
RECORD OF DECISION

BUREAU OF RECLAMATION

FINAL ENVIRONMENTAL IMPACT STATEMENT

ALL-AMERICAN CANAL LINING PROJECT IMPERIAL COUNTY, CALIFORNIA

MAY 1994

I. INTRODUCTION

This document constitutes the Record of Decision of the Department of the Interior, Bureau of Reclamation (Reclamation), regarding implementation of the All-American Canal Lining Project (Project). The Project was authorized by Congress in Title II of Public Law 100-675, which provides for non-Federal funding of the Project along part of the existing unlined All-American canal which is under Federal ownership.

Four action alternatives were developed in compliance with the National Environmental Policy Act (NEPA), and documented in the Final Environmental Impact Statement, All-American Canal Lining Project, Imperial County, California, March 1994 (FEIS Number INT-94-9), which was filed with the Environmental Protection Agency on April 14, 1994, and noticed in the Federal Register on April 19, 1994.

The water conserved by the Project would be available for use by the Palo Verde Irrigation District, Imperial Irrigation District (IID), Coachella Valley Water District (CVWD), and The Metropolitan Water District of Southern California (MWD) (California Contractors) in accordance with the California Seven Party Agreement and Title II of Public Law 100-675.

II. ALTERNATIVES CONSIDERED

Four Action alternatives and the No Action alternative were evaluated in the April 1994, FEIS:

1. The Parallel Canal Alternative which consists of constructing a new concrete-lined canal parallel to 23 miles of the earthen All-American Canal, beginning approximately 1.6 miles downstream of Pilot Knob and ending at Drop 3. This alternative

would conserve an estimated 67,700 acre-feet per year of Colorado River water. The Parallel Canal Alternative is cited as the preferred alternative in the Final Environmental Impact Statement.

2. The Drop 3 Alternative which consists of constructing an in-place underwater lining from Pilot Knob to Drop 3, conserving approximately 66,700 acre-feet per year.

3. The Drop 4 Alternative which consists of constructing an in-place underwater lining from Pilot Knob to Drop 4, conserving approximately 68,700 acre-feet per year.

4. The Well Field Alternative which consists of drilling wells and pumping water back into the existing canal between Pilot Knob and Drop 2, recovering approximately 68,000 acre-feet per year. The Well Field Alternative is the environmentally preferred alternative.

5. The No Action Alternative which consists of allowing the canal to remain unlined and the current seepage loss to continue.

The four action alternatives include mitigation measures to compensate for potential impacts on fish and wildlife habitat.

III. SAN LUIS REY INDIAN WATER RIGHTS SETTLEMENT

Title I of Public Law 100-675 directs the Secretary of the Interior (Secretary) to provide a supplemental water supply of 16,000 acre-feet per year for the benefit of the La Jolla, Rincon, San Pasqual, Pauma, and Pala Bands of Mission Indians (Bands) and the City of Escondido, Escondido Mutual Water Company, and Vista Irrigation District (local entities). There is a potential that 16,000 acre-feet per year or less of the water made available by the Project may be provided to the bands and local entities through negotiated contractual arrangements with the MWD and the San Diego County Water Authority as part of the water rights settlement. If a decision is reached to provide water conserved by the Project, any NEPA compliance required will be conducted. Such NEPA compliance, if required, would not affect the mitigation required or the decision on the Project discussed in this Record of Decision.

IV. BASIS FOR DECISION

Section 203 of Public Law 100-675 authorizes the Secretary to line the previously unlined portions of the Project from the vicinity of Pilot Knob to Drop 4 or construct a new lined canal, or construct seepage recovery facilities. Section 203 also authorizes the Secretary to implement measures for the

replacement of incidental fish and wildlife values adjacent to the canal or mitigation of resulting impacts of fish and wildlife resources resulting from construction of a new canal or a portion thereof. The water conserved would be made available for beneficial consumptive use by the California Contractors as stipulated in Title II of Public Law 100-675.

The Well Field Alternative would have the least environmental impact and would produce the conserved water at the lowest cost. However, it was not selected because of international concerns related to pumping from a transboundary groundwater aquifer. Other reasons for not selecting the Well Field Alternative include potential impacts to All-American Canal water quality, high operation and maintenance costs, and the significant amount of electrical energy needed to operate the Well Field. A lined canal (underwater lining or parallel canal) was determined to be a more straight-forward, reliable method of reducing All-American Canal seepage.

While land disturbance impacts would be minimal under the underwater lining alternatives, they were not selected because of higher estimated construction costs. In addition to cost, the constructibility of lining a portion of the All-American Canal using the in-place lining technique has yet to be demonstrated. Lastly, the Drop 4 Alternative would impact the 1,430 acre wetlands complex between Drop 3 and Drop 4.

