conservation measures will become terms and conditions of the incidental take statement contained in the biological and conference opinion for the LCR MSCP. The amount and extent of habitat lost for the covered species is included in Appendix C.

The conservation measures in the LCR MSCP HCP are briefly summarized below. The full text of the LCR MSCP HCP is herein incorporated by reference.

- Establishment of 5,940 acres of cottonwood-willow habitat suitable for the covered species that use this habitat type in amounts described in Table 2-55 of the BA and Table 5-5 of the HCP.
- Establishment of 1,320 acres of honey mesquite type III habitat (defined in section 3.3.1 of the HCP) suitable for the covered species that use this habitat type in amounts described in Table 2-55 of the BA and Table 5-5 of the HCP.
- Establishment of 512 acres of cattail (*Typha domingensis*)/bulrush (*Scirpus* spp.) marsh habitat for the covered species that use this habitat type in amounts described in Table 2-55 of the BA and Table 5-5 of the HCP.
- Establishment of 360 acres of backwaters for the covered species that use this habitat type in amounts described in Table 2-55 of the BA and Table 5-5 of the HCP.
- Perpetual maintenance of habitat created to replace that lost to “footprint” (non-flow related) impacts. The remaining habitat acreage will be maintained for at least the 50-year period covered by the permit and consultation. Created habitat lost to fire, drought, or flood will be restored to suitable condition or replaced elsewhere to ensure the total acreage of habitat is provided for the term of the LCR MSCP.
- Contributions to river-wide fire protection efforts by other Federal and state agencies.
- Planning process to select suitable sites for habitat restoration described.
- Augmentation of existing populations of razorback sucker in the LCR MSCP planning area to enhance these populations and provide for subsequent research and management programs.
- Augmentation of existing populations of bonytail and expansion of occupied area in the LCR MSCP planning areas to enhance existing populations and establish a new population and provide for subsequent research and management programs.
- Provision of \$500,000 to the Glen Canyon Dam Adaptive Management Work Group to support unfunded conservation needs of the humpback chub.
- Provision of \$400,000 for conservation measures in support of the flannelmouth sucker in the LCR.
- Provision of \$10,000 per year for 10 years to support planned, but unfunded, conservation actions to contribute to the recovery of the relict leopard frog.

- Provision of \$10,000 per year until 2030 (25 years of funding) to the Clark County Multi-Species Habitat Conservation Plan Rare Plant Workgroup to support unfunded conservation measures in support of the sticky buckwheat and threecorner milkvetch.
- Directed research into covered and evaluation species and their habitats, management actions and restoration technology for habitat restoration, and monitoring of species and their habitats.
- Establishment of a \$25 million dollar fund to support maintenance actions for existing covered species habitats on the LCR.
- Provision for specific avoidance and minimization measures to reduce the potential for take of covered species, and specific mitigation measures to offset take that has occurred. There are both general and species-specific measures included. In addition, there are monitoring and research measures that provide information on the species, their distribution, and habitat use to provide focus for the development of habitats. The general measures are listed below and are detailed in Chapter 5 of the HCP:
 1. Avoidance and Minimization Measure (AMM) 1: To the extent practicable, avoid and minimize impacts of implementing the LCR MSCP (Conservation Plan) on existing covered species habitats.
 2. AMM 2: Avoid impacts of flow-related covered activities on covered species habitats at Topock Marsh.
 3. AMM 3: To the extent practicable, avoid and minimize disturbance of covered bird species during the breeding season.
 4. AMM 4: Minimize contaminant loads in runoff and return irrigation flows from LCR MSCP-created habitats to the LCR.
 5. AMM 5: Avoid impacts of operation, maintenance, and replacement of hydroelectric generation and transmission facilities on covered species in the LCR MSCP planning area.
 6. AMM 6: Avoid or minimize impacts on covered species habitats during dredging, bank stabilization activities, and other river-management actions.
 7. Monitoring and Research Measure (MRM) 1: Conduct surveys and research to better identify covered and evaluation species' habitat requirements.
 8. MRM 2: Monitor and adaptively manage created covered species and evaluation species habitats.
 9. MRM 3: Conduct research to determine and address the effects of nest-site competition with European starlings on reproduction of covered species.
 10. MRM 4: Conduct research to determine and address the effects of brown-headed cowbird nest parasitism on reproduction of covered species.
 11. MRM 5: Evaluate selenium in created backwaters and marshes and evaluate effects of releasing selenium through dredging activities.
 12. Created Area Maintenance Measure (CMM) 1: Reduce risk of loss of created habitat to wildfire.
 13. CMM 2: Replace created habitat affected by wildfire.

