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In Reply Refer To:
AESO/SE
02-21-04-F-0255

May 2, 2006

Ms. Cindy Lester, P.E.
Department of the Army
Arizona-Nevada Area Office
3636 North Central Avenue, Suite 900
Phoenix, Arizona 85012-1939

RE: Biological Opinion for Cotton Lane Bridge, Bank Stabilization, and Habitat
Modification at the Gila River

Dear Ms. Lester:

Thank you for your November 7, 2005, request for formal consultation with the U.S. Fish and Wildlife Service (FWS) pursuant to section 7 of the Endangered Species Act of 1973 (16 U.S.C. 1531-1544), as amended (Act). All the information necessary to initiate consultation was received by us on December 15, 2005. This consultation addresses effects that may result from the proposed Cotton Lane Bridge, Bank Stabilization, and Habitat Modification at the Gila River, located in Maricopa County, Arizona. The U.S. Army Corps of Engineers (Corps) has determined the proposed action is likely to adversely affect the southwestern willow flycatcher (*Empidonax traillii extimus*) and the Yuma clapper rail (*Rallus longirostris yumanensis*).

This biological opinion (BO) is based on information provided in the October 2005 biological assessment, the December 2005 draft hydraulic report, the June 2005 Section 404 individual permit application package, the February 2006 Cotton Lane Bridge Mitigation Plan Addendum, telephone and electronic mail conversations, field investigations, and other sources of information. Literature cited in this BO is not a complete bibliography of all literature available on the species of concern, Gila River, the proposed action and its effects, or on other subjects considered herein. A complete administrative record of this consultation is on file at this office.

Consultation History

May 10, 2004: Received letter dated May 6, 2004, from Maricopa County Department of Transportation (MCDOT) requesting a list of threatened and endangered species that may occur in the action area.

May 20, 2004: Species list for Maricopa County sent to MCDOT.

February 23, 2005: Met with Baker Engineering & Energy (Baker) and the Arizona Game and Fish Department (AGFD) to discuss project background and status.

August 10, 2005: Received letter dated August 8, 2005, from Corps transmitting biological assessment and requesting initiation of formal consultation for the cactus ferruginous pygmy-owl (*Glaucidium brasilianum cactorum*), the southwestern willow flycatcher, the Yuma clapper rail, and the yellow-billed cuckoo (*Coccyzus americanus occidentalis*).

September 7, 2005: Sent letter to Corps requesting additional information related to affects analysis.

November 9, 2005: Received letter dated November 7, 2005, from Corps transmitting updated biological assessment and informing of the availability of additional information.

December 15, 2005: Received letter of transmittal from Baker Engineering & Energy transmitting Draft Hydraulic Report.

December 28, 2005: We sent letter to Corps indicating that formal consultation was initiated on December 15, 2005, for the southwestern willow flycatcher and Yuma clapper rail, and the final BO will be delivered on or before May 2, 2006. We also concluded that effects to the cactus ferruginous pygmy-owl would be insignificant and discountable, and that our letter could be used as concurrence for a determination of may affect, but is not likely to adversely affect for the pygmy-owl.

January 11, 2005: Informed by Corps staff, via telephone, that draft mitigation plan should be considered part of proposed action excluding native fish refugia.

February 24, 2006: Received Cotton Lane Mitigation Plan Addendum from Baker Engineering & Energy and Ecoplan Associates, Inc.

March 27, 2006: Transmitted draft BO to Corps, as requested.

April 19, 2006: Received comment letter from Corps requesting release of final BO via electronic mail.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

MCDOT has applied for a permit under Section 404 of the Clean Water Act (CWA) to construct the proposed Cotton Lane Bridge, Bank Stabilization, and Habitat Modification at the Gila River. The action area is located within the city limits of Goodyear, Maricopa County, Arizona and is depicted in Figures 1 and 2 in the draft biological assessment, and other maps provided by Baker Engineering. The action area also includes The King's Ranch development and 682 acres of off-site mitigation lands to create a wildlife corridor from Powers Butte Wildlife Area, downstream of the project, and some areas upstream of the project area. The following description is based on information from the draft biological assessment (Baker 2005a) and the draft mitigation plan (Ecoplan 2005).