Consequently, the Parallel Canal Alternative has been selected from among the canal lining alternatives because it has the lowest construction cost estimate, uses a well established construction method, and would have the shortest construction period. This alternative avoids disturbance of the 1,430 acre wetland complex between Drop 3 and Drop 4, and disturbance of cultural resources in the Pilot Knob Area of Critical Environmental Concern. While construction of a Parallel Canal could potentially cause significant impacts to the environment, measures that avoid, minimize, or compensate for such environmental impacts, are included with this alternative, as described in the FEIS and included in Attachment A of this Record of Decision.

The mitigation measures were developed through coordination with Federal and California resource agencies in an interagency biological work group. Agencies represented were the U.S. Fish and Wildlife Service (FWS), U.S. Bureau of Land Management (BLM), California Department of Fish and Game (CDFG), Reclamation, IID, CVWD, and MWD.

V. DECISION

The decision is to construct the Parallel Canal Alternative, with associated mitigation measures, outlined in Attachment A, and is the preferred alternative in the FEIS.

VI. PUBLIC RESPONSE TO FINAL ENVIRONMENTAL STATEMENT

Following the Federal Register Notice of Availability of the FEIS on April 15, 1994, Reclamation received one letter of comment on the FEIS. Significant comments are summarized below together with Reclamation's responses.

Comment. Reclamation should indicate that the consultation with Mexico satisfied the requirements of Executive Order 12114 - Environmental Impacts Abroad of Major Federal Actions.

Response. This has been indicated below under the heading of Impacts on Mexico.

Comment. Reclamation should indicate that while the Project would provide a greater amount of useable water supply from the Colorado River, the Project would reduce the flow of the river downstream from Parker Dam.

Response. This has been discussed below under the heading of Status of Consultation on Special Status Species.

VII. ALTERATION OF PROJECT PLAN IN RESPONSE TO PUBLIC COMMENT

Public comments on the FEIS did not result in changes to the Project plan.

VIII. STATUS OF CONSULTATION ON SPECIAL STATUS SPECIES

Wetlands vegetation grows along the canal, which provides habitat for various species of wildlife, including the Yuma clapper rail listed as endangered under the Federal Endangered Species Act (ESA). This vegetation has emerged since the canal was constructed and is sustained by canal seepage. The Parallel Canal Alternative avoids the section of canal that supports most of the wetlands vegetation, and provides for replacement of the remaining vegetation that would be lost. FWS participated in the formulation of the Project mitigation commitments (Attachment A). Reclamation's assessment is that, with this mitigation, the Project will have no effect on the Yuma clapper rail .

The FWS concurred with Reclamation's assessment that the Project would have no adverse effect on Yuma clapper rails along the

canal because impacts to Yuma clapper rail habitat, between Drop 3 and Drop 4, would be avoided by stopping the lined canal at Drop 3 (Memorandum, FWS to Reclamation, July 5, 1994, Attachment B).

The Colorado River, along the last 40 miles above Imperial Dam, has an irregular channel with numerous backwaters on a flood plain that contains abundant riparian habitat. The aquatic habitat supports a variety of wildlife, including the federally endangered Yuma clapper rail, and this portion of the river has been designated as critical habitat for the endangered razorback sucker. It is estimated that the Project would lower the level of the river by about 1/2 inch in this reach.

The river's fluctuating water level creates a dynamic system of river, backwaters, and wetlands in which it is difficult to make meaningful correlations between hydraulic changes caused by the Project and habitat for special status species. The Project effect on river flow would be unmeasurable against the continual fluctuation in flow and the continual change in river channel shape. There is no clear indication of impact by the Project. To ensure the Project does not cause an adverse change to wildlife habitat along the Colorado River, the FEIS includes funding of \$100,000 for habitat restoration work, which would be managed through the Lower Colorado River Management Work Group Backwaters Committee.

The FWS concurred with Reclamation's assessment that the Project would not adversely affect Yuma clapper rails along the Colorado River backwaters. This determination was made because the decrease in water level would not appreciably alter the wetland habitat along the backwaters that are used by Yuma clapper rails. The FWS also concurred with Reclamation's assessment that the Project would not adversely affect razorback suckers and would not adversely modify their critical habitat on the Colorado River. The FWS reached this conclusion because the minor decrease in water level would not be expected to alter razorback sucker habitat (Memorandum, FWS to Reclamation, July 5, 1994).

The parallel canal would occupy desert land containing habitat of six candidate species consisting of two reptiles, one invertebrate, and three plants. Two of these species, the flat tailed horned lizard and Peirson's milkvetch, are proposed for listing as federally threatened and endangered, respectively. The other four candidate species, the Colorado Desert fringed-toed lizard, Andrew's dune scarab beetle, silver-leaved dune sunflower, and sand food share habitat in the Sand Hills. A Federal Agency is required to confer with the FWS on any action that is likely to jeopardize the continued existence of any species proposed for listing under the ESA. In contrast, candidate species receive no Federal protection under the Act. However, a candidate species should be considered in Project

planning and if listed before Project completion, formal consultation will be required pursuant to Section 7 of the ESA.