Proposed Monitoring

The FWS will monitor compliance with the terms and conditions of the permit and the incidental take statement. The LCR MSCP HCP contains a comprehensive monitoring program that will assess the effectiveness of minimization and mitigation measures throughout the 50-year term of the permit and section 7 consultations with the Federal agencies. The goal of the monitoring program is to provide information and data necessary to assess compliance, to verify progress toward achievement of the biological goals for the species, and adapt management in accordance with monitoring results. Specific phases of the monitoring program are:

1. System monitoring: collect data on existing populations of covered species and their habitats to identify data gaps and research questions that relate to the successful implementation of the conservation plan.
2. Species research: based on the results of system monitoring, targeted species research will be identified and implemented to ensure the success of the habitat-creation components of the conservation plan.
3. Restoration research: identify effective technologies and practices to create the habitats for the covered species.
4. Post-development monitoring: once habitats are created, evaluate the progress toward suitable habitat for the covered species to evaluate success of the conservation plan. Documented use of the created habitats by the covered species is not required for habitat creation to be deemed successful, although habitat conditions on the created habitats should be comparable to occupied habitats.

In the LCR MSCP HCP, section 5.11 describes the monitoring program and section 5.12 describes how the results from the monitoring program will be incorporated into adaptive management strategies to provide for effective implementation of the conservation plan.

Analysis of Incidental Take

The effects of the proposed action on the affected species are fully analyzed in the EIS/EIR (incorporated herein by reference), LCR MSCP HCP, and biological and conference opinion for the proposed action. Take would occur as a result of implementation of flow-related and non-flow related present and future covered activities described in the LCR MSCP HCP and LCR MSCP BA and from implementation of the conservation measures of the LCR MSCP HCP. In the biological and conference opinion for the LCR MSCP, several categories of actions resulting in incidental take were identified:

1. Flow-related actions: habitat lost from water releases, diversions, storage decisions, and changes in points of diversion (Appendix C).
2. Non-flow related actions: habitat lost from “footprint” activities including present and future operation and maintenance of irrigation diversions and distribution facilities, power transmission facilities, creation of new agricultural areas, and river management structures (bank stabilization, levees, jetties) (Appendix C)

3. Creation of restoration sites: disturbances to covered species from covered activities that would create new suitable habitats and from creation and maintenance of habitats included in the conservation plan.
4. Environmental baseline-related actions: additional habitat loss likely to occur in the future due to the effects of actions in the baseline that have not been fully realized. This take has not been quantified, but is not a significant additional loss.
5. Other actions resulting in incidental take: disturbances during implementation of covered activities and implementation of the conservation plan, entrainment of fish into diversion structures or powerplant intakes, stranding due to water-level fluctuations, and losses due to vehicle use.

A full discussion of the effects of this incidental take is in the biological and conference opinion.

II. PUBLIC COMMENT

During its ten-year development, the LCR MSCP participants have provided opportunities for all interested parties to participate in, or remain aware of, the development of the LCR MSCP. The LCR MSCP program maintains a website with information on upcoming meetings, copies of meeting minutes, and other documents. In addition, three public scoping sessions were held in 1999, 2000, and 2003 during the development of the LCR MSCP. The Notice of Availability of the Draft LCR MSCP HCP, LCR MSCP BA, Receipt of the Application, and draft EIS/EIR for an Incidental Take Permit for 27 covered species was published in the Federal Register on June 18, 2004 (69 FR 34185). Approximately 360 copies of the draft documents were distributed to agencies, public libraries, Indian tribes, organizations, and individuals for review during the 60-day public review period that ended on August 18, 2004. Three public hearings were held, one each in Henderson, Nevada on July 20, 2004; Blythe, California on July 21, 2004; and Phoenix, Arizona on July 22, 2004.

The FWS received comments from 31 agencies, groups, or individuals and 1375 form letters originating from a message board operated by Defenders of Wildlife. We also had testimony from several individuals or representatives of agencies at the public hearings. The full text of comment letters and testimony, and the responses to those comments, are included in Volume V of the final LCR MSCP documents, which has been provided to the Regional Director under separate cover. The following summary of comments highlights the comments most important to the decision process.

Comment 1: Definition of the planning area.