Bridge and Bank Stabilization

The proposed project would consist of 6 individual segments: 3.85-mile widening and extension of Cotton Lane from 0.60 mile north of the intersection with Maricopa County Road (MC) 85 to the intersection with Estrella Parkway, construction of a 1.57-mile six-lane roadway (Segments 1A and 1B) from the beginning of the project to the Gila River, a 0.39-mile (2,067 ft.) bridge over the Gila River (Segment 2A), channel improvements to the Gila River two miles upstream and three miles downstream of the proposed Cotton Lane Bridge alignment, and a 1.89-mile six-lane roadway south of the Gila River to Estrella Parkway (Segments 3 and 4). Figure 3 of the biological assessment, The Project Segment Map, displays the relationship and orientation of each segment in the project area.

The proposed channel improvement segment limits are: upstream limits start 0.5 mile downstream (west) of the existing Estrella Parkway Bridge; downstream limits end 0.5 mile downstream (west) of the 194th/Perryville Road alignment. The 194th/Perryville Road alignment is located 1 mile east of the Tuthill Road/Jackrabbit Trail Bridge. The footprint will encompass 3.85 miles in length from 0.6 mile north of MC 85 and the east to west alignment of Estrella Parkway, and a channel width of 2,000 ft and a proposed Right-of-Way (R/W) width between 200 and 300 feet. The proposed action would discharge dredged and fill material into approximately 840 acres of jurisdictional waters, under Section 404 of the CWA. The total disturbed area of waters of the United States will be 840 acres, of which approximately 593 acres will be affected permanently by excavation but will remain jurisdictional; about 162 acres will be disturbed temporarily by construction activity and 85 acres will be affected by permanent fill in the channel and will result in a loss of waters of the United States.

Segment 1A, Intersection of Cotton Lane and MC 85 to the Buckeye Irrigation Company canal, 0.6 mile north of MC 85. This 0.6-mile segment involves widening from two lanes to 10 lanes and construction of intersection improvements at MC 85. This segment includes an "at grade" crossing of the Union Pacific Railroad parallel to MC 85. The MC 85 and Cotton Lane intersection would be comprised of three 12-foot through lanes in each direction, a

dedicated 12-foot right turn lane in each direction, and two 12-foot dedicated left turn lanes in each direction. A bridge would be constructed over the Buckeye Irrigation Canal (BIC) and consist of three 12-foot travel lanes in each direction in the ultimate roadway section, a 5.4-ft bike lane in each direction, and a 7.75 ft sidewalk in each direction. A 16-ft median is also part of the design.

Segment 1B, BIC to the Gila River Bridge: This segment involves 0.97 mile of a new six-lane roadway segment. This segment involves the construction of a four-lane facility from just south of the BIC bridge to approximately 700 feet south of the BIC bridge.

Segment 2A, Gila River Bridge: This 0.39-mile (2,067 feet) segment involves the construction of a six-lane facility approximately 115 feet wide over the Gila River including an approximately 1,000-foot north approach roadway. The typical bridge section would consist of three 12-foot travel lanes in each direction in the ultimate roadway section, a 5.4-ft bike lane in each direction, and a 7.75-ft sidewalk in each direction. A 16-ft median is also part of the design.

Segment 2B, Gila River Channel Improvement Section (Estrella Parkway to east of Tuthill Road Bridge): This segment involves the construction of channel improvements and flood control bank stabilization along approximately five miles of the Gila River. The area of construction is primarily within the 2,000 ft. wide, high-flow channel approximately two miles upstream (Estrella Parkway) to three miles downstream (Tuthill Road