The FWS and Reclamation have previously agreed, through discussions in the Project's biological work group, to treat proposed and candidate species as if they were listed. The benefits of this approach are two-fold. First and foremost, the mitigation plan would be expected to reduce the Project impacts on the species of concern. Second, this approach should enable Reclamation to proceed with the Project with minimal delay in the event that any of these species does become listed prior to completion of the Project. For the purpose of developing a mitigation plan for the Project the FWS prepared a Final Fish and Wildlife Coordination Act Report (September 1993) and participated in the formulation of Project mitigation commitments (Attachment A).

The FWS and Reclamation have resolved most issues and are working in good faith to resolve the remaining issues regarding the proposed and candidate species. Even though the agencies are in fundamental agreement with the substance of the mitigation plan for the Project, the Project would still result in the loss of individuals and habitat for these species. For this reason the FWS cannot concur with Reclamation's finding that the Project would have no effect on the proposed and candidate species. The FWS recommends that Reclamation request a conference opinion for the proposed species, flat-tailed horned lizard and Peirson's milkvetch. The FWS would append to the conference opinion an analysis of the four candidate species. The conference opinion issued may be adopted as the biological opinion if any of the species of concern are listed prior to Project completion. In this manner, the Project would not be subjected to any unnecessary delays. The conference opinion would also formalize the impact analysis, and mitigation plans for the species of concern (Memorandum, FWS to Reclamation, July 5, 1994). Reclamation commits to request a conference opinion from the FWS and will participate in developing an opinion that can be adopted for the species of concern. Those California Contractors' choosing to participate in Project funding and construction would be included in the conference opinion process as cooperating agencies.

IX. IMPACTS ON MEXICO

Most of the seepage from the All-American Canal between Pilot Knob to Drop 4 flows underground across the International Boundary with Mexico. In Mexico this seepage water commingles with groundwater from other sources and is pumped for agricultural use in the Mexicali Valley. The amount of water to be conserved by the Project represents approximately 12 percent of the total groundwater recharge to the Mexicali Valley. The

degree to which the loss of this water will affect Mexico depends on the degree to which Mexico pumps in the future.

The proposed Project and its effects on the Mexicali Valley fall within the purview of the 1944 Water Treaty (Treaty) between the United States and Mexico. Under Point 6 of Minute 242, of the International Boundary and Water Commission (IBWC), the United States Section of IBWC (USIBWC), which receives diplomatic guidance from the United States Department of State, initiated a consultation with Mexico regarding the Project in 1990. The United States Government has asserted to the Government of Mexico that the United States reserves the right to recover the waters of the Colorado River reserved to the United States under the 1944 Water Treaty that are conveyed in the All-American Canal.

The consultation with Mexico includes a variety of technical and political issues associated with the proposed canal lining Project and the ground and surface water in the vicinity of the International Boundary. The consultation has included technical briefings by USIBWC regarding the proposed Project, and technical briefings by the Mexican Section of the IBWC regarding the effect of the proposed Project on the ground water and surface water in the eastern part of the Mexicali Valley.

The United States does not consider that it has an obligation to mitigate for such effects in Mexico that may result from continued pumping by Mexico at rates that include AAC seepage. However, as a matter of goodwill only, and not in any way assuming responsibility for loss of water in Mexico or in any way setting a precedent, the United States Government considers it appropriate to assist Mexico in its efforts to adjust for the loss of the seepage water, and thus encourages the contractors participating in the lining of the All-American Canal to:

1. Set aside a flow capacity of 500 cfs in the proposed lined All-American Canal to facilitate delivery of a portion of the water allocated to Mexico under the 1944 Water Treaty through the All-American Canal; and
2. Determine the cost of this additional capacity in terms of incremental costs of construction, operation and maintenance; and
3. Establish a period prior to the start of construction during which the United States Government will advise the participating contractors as to the method of Mexico's repayment of the referenced incremental costs.

In the event that such assistance to Mexico is provided, the United States Government would implement the following provisions:

1. The salinity calculation under Minute No. 242 would be modified to be calculated based on the weighted average salinity of water delivered at the Northerly International Boundary (NIB) and through the AAC for Mexico.
2. Prospective adjustments would be made in the deliveries to Mexico at the NIB to account for instances when the Gila River flows would have met the deliveries to Mexico instead of mainstem deliveries through the AAC.
3. Mexico would share pro-rata in water losses for the AAC reaches used for Mexico.

The FEIS incorporates information regarding impacts to Mexico obtained in coordination with USIBWC, including Mexico's ground-water impact analysis, whose publication the USIBWC judged would not affect the consultation. The technical and political matters involved in the consultation are being documented by USIBWC, and those aspects that will not require safeguarding of confidentiality will be made public at the conclusion of the consultation and upon concurrence by the Department of State.