Several commenters asked why the LCR MSCP did not cover the LCR upstream of Lake Mead (to Glen Canyon Dam) or down through Mexico. We responded that it was appropriate to address the Colorado River basin in terms of the origin of the proposed covered activities and division of management authority between the Upper and Lower Colorado River basins. The LCR MSCP is focused on water and power uses by the three Lower Colorado Basin states (Arizona, California, and Nevada) and the operation of USBR facilities that provide for those

uses. Effects to listed species in Grand Canyon due to operation of Glen Canyon Dam are covered under an existing program with completed section 7 compliance.

Analysis of the effects of the covered activities in the United States to the portion of the LCR in Mexico is not required under the Endangered Species Act. A recent court case concerning USBR analysis of effects of its LCR operations in the United States on endangered species in Mexico (Defenders of Wildlife v Norton, 257 F. Supp 2d 53 [2003]) affirmed this position. The LCR MSCP does include the LCR in the United States in Reach 7, where the eastern side of the river is in the United States. Effects to the lands in the United States in Reach 7 were considered in the analysis, and as potential sites for conservation areas.

Comment 2: Certainty of water supplies for the conservation areas.

Several commenters asked about the origin and reliability of the water supplies necessary for creation and maintenance of habitats. We responded that, as part of the site selection criteria for conservation areas, the availability of water would be a key component in selection of a particular site. All water would be obtained through sale or lease from willing water rights holders with no condemnation of rights. All water rights on the LCR are, at some point, subject to reduction during extreme shortage conditions. However, the LCR MSCP will evaluate the priority ranking of the affected water right in deciding to locate a project on particular lands. Those water rights with high priorities are desirable, since reductions there are less likely than for the lower priority rights. In the event of extreme drought that reduces water supplies and results in loss or degradation of the created habitats, the LCR MSCP would, at the end of the shortage period, be required to restore the habitats that were adversely affected.

Comment 3: The draft Implementing Agreement was not provided for public comment.

The Federal Register Notice of Availability for the LCR MSCP (69 FR 34185) indicated that the draft IA would be circulated for review with the draft EIS/EIR, HCP, and BA. Unfortunately, the draft IA was not ready at the start of the public comment period and, due to an editing error, reference to it was not removed from the Notice of Availability. The regulations for section 10(a)(1)(B) permits recommends that an IA be developed for complex HCP programs, and that it be provided to the public during the public review period. However, this is not a requirement. The final draft IA was attached to the final LCR MSCP HCP as an exhibit and available as a part of the public record for the LCR MSCP permit issuance. In addition to the IA, the LCR MSCP participants developed a final draft Funding and Management Agreement (FMA) that details the implementation mechanism for the program that was also attached to the final LCR MSCP HCP as an exhibit. These final drafts may be slightly modified by the permit applicants prior to signing; however, significant changes are not expected.

Comment 4: Definition of the action analyzed in the EIS/EIR.

Several commenters stated that the proposed action evaluated in the EIS/EIR should include the Federal and non-Federal covered activities that result in the incidental take of covered species.

We responded that the purpose of the EIS/EIR was to document the effects of the proposed action; in this case issuance of a section 10(a)(1)(B) permit by the FWS and the implementation of the conservation plan by Reclamation for the permittees as required by NEPA and the effects of that implementation for Metropolitan and the other California permit applicants as required by CEQA. Arizona and Nevada have no separate requirement for environmental compliance comparable to CEQA. The covered activities are those that have already completed NEPA and/or CEQA compliance at the time they were initially proposed, or they will have a requirement for compliance in the future when they are proposed for implementation. The section 10(a)(1)(B) permit process only provides coverage under the Act for these covered activities, and is not intended to meet NEPA, Clean Water Act section 404, or other compliance needs for future covered actions. Completion of the LCR MSCP EIS/EIR does not provide approval or compliance for the underlying covered activities for other Federal or state environmental laws. The alternatives in the EIS/EIR are properly focused on alternatives to implement the preferred action (the conservation plan), not on ways to implement the covered activities.

Comment 5: Modeling results are inadequate to assess effects to species.

The analysis of incidental take was accomplished in several ways, predominately through hydrology models examining changes in water flows and resultant effects to species habitats. The models used in the LCR MSCP were also used in the EIS and section 7 consultation for the Interim Surplus Criteria, Quantification Settlement Agreement, and Secretarial Implementation Agreements for the LCR. These models are described in great detail in Appendices J and K in Volume IV of the LCR MSCP documents. The models use either: (1) the drop in median river surface elevation to estimate groundwater declines due to lower flows resulting from changes in points of diversion to upstream points (groundwater level under the floodplain tracks the median water elevation in the river); or (2) the seasonal drop in river surface elevation to estimate changes to river channel, and backwaters/marshes with open connection to the river (these connected areas show immediate response to daily/seasonal fluctuations). The models assume that all cottonwood-willow habitat would be lost where the projected decline in groundwater elevation would result in changes in soil moisture that support covered species habitat. This does not underestimate the amount of habitat that could be lost, because it assumes that all vegetation on the land would die, not just that microclimates would be altered. The models for groundwater decline take into account areas along the river where, due to local conditions (reservoir ponding), no groundwater drop would be anticipated and those other areas of the historical floodplain supporting habitats that would not be subject to groundwater decreases due to other local conditions. Thus, the affected acres as given in the HCP are not equal to the total acres of that habitat type in the planning area. This was a point of confusion for some commenters.