The FEIS complies with Executive Order 12114 - Environmental Impacts Abroad of Major Federal Actions, January 4, 1979 (E.O.), and addresses the treatment of international effects in environmental compliance documents. The E.O. provides among other things that (1) Federal agencies involved in actions with significant environmental impacts outside of the United States must provide information to Federal decision makers so that the effects may be evaluated with other pertinent considerations of national policy, (2) activities involving foreign governments be coordinated through the Department of State, and (3) pertinent information may be withheld from other agencies and nations when necessary to avoid adverse impacts to foreign relations and ensure appropriate reflection of diplomatic factors.

Reclamation has complied with the E.O. by informing USIBWC of the Project and by providing technical support to USIBWC for the consultation. USIBWC has kept the Department of State informed of the process and has received guidance from that agency. USIBWC also counseled Reclamation regarding the diplomatic sensitivities of the issues involved, and advised Reclamation to limit dissemination of information regarding Project impacts to Mexico to avoid jeopardizing the consultation and diplomatic relations with Mexico.

X. IMPLEMENTING THE DECISION AND ENVIRONMENTAL COMMITMENTS

IID proposes to implement the Project, including mitigation measures, with funds provided by the MWD. The conserved water would be used by MWD, except when the water may be used by Palo Verde Irrigation District, IID, or CVWD, in which case MWD would be reimbursed monetarily for such use.

Reclamation, on behalf of the Secretary, proposes to execute a construction and funding contract with IID, MWD, and the CVWD concerning the respective responsibilities of the Secretary and the districts regarding Project construction and operation, including implementation and maintenance of mitigation measures, and other applicable provisions of Reclamation Law and Title II of Public Law 100-675. No Federal Funds have been appropriated for construction of the Project.

MWD and IID have proposed a mitigation agreement be executed among IID, MWD, Reclamation, FWS, BLM, and CDFG which would address the process by which the mitigation and monitoring commitments would be developed and implemented. Under the proposed mitigation agreement, IID would develop and implement the biological mitigation commitments contained in the FEIS and included in Attachment A, subject to review by a biological mitigation review team consisting of one representative of each signatory party. All costs of mitigation under the mitigation agreement would be funded by MWD.

During the design phase of the Project, IID would prepare an environmental commitment plan for the Project for approval by Reclamation. The environmental commitment plan would outline the verification and monitoring procedures by which the environmental commitments made in the FEIS and included in Attachment A, would be implemented. The environmental commitment plan may be included in the mitigation agreement proposed by MWD and IID, which would be executed among MWD, IID, Reclamation, FWS, BLM, and the CDFG.

Specific monitoring and evaluation procedures would be developed by IID and approved by Reclamation to track the effectiveness of mitigation measures for fish and wildlife habitat, and to serve as the basis to assess the need for any remedial mitigation measures needed to satisfy the environmental commitments. IID would conduct the environmental monitoring program.

Reclamation would oversee the implementation and monitoring of the environmental commitments. More specifically, Reclamation will ensure that:

1. The environmental commitments set forth in the FEIS and subsequent environmental commitment plan are formally adopted by IID.

2. Site-specific mitigation and monitoring measures are designed by IID in accordance with the FEIS, applicable Federal Laws and Reclamation policies, guidelines, and regulations, which are implementable, enforceable, and effective for each environmental impact they are intended to mitigate; and that the mitigation measures are implemented, maintained and monitored for the life of the Project at the expense of the participating contractors, in accordance with Title II of Public Law 100-675.

3. Interagency coordination and consultation is conducted regarding site-specific mitigation design with appropriate agencies, including the FWS, BLM, and CDFG.

There are no unresolved environmental issues.

XI. SIGNATURES

Recommended

William E. Risie
Regional Environmental Officer
Lower Colorado Region

Date 07/27/94

Approved

Lawrence L. Hancock
Regional Director
Lower Colorado Region

Date 7/29/94

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ATTACHMENT A

ALL-AMERICAN CANAL LINING PROJECT, IMPERIAL COUNTY CALIFORNIA

Chapter VII

MAY 1994

ENVIRONMENTAL COMMITMENTS

This chapter summarizes the environmental commitments made for the preferred alternative (Parallel Canal Alternative) in this final environmental impact statement/final environmental impact report and would be reflected in Reclamation's environmental commitment plan. These commitments were developed in consultation with the interagency biological work group consisting of biologists and other technical representatives from the project sponsors, the Bureau of Reclamation (Reclamation), the U.S. Fish and Wildlife Service (FWS), the Bureau of Land Management (BLM), and the California Department of Fish and Game (CDFG). Fish and wildlife mitigation measures would be implemented prior to or during construction.

AIR QUALITY

Air quality regulations of Imperial County would be observed, including permits covering excavation and equipment operation. Dust from construction activities would be localized and would be controlled by sprinkling access roads and work areas with water.

WETLANDS HABITAT ALONG THE ALL-AMERICAN CANAL

Mitigation Plan

The Parallel Canal Alternative achieves the mitigation goal of "avoidance of impact" to the maximum degree possible. Mitigation for the unavoidable impacts to other wetlands vegetation would be achieved by replacing lost riparian habitat values and 1 acre of marsh vegetation through habitat creation in and adjacent to the Drops 3 and 4 wetlands complex.

Forty-three acres of honey mesquite and/or cottonwood/willow (24 acres for canal bank vegetation and 19 acres for other wetlands vegetation) and 1 acre of marsh would be established in the wetlands complex. The number of plantings in riparian vegetation mitigation sites would be designed to achieve a density of about 100 mature trees per acre, pursuant to research completed along the lower Colorado River. Planting honey mesquite/quailbush associations may be appropriate in areas of high-salinity soils. Specific vegetative establishment sites would be selected based upon physical and biologic suitability criteria (e.g., soil electroconductivity and

texture, depth to ground water, topography, presence or absence of other vegetation), avoidance of disruption of existing riparian and marsh vegetation, and maximization of value to specific wildlife species of special concern, such as the federally endangered Yuma clapper rail and California black rail.

Based on the guidelines above, a site-specific plan for mitigation would be developed and approved. The plan would be reviewed and approved by the appropriate entities prior to implementation. Improvements would be in place prior to disturbance of wetlands located between Drops 2 and 3.

Monitoring Plan

A monitoring plan would also be implemented. The mitigation site would be monitored monthly during the first and second year growing seasons, twice annually during years 3 through 5, and annually for years 6 through 10. The site would then be monitored in postplanting years 15, 20, and 25. The mitigation plan would be reviewed following each survey year to see if plan modifications or corrective actions are required. In addition, the Drops 3 to 4 wetlands complex would be monitored for nonproject-related changes.

Ground-water elevation shall be monitored within the wetland between Drops 3 and 4. If ground-water elevation decreases as a result of the project, Reclamation shall initiate discussions with the sponsors and FWS to identify and implement reasonable measures to ensure maintenance of existing values within the wetland. Special attention shall be given to maintenance of Yuma clapper rail and black rail habitat.

WETLANDS HABITAT ALONG THE COLORADO RIVER

To ensure that the project does not cause an adverse change to wetlands along the Colorado River, the project sponsors would provide \$100,000 in funding for backwater restoration and enhancement on the Colorado River between Parker Dam and Imperial Dam.

TERRESTRIAL HABITAT

Impacts to the terrestrial habitats of special status species would be compensated for as specified under "Special Status Species." This compensation would be in accordance with Public Law 100-675, Section 203. In areas disturbed by construction, vegetation would be crushed rather than bladed whenever possible. In vegetated areas requiring blading, topsoil would be stripped and stockpiled prior to disturbance. Before the construction site is abandoned, it will be recontoured to approximate original topography, and the surface soil materials will be replaced to facilitate natural revegetation.

SPECIAL STATUS SPECIES

Candidate areas for construction staging, borrow, and/or disposal activities which occur where special status plant or animal species are likely to occur would be surveyed by qualified biologists representing project sponsors and resource agencies. Construction plans would be modified to the extent possible to avoid impacts to special status species habitats.

Yuma Clapper Rail and California Black Rail

Under the preferred alternative, impacts are avoided.

Flat-Tailed Horned Lizard

To compensate for the loss of flat-tailed horned lizard habitat, pursuant to the compensation formula, the project sponsors will acquire lands in the vicinity of the AAC based on an acre-for-acre (1:1) compensation ratio. Ecological equivalency will be the primary selection criteria. These lands would be of habitat value comparable to the lands lost to the project.

These compensation lands would be transferred to BLM. Agreements with BLM would stipulate that these lands will be protected from land uses that could endanger the continued existence of the flat-tailed horned lizard. Implementation of this commitment would be coordinated through the biological work group.

Plants

For loss of sand dune habitats which are utilized by other special status plants and animal species, lands would be acquired within the Algodones Dunes area and transferred to BLM.

Prior to construction, abundance and habitat characterization studies would be conducted for Pierson's milkvetch, sand food, Wiggin's croton, and silver-leaved dune sunflower plants in the area that could be disturbed by project activities.

If sufficient lands are not available for acquisition to achieve an acre-for-acre

replacement, Reclamation or the project sponsors would fund a multispecies conservation plan for the sand dune species. Funding also will be provided for implementation of the conservation plan to equal the estimated cost of acquiring sufficient lands to meet the acre-for-acre replacement requirement minus the cost of developing the conservation plan and the cost of lands actually acquired and transferred to BLM.