Comment 6: Habitat restoration does not take into account all of the habitat needs for the covered species.

Habitat restoration contemplated in the LCR MSCP does take into account all the habitat components needed for the covered species over the 50-year term of the permit. The definition

of species habitat that would be affected by the covered activities takes into account both vegetative type and structure. Those same parameters will guide the initial development of habitats for those species under the conservation plan. During the construction of conservation plan habitats, monitoring and research on the needs of the species will be incorporated into the newly created habitats to ensure that the physical conditions in the created habitats meet all the needs of the species, not just the structural basics. The adaptive management program will have a considerable positive impact on the development of habitats for the covered species.

Comment 7: Mitigation and conservation for listed fish species.

Several commenters stated that the LCR MSCP focus on stocking large numbers of bonytail and razorback suckers into the LCR does not constitute effective mitigation or conservation for the species. We responded that the description of the conservation program for these fish species in the HCP inadequately described the program, and additional explanation is now included in the text. The initial focus for fish conservation is stocking, with intensive monitoring and research to determine the fate of stocked fish, habitat use, and other factors useful in defining future management actions. The number of fish actually stocked, and where they are stocked will be determined by the monitoring program and be subject to adaptive management. The HCP provides the option to use this funding for other research and management actions to identify additional opportunities to promote self-sustaining populations. Thus, the mitigation in the LCR MSCP provides for adult populations of these species in the wild (which also contributes to maintaining genetic diversity), identifies and provides a variety of habitats and habitat types for those populations, and enables research and monitoring to identify those areas with the greatest potential to have self-sustaining populations to meet recovery goals.

Comment 8: The LCR MSCP does not return the LCR to any semblance of its historical conditions.

Several commenters stated that the LCR MSCP maintained the current conditions and uses of the LCR at the expense of the listed species and that, without extensive physical changes to return the river to a natural system; there is no meaningful mitigation. Federal law does not require the LCR MSCP to result in returning the river to its historical conditions. The HCP process does not require a return to historical conditions. The effects of incidental take resulting from certain covered actions must be minimized and mitigated to the maximum extent practicable, and section 7 requires Federal agencies to ensure that their actions neither jeopardize listed species nor destroy or adversely modify their critical habitat. The baseline conditions that exist at the time the HCP is developed are an important component in the analysis, as are other legal constraints such as the Law of the River barring the elimination of dams, diversions, and other features. The conservation provided in the LCR MSCP HCP provides for the creation of natural habitats that offset the loss of existing habitat and, in many cases, are designed to contribute to the recovery of the species.

Comment 9: The Biological Assessment does not fully evaluate the effects of the actions on listed species or their critical habitat.

Reclamation has responded to this question by expanding the explanatory text in the BA relative to these evaluations.

Comment 10: Modeling done for Lake Mead elevations did not use the most recent information.

Reclamation has responded to this question by incorporating the most recent complete datasets on water years into the hydrology model and has re-run the model. The results of this modeling are included in Appendix J of the final LCR MSCP Volume IV.

Comment 10: The LCR MSCP fails to address the California Endangered Species Act.

The text in the EIS/EIR has been clarified on this point. All California agencies involved in the LCR MSCP will evaluate their obligations under California law and will comply with those laws as applicable. The California permit applicants are working with the CDFG to complete the requirements of CESA. The Federal agencies, and permit applicants in Arizona and Nevada are not subject to California law.

III. INCIDENTAL TAKE PERMIT CRITERIA-ANALYSIS AND FINDINGS

A. The taking of the affected species will be incidental to otherwise lawful activities.

Any take of the affected species will be incidental to the otherwise lawful implementation of the covered activities and the conservation measures, as specified in detail in the LCR MSCP HCP and in the biological and conference opinion. Any incidental taking of listed species for research or other conservation purposes will be covered under separate section 10(a)(1)(A) permits.