To the extent possible, construction of staging areas and the batch plant would be limited to previously disturbed areas and would avoid areas where individuals of these species are relatively numerous. Qualified biologists from Reclamation, FWS, and CDFG would accompany the responsible engineers and/or contractors onsite to recommend areas to be used as borrow, disposal, and equipment staging areas.

Terrestrial habitat for the candidate species associated with blow-sand habitat would be surveyed prior to construction of staging areas and the batch plant. To the extent possible, construction of these facilities would be limited to previously disturbed areas and would avoid areas where individuals of these species are relatively numerous. The blow-sand habitat along the new canal would be expected to recover within a few years after the completion of construction, and the species of concern are expected to recolonize the area.

Colorado Fringe-Toed Lizard and Andrew's Dune Scarab Beetle

Since both the Colorado fringe-toed lizard and Andrew's dune scarab beetle inhabit the same habitat as the candidate plant species, impacts to the Colorado fringe-toed

lizard and Andrew's dune scarab beetle will be compensated by implementation of the dunes habitat commitment.

POSTCONSTRUCTION SURVEY

At the conclusion of construction, a project area wide survey would be conducted to quantify actual construction impacts.

LARGE MAMMAL ESCAPE

Concrete ridges would be incorporated into project design and would run continuously for entire length of the lined canal.

Deflector systems, such as cables with visible buoys, would be installed and maintained upstream of all drop structures to direct large mammals to escape ridges.

CANAL FISHERY

One hundred ninety-seven super reefs would be installed and maintained in the lined portion of the AAC. Location of the reefs in the canal would be determined by Imperial Irrigation District (IID), in consultation with the interagency biological work group, to ensure compatibility with resource agencies policies.

The number (197) and size (16 by 50 feet) of the artificial reefs are based on research data from studies conducted in canal systems in California and Arizona.

If further research indicates that artificial reefs would be insufficient or inadequate, the following alternatives would be implemented in order of preference:

- Channel catfish would be stocked at rates required to maintain the channel catfish population at levels approximating preproject levels. Project sponsors would fund the stocking program. The stocking plan would be prepared by CDFG and reviewed and approved by IID prior to completion of construction.
- Fish habitat would be created or improved in one or more IID regulating reservoirs. IID would develop a detailed fish habitat improvement plan addressing target fish species, habitat structures, reservoir operations, public access, and stocking rates. The plan would be reviewed and approved by appropriate resource agencies prior to implementation.

CULTURAL RESOURCES

Prior to land disturbances, class III cultural resource surveys would be conducted on lands that would be directly affected by construction activities. To the extent possible, construction activities would be planned to avoid disturbance of identified cultural resource sites. In case a site cannot be avoided, mitigation would include professionally recovering, documenting, and preserving the cultural resources as appropriate.

Surveys and recovery activities would be coordinated with the California State Historic Preservation Officer (SHPO) and the Quechan Indian Tribe (Tribe), with whom project coordination is in progress. To fulfill the requirements of the National Historic Preservation Act, Reclamation would enter into an agreement with the California SHPO, Native American tribes, BLM, the Advisory Council on Historic

Preservation, and other interested persons. A Native American observer would be given the opportunity to participate in archeological surveys in the Pilot Knob Area of Critical Environmental Concern (ACEC).

Construction activities would be planned and conducted so as not to disturb the terraces and intervening arroyos on the north side of the canal adjacent to the Pilot Knob ACEC. Incidental contractor activity there would be restricted to the width of ground that is already disturbed. The Tribe would be consulted on the use of reservation lands during construction.

Prior to the start of construction, the project sponsors, in consultation with the Quechan Indian Tribe and BLM, would develop a plan for restricting public access to sensitive archeological sites in the Pilot Knob ACEC during construction. This would be made a part of the interim recreation management plan described under "Recreation."

Provisions would be included in each onsite construction contract that require the contractor to report cultural resources located during the construction activities and to cease construction activities in the immediate area of the located resources until the site is inspected by professional cultural resources personnel. In the event that cultural resources are discovered during construction, work would be suspended until evaluation and mitigation is complete.

RECREATION

An interim recreation management plan would be developed with BLM to minimize impact to recreation and to control hazards to the public.

The mitigation measures listed under "Canal Fishery" would be included in the project to maintain sport fishing opportunity.

SAND AND GRAVEL SUPPLIES

For the preferred alternative, an estimated 185,000 cubic yards of material would be needed, 85 percent of which would need to meet certification for concrete.

The specific source or sources of sand and gravel for the project have not been determined. During the project design phase, samples of sand and gravel from potential sources would be tested for suitability for project concrete. On the basis of such tests, a variety of sources would be certified for use on the project.

During the design phase, an assessment also would be made of the cultural and biological resources that may be affected by quarry activities at each certified site. Based on this assessment, potential disturbance of sensitive areas would be avoided by excluding the source, or would be mitigated in conjunction with mitigation for construction as described in chapter III. Environmental commitments associated with certified sand and gravel sources would be included in the construction specifications.

The construction specifications would provide the contractor with the options of using one or more of the certified sources, or requesting certification of another source of his choosing. If the contractor were to request the use of a source not previously certified and assessed environmentally, he would be required to comply with applicable requirements.

TRANSPORTATION

To minimize impacts, off-highway traffic hazards to the public would be addressed by the interim recreation management plan discussed under chapter III, "Recreation." For example, standard traffic controls such as signs and flagmen would be used as needed.

PUBLIC SAFETY

Concrete ridges would be cast into the sideslopes of the new canal lining. Deflector systems, such as cables with visible buoys, will be installed and maintained upstream of all drop structures. If field testing indicates that the ridges are not completely effective on a 1-1/2:1 side-slope, safety ladders would also be added to the canal design in addition to the ridges.

The interim recreation management plan listed under chapter III, "Recreation" would provide for public safety at the construction site.

An operation and maintenance plan for the old canal would be developed during project design.

IMMIGRATION FROM MEXICO

Construction activity could make it more difficult for the Immigration and Naturalization Service's Border Patrol (Border Patrol) to conduct surveillance and detect the presence of illegal aliens. The Border Patrol would need to patrol the active construction sites more intensely than at present.

After completion, the new canal would not change the fencing at the drop structures and freeway crossings or the Border Patrol access for patrol work. However, the old canal would provide cover for illegal aliens trying to escape detection and might require more intense patrol activity.

Escape ridges described under "Large Mammal Escape" should reduce risk of drowning. In addition, warning signs in English, Spanish, and international symbols would be posted on both sides of the canal to warn people of the dangerous waters.

GEODETIC SURVEY MONUMENTS

The U.S. Coast Guard and Geodetic Survey will be notified not less than 90 days in advance of any planned construction activities that would disturb or destroy any geodetic control survey monuments.

INDIAN TRUST ASSETS

The Parallel Canal Alternative would begin more than a mile from the reservation boundary and thus would not directly impinge on reservation land. However, if contractor access to the upstream end of the project would require crossing reservation land, an agreement with the Tribe would be required. Appropriate compensation and mitigation would be negotiated at that time. In meetings with Reclamation, the Tribe has expressed willingness to reach such an agreement. The area concerned is a highly disturbed borrow pit, and no impacts are expected.



United States Department of the Interior

FISH AND WILDLIFE SERVICE

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Memorandum

To: Regional Director, Lower Colorado Regional Office,
Bureau of Reclamation, Boulder City, Nevada

From: *Adams* Field Supervisor, Ecological Services - Ventura Field
Office, Ventura, California *Raymond Bransfield*

Subject: Informal Consultation on the Proposed All-American
Canal Lining Project, Imperial County, California

The U.S. Fish and Wildlife Service (Service) has reviewed the Bureau of Reclamation's (Reclamation) request for informal consultation, pursuant to 50 CFR 402.13, regarding the referenced action. The species of concern that occur in the vicinity of the proposed project are the federally endangered Yuma clapper rail (*Rallus longirostris yumanensis*) and razorback sucker (*Xyrauchen texanus*) as well as several proposed and candidate species.

The All-American Canal Lining Project is being directed by Reclamation in cooperation with several water agencies including the Metropolitan Water District of Southern California (MWD). The purpose of the project would be to reduce water seepage along 30 miles of the unlined All-American Canal in Imperial County, California. Reclamation's preferred alternative is the construction and operation of a concrete-lined canal parallel to a 23-mile section of the existing unlined canal from one mile west of Pilot Knob to Drop 3. The new canal would lie north of the existing canal from Pilot Knob to Drop 1 and south from Drop 1 to Drop 3. The centerline of the new canal would be placed between 300 and 600 feet away from the existing canal centerline. The exact placement would depend on terrain, ease of construction, and location of existing structures. In the large dunes, the full 600-foot right-of-way would be required for construction. The excavation of 25 million cubic yards of earth would be required to complete the project. Some of this material would be used for a canal embankment; the remaining material would be deposited in rows along the canal. The existing canal would continue to be used until the new canal is completed, at which time the water would be diverted to the new canal. The old structure would remain as a back-up canal.

The water conserved by the project would be available for use by MWD. The existing Colorado River Aqueduct would be used to transport the conserved water from Lake Havasu to the southern California coastal area. The proposed project would reduce the level of open water in the backwaters of the Colorado River, between Blythe, California and Imperial Dam, by 0.5 inches.

The Service concurs with Reclamation's assessment that the proposed project would have no adverse effect on Yuma clapper rails along the canal because impacts to Yuma clapper rail habitat, between Drop 3 and Drop 4, would be avoided by stopping the lined canal at Drop 3. In addition, ground-water elevation would be monitored between Drop 3 and Drop 4. If groundwater elevation drops as a result of the project, Reclamation would be required to enter into informal consultation with the Service to determine an appropriate course of action.