B. The Applicants will, to the maximum extent practicable, avoid, minimize, and mitigate the impacts of taking the affected species.

The LCR MSCP HCP contains measures, as summarized in this Findings document, to minimize and mitigate, to the maximum extent practicable, the impacts of take of the covered species under the permit and the incidental take statement of the biological and conference opinion for the Federal actions. In addition to the avoidance, minimization, and mitigation components of the HCP that support a determination that the HCP does mitigate to the maximum extent practicable, the HCP includes additional conservation measures that contribute to the recovery or stabilization of most of the covered species. These measures include:

1. conservation of more acres of habitat than required for full mitigation of habitat lost;
2. species-specific research on other threats that identifies actions that will be taken if those threats are significant. An example is MRM 3 for research on the effects of nest site competition with starlings for the cavity nesting covered bird species;
3. contributions to ongoing conservation programs that enhance the ability of such programs to evaluate or implement other conservation opportunities; and

4. coordination with present and future recovery efforts for listed species through evaluation of conservation actions (such as habitat creation technologies, monitoring of stocked fish survival and habitat use, and evaluation of selenium transit through river management activities).

C. The Applicant will ensure that adequate funding for the plan will be provided.

The IA and FMA for the LCR MSCP describe the full level of funding to implement all facets of the LCR MSCP HCP. The total cost is estimated at \$620,000,000 (with yearly adjustments for inflation), with 50% of the costs borne by the permit applicants and 50% borne by the U.S. government as represented by USBR. Information used to estimate the total cost of implementing the LCR MSCP HCP is found in Appendix N in Volume IV of the final LCR MSCP documents and in Chapter 7 of the final LCR MSCP HCP. The final draft IA and FMA document the agreed-upon cost share. These documents are herein incorporated by reference. Further evidence that causes the FWS to believe that the permit applicants will ensure adequate funding for the LCR MSCP includes:

1. letters dated August 17, 2004 from the states of Arizona, California, and Nevada to the Secretary of the Interior agreeing to fund the LCR MSCP for its full 50-year term;
2. the fact that the permit applicants who have agreed to fund the LCR MSCP have a consistent fiscal track record. Non-Federal parties have participated in the LCR MSCP for 10 years at an approximate cost of 4 million dollars;
3. the IA and FMA provide written funding assurances by the non-Federal parties;
4. the LCR MSCP is jointly funded by multiple contributors from the three states, rather than by a single contributor; and
5. the states are currently finalizing intra-state funding arrangements, which will provide each contributor with specific responsibilities for an amount of their contribution. These agreements will be ratified by the boards or other relevant authorities prior to the permit being issued.

D. The taking will not appreciably reduce the likelihood that the species will survive and recover in the wild.

The Act's legislative history establishes the intent of Congress that issuance criteria be based on a finding of "not likely to jeopardize" a species' continued existence and "not likely to destroy or adversely modify" designated critical habitat under section 7(a)(2) [see 50 CFR 402.02]. In addition, because proposed critical habitat for the southwestern willow flycatcher is present in the LCR MSCP action area, and 20 unlisted species are included as covered species for which incidental take authority will be permitted upon listing, we must also consider the requirements of formal conference to make determinations on likelihood of jeopardy for these unlisted species as if they were proposed to be listed as threatened or endangered, or adverse modification of proposed critical habitat. In the biological and conference opinion, we concluded that the issuance of the incidental take permit to the Applicants and the actions of Federal agencies described in the LCR MSCP BA will not likely jeopardize the continued existence of the covered

species. Designated and proposed critical habitat will not likely be destroyed or adversely modified.

E. Other measures, as required by the Director of the FWS, have been met.

The LCR MSCP HCP and proposed permit terms and conditions incorporate all elements that we have determined to be necessary for approval of the LCR MSCP HCP and issuance of the permit.

F. Alternatives.

As noted under the Proposed Action, the alternatives contained in the EIS/EIR evaluated a “no action” alternative, the proposed action, and two variants on the proposed action. None of these alternatives contained changes to the management of the river or changes in the other covered activities that could result in a reduction in the amount of incidental take. Alternative 3 has a lower amount of incidental take included only because the 6 listed species would be the only species covered by the permit. The EIS/EIR section 2.2 describes the alternatives considered but eliminated from detailed analysis. One class of these eliminated alternatives addressed changes to the physical management of the LCR through re-operation of dams, removal of dams, removal of bankline and levees, and conservation of water for environmental uses on the LCR. These alternatives all provided for the delivery of water to entities with valid contracts or other legal rights to LCR water. The second class of alternatives included a larger conservation plan or a shorter/longer permit duration. The following is a summary of why these alternatives were eliminated. Please refer to section 2.2 of the EIS/EIR for the complete text, which is incorporated herein by reference.