The Service also concurs with Reclamation's assessment that the proposed project would not adversely affect Yuma clapper rails along the Colorado River backwaters. This determination was made because the decrease in water level would not appreciably alter the wetland habitat along the backwaters that are used by Yuma clapper rails.

The Service concurs with Reclamation's assessment that the proposed project would not adversely affect razorback suckers and would not adversely modify their critical habitat on the Colorado River. The Service reached this conclusion because the minor decrease in water level would not be expected to alter razorback sucker habitat.

In Reclamation's request for informal consultation, reference is made to several Federal special status species that occur in the terrestrial habitat along the canal. The classification of these species as "special status" requires some clarification. Two of these species, flat-tailed horned lizard (*Phrynosoma mcallii*) and Peirson's milkvetch (*Astragalus magdalene* var. *perisonii*), are proposed for listing as federally endangered. The other four sensitive species, the Colorado Desert fringed-toed lizard (*Uma notata notata*), Andrew's scarab beetle (*Pseudocotalpa andrewsi*), silver-leaved dune sunflower (*Helianthus niveus* var. *tephrodes*), and sand food (*Pholisma sonora*), are candidate species for Federal listing. Reclamation should be aware of the distinction between federally proposed and candidate species.

A Federal agency is required to confer with the Service on any action that is likely to jeopardize the continued existence of any proposed species. Conferences, which are informal discussions between the Service and the Federal agency, are designed to identify and resolve potential conflicts between an action and proposed species at an early point in the decision making process. A conference may be conducted in accordance with

the procedures for formal consultation. An opinion issued at the conclusion of the conference may be adopted as the biological opinion when the species is listed but only if no significant new information is developed and no significant changes to the Federal action are made that would alter the content of the opinion. The incidental take statement provided in the conference does not become effective unless the Service adopts the opinion once the listing is final. The Service makes recommendations, if any, on ways to minimize or avoid adverse effects of the action. These recommendations are advisory because the jeopardy prohibition of section 7(a)(2) of the Endangered Species Act of 1973 (16 U.S.C. 1531-1544, 87 Stat. 884), as amended, does not apply until the species is listed.

In contrast, candidate species receive no Federal protection under the Act. However, a Federal agency should consider candidate species in the planning process in the event they become listed or proposed for listing prior to project completion. If a candidate species becomes listed before completion of the project, formal consultation will be required.

For the purpose of developing a mitigation plan for the proposed action, the Service and Reclamation have previously agreed, through discussions in the project's biological work group, to treat proposed and candidate species as if they were listed. The benefits of this approach are two-fold. First and foremost, the mitigation plan would be expected to reduce the project impacts on the species of concern. Second, this approach should enable Reclamation and the MWD to proceed with the project with minimal delay in the event that any of these species does become listed prior to completion of the project.

Although the Service and Reclamation have resolved most issues and are working in good faith to resolve the remaining issues regarding the proposed and candidate species, the proposed action would still result in the loss of individuals of and habitat for these species. Consequently, we cannot concur with Reclamation's finding that the project would have no effect on flat-tailed horned lizard, Peirson's milkvetch, the Colorado Desert fringed-toed lizard, Andrew's scarab beetle, silver-leaved dune sunflower, and sand food. We recommend that Reclamation request a conference opinion from the Service for the proposed species, flat-tailed horned lizard and Peirson's milkvetch. Additionally, the Service would append the conference opinion with an analysis of the four candidate species. The conference opinion issued may be adopted as the biological opinion if any of the species of concern are listed prior to project completion. In this manner, the proposed project would not be subjected to any unnecessary delays.

However, Reclamation would be required to reopen discussion of the mitigation measures or reinitiate formal consultation if the

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amount or extent of anticipated incidental take is reached, if new information reveals effects of the lining that may adversely affect listed species or critical habitat in a manner not already considered, if the agency action is subsequently modified in a manner that causes an effect to a listed species or critical habitat that was not already considered, or if a new species is listed or critical habitat designated that may be affected by this action. These stipulations are contained in the implementing regulations for section 7 (50 CFR 402.16) and are standard provisions in all biological opinions issued by the Service.

In conclusion, the Service concurs with Reclamation's findings for the Yuma clapper rail and the razorback sucker. However, we cannot concur with Reclamation's finding of no effect for the proposed and candidate species, even though we are in fundamental agreement with the substance of the mitigation plan for the project, because the project would still result in the loss of individuals and habitat. The Service recommends that Reclamation proceed with a conference to formalize the impact analysis and mitigation plans for the species of concern.

Should you have any questions, please contact Ms. Catherine McCalvin of my staff at (805) 644-1766.