1. Alternative A: Re-operation of the LCR Without Modifications to Existing Structures. This alternative analyzed changing water release patterns to inundate key portions of the historical floodplain and provide for the reconnection of some parts of the floodplain to the river and restore natural river function. No existing dams or bankline stabilization would be removed. This alternative was eliminated because: (1) structural limitations within the dams reduce the amount of water that can safely be released. These limits preclude any releases that can mimic the high flows of the pre-dam hydrograph.; (2) natural hydrograph releases could violate the Law of the River in terms of releases of water without a request from a water user; (3) past incisement of the river channel has created a deep, scoured channel that can largely accommodate the level of flows that could be released from the dams without flows overtopping the channel and moving onto the floodplain to create overbank flooding; and (4) the potential for flood damage to human resources such as houses, businesses, diversion structures, and farmlands, along the river in violation of the Law of the River constrains the magnitude of flood releases.
2. Alternative B: Dam Removal. This alternative removes all dams on the LCR from Hoover Dam down to the SIB. This alternative was eliminated because: (1) loss of water and power resources for urban and agricultural uses in Arizona, California, and Nevada that account for a large portion of the economic production (particularly agricultural

production) in these states; (2) elimination of the dams would violate those portions of the Law of the River that authorize the creation and maintenance of dams on the LCR for river regulation, flood control, improved navigation, storage and delivery of water, and hydropower production. Significant modifications to existing legislation, agreements, and treaties would be required in order to consider this alternative. The social and economic costs are neither reasonable nor prudent.

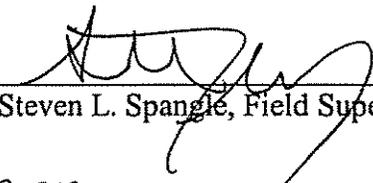
3. Alternative C: Removal of Banklines, Levees, and other Modifications to the LCR. This alternative evaluated the opportunity to reconnect the river to the historical floodplain without removing the dams or significantly altering the existing water releases (as described in Alternatives A and B). This alternative was eliminated due to: (1) existing incised channels and the lack of sediment in many parts of the system, particularly where overbank flooding could be advantageous; (2) difficulties in providing the proper flows to provide for channel erosion to contribute to instream sediments; (3) property damage resulting from elimination of stabilization and levees where erosion may take place; (4) violation of the Law of the River with regard to legislation for river control (Colorado River Front Works and Levee System) and flood control.
4. Alternative D: Use of Conserved Water for Environmental Uses on the LCR. This alternative identified other sources of water that could be used by current river users, identify and implement water conservation practices, and dedicate the conserved water to environmental purposes in the LCR. This alternative was eliminated due to: (1) the existence of ongoing water conservation programs by water users; (2) priority allocation systems for LCR water that require any water not used by a user with a higher priority be made available for use by a lower priority user; and (3) the Law of the River prohibits the Secretary of the Interior from releasing or delivering water other than to water users with valid contracts. The Law does not recognize instream flow as a beneficial use of water.
5. Alternative E: Larger-Scale Conservation Plan. This alternative examined a more extensive conservation plan that would provide for the restoration and protection of up to 70,000 acres of riparian, marsh, and backwater habitats in the LCR and adjacent suitable areas and would provide for the recovery of the listed species. This alternative was eliminated due to: (1) the goal of the LCR MSCP to contribute to the recovery of listed species is already beyond that needed to meet the requirements of a section 10(a)(1)(B) permit; and (2) the costs of a full recovery program were deemed too expensive.
6. Alternative F: Shorter or Longer Permit Duration. This alternative considered permits of greater or less than a 50-year duration. This alternative was eliminated due to: (1) the long-term duration of the effects of the covered actions, and the time over which they would be implemented did not allow for a shorter permit period; (2) the time to build and develop the conservation plan-created habitats required a longer time to ensure they would be properly implemented; and (3) the covered activities were developed based on reasonable predictions for water and power needs over time. Predictions beyond 50 years became more uncertain and more likely to change significantly. It was determined that this amount of uncertainty was too large to request a longer permit period.

IV. GENERAL CRITERIA AND DISQUALIFYING FACTORS-ANALYSIS AND FINDINGS

We have no evidence that the permit should be denied on the basis of the criteria and conditions set forth in 50 CFR 13.21(b)-(c). The applicants have met the criteria for the issuance of the permit and do not have any disqualifying factors that would prevent the permit from being issued under current regulations.

V. RECOMMENDATION ON PERMIT ISSUANCE

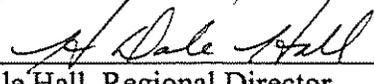
Based on the foregoing findings with respect to the proposed action, issuance of a permit to authorize the incidental taking of the 26 species listed in Appendix B by the LCR MSCP Permit Applicants as listed in Appendix A, in accordance with the final LCR MSCP HCP, IA and FMA is recommended.



Steven L. Spangle, Field Supervisor

3/4/05

Date

concur


Dale Hall, Regional Director

4/3/05

Date

Appendix A: Section 10(a)(1)(B) Permit Applicants

Arizona	<ul style="list-style-type: none"> • Arizona Department of Water Resources • Arizona Electric Power Cooperative • Arizona Game and Fish Department • Arizona Power Authority • Central Arizona Water Conservation District • Cibola Valley Irrigation and Drainage District • City of Bullhead City • City of Lake Havasu City • City of Mesa • City of Somerton • City of Yuma • Electrical District No. 3 • Golden Shores Water Conservation District • Mohave County Water Authority • Mohave County Irrigation and Drainage District • Mohave Water Conservation District • North Gila Valley Irrigation and Drainage District • Salt River Project Agricultural Improvement and Power District • Town of Fredonia • Town of Thatcher • Town of Wickenburg • Unit “B” Irrigation and Drainage District • Wellton-Mohawk Irrigation and Drainage District • Yuma County Water Users Association • Yuma Irrigation District • Yuma Mesa Irrigation and Drainage District
California	<ul style="list-style-type: none"> • Bard Water District • Coachella Valley Water District • City of Needles • Colorado River Board of California • Imperial Irrigation District • Los Angeles Department of Water and Power • The Metropolitan Water District of Southern California • Palo Verde Irrigation District • San Diego County Water Authority • Southern California Edison • Southern California Public Power Authority

Nevada	<ul style="list-style-type: none">• Basic Water Company• Colorado River Commission of Nevada• Nevada Department of Wildlife• Southern Nevada Water Authority
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Note: Final list of permit applicants will be in the final Implementing Agreement and Funding and Management Agreements prepared for this permit.

Appendix B: Covered Species for LCR MSCP

Listed Species

Yuma clapper rail (*Rallus longirostris yumanensis*): endangered
 Southwestern willow flycatcher (*Empidonax traillii extimus*): endangered with proposed critical habitat
 Desert tortoise (*Gopherus agassizii*): threatened with designated critical habitat
 Bonytail (*Gila elegans*): endangered with designated critical habitat
 Humpback chub (*Gila cypha*): endangered
 Razorback sucker (*Xyrauchen texanus*): endangered with designated critical habitat

Candidate Species

Yellow-billed cuckoo (*Coccyzus americanus occidentalis*)
 Relict leopard frog (*Rana onca*)

Non-listed Species

Western red bat (*Lasiurus blossevillii*)
 Western yellow bat (*Lasiurus xanthinus*)
 Colorado River cotton rat (*Sigmodon arizonae plenus*)
 Yuma hispid cotton rat (*Sigmodon hispidus eremicus*)
 Western least bittern (*Ixobrychus exilis hesperis*)
 California black rail (*Laterallus jamaicensis corturniculus*)
 Elf owl (*Micrathene whitneyi*)
 Gilded flicker (*Colaptes chrysoides*)
 Gila woodpecker (*Melanerpes uropygialis*)
 Vermilion flycatcher (*Pyrocephalus rubinus*)
 Arizona Bell's vireo (*Vireo bellii arizonae*)
 Sonoran yellow warbler (*Dendroica petechia sonorana*)
 Summer tanager (*Piranga rubra*)
 Flat-tailed horned lizard (*Phrynosoma mcalli*)
 Flannelmouth sucker (*Catostomus latipinnis*)
 MacNeill's sootywing skipper (*Pholisora graciellae*)
 Sticky buckwheat (*Eriogonum viscidulum*)
 Threecorner milkvetch (*Astragalus geyeri* var *triquetrus*)

Desert pocket mouse (*Chaetodipus penicillatus sobrinus*): In our evaluation of the LCR MSCP HCP, we determined that there was insufficient information to support inclusion of the desert pocket mouse as a covered species. We recommended that the LCR MSCP consider the desert pocket mouse as an evaluation species.

Appendix C: Quantified incidental take in acres and miles of river resulting from habitat loss due to implementation of the Federal and non-Federal covered actions

Table 1: Habitat loss in acres

Species Name	Flow Related Actions	Non-Flow Related Actions	Restoration Loss	Total Acres/Miles Lost
Yuma clapper rail	133 acres	100 acres	10 acres	243 acres
Southwestern willow flycatcher	1,734 acres	59 acres	10 acres	1,853 acres
Desert tortoise	0 acres	192 acres	0 acres	192 acres
Bonytail	399 acres	0 acres	0 acres	399 acres
Humpback chub +	62 miles	0 miles	0 miles	62 miles
Razorback sucker	399 acres	0 acres	0 acres	399 acres
Western red bat *	161 acres	604 acres	0 acres	765 acres
Western yellow bat *	161 acres	604 acres	0 acres	765 acres
Desert pocket mouse #	0 acres	0 acres	0 acres	0 acres
Colorado River cotton rat	59 acres	3 acres	5 acres	67 acres
Yuma hispid cotton rat	0 acres	71 acres	5 acres	76 acres
Western least bittern	133 acres	100 acres	10 acres	243 acres
California black rail	37 acres	61 acres	5 acres	103 acres
Yellow-billed cuckoo	1,425 acres	99 acres	10 acres	1,534 acres
Elf owl	161 acres	590 acres	0 acres	751 acres
Gilded flicker	1,425 acres	99 acres	10 acres	1,534 acres
Gila woodpecker	819 acres	26 acres	10 acres	855 acres
Vermilion flycatcher	1,890 acres	714 acres	10 acres	2,614 acres
Arizona Bell's vireo	1,654 acres	1,309 acres	20 acres	2,983 acres
Sonoran yellow warbler	2,929 acres	183 acres	10 acres	3,122 acres
Summer tanager	161 acres	14 acres	0 acres	171 acres
Flat-tailed horned lizard	0 acres	128 acres	0 acres	128 acres
Relict leopard frog #	0 acres	0 acres	0 acres	0 acres
Flannelmouth sucker	85 acres	0 acres	0 acres	85 acres
MacNeill's sootywing skipper	172 acres	50 acres	0 acres	222 acres
Sticky buckwheat ^	ND	0 acres	0 acres	ND
Threecorner milkvetch ^	ND	0 acres	0 acres	ND

Notes: + the maximum amount of riverine habitat at the lower end of the Grand Canyon that could be present depending on water elevation levels of Lake Mead.

* for these bats, habitat lost is riparian areas with large trees used as roosts.

no habitat loss from covered actions is anticipated.

^ the amount of habitat lost for these plants has not been determined, but is related to water elevation levels of Lake Mead.

Table 2: Extent of existing and new facilities that will require maintenance activities over the life of the consultation and permit.

Type of Activity	Existing Area	New Area	Total
River channel (dredging, wash fan removal)	275 miles	0	275 miles
Stabilized bankline (repair riprap)	336 miles	13.9 miles	349.9 miles
Levees (grade roads, repair riprap)	114 miles	0	114 miles
Settling basins: basin area	445 acres	0	445 acres
disposal sites	1,900 acres	0	1,900 acres
Stockpiles	864 acres	1 acre	864 acres
Associated roads	380 miles	1 mile	381 miles
Jetties (clear access, dredge, replace rock)	102 jetties	41 jetties	143 jetties
Training structures (clear access, replace rock)	25 structures	0	25 structures
Drainage pump outlet structures (remove vegetation and sediment)	122 acres	0	122 acres
Drains and siphons (remove vegetation and sediment)	7.5 acres	0	7.5 acres
Yuma Mesa Conduit (vegetation removal)	4.5 acres	0	4.5 acres
Boat ramps (vegetation trimming)	3.5 acres	0	3.5 acres
Backwaters: inlets and outlets (dredged)	42 backwaters	0	42 backwaters
mitigation responsibility	31 backwaters	0	31 backwaters
maintenance responsibility	65 backwaters	0	65 backwaters
Canals and drains (vegetation and sediment removal)	557 miles	0 *	557 miles
Fish habitat enhancement	0 ^	308 acres	308 acres

Notes: *The extent of new canals and drains that would have to be developed for the habitat restoration component of the Conservation Plan has not been determined. It is assumed that these facilities would be maintained to prevent the establishment of marsh or riparian habitats within their footprint.

^There are existing areas of fish habitat-enhancement structures within the LCR MSCP planning area; however, the agencies responsible for placing the structures have not requested coverage for their maintenance or replacement except as described in the BA and HCP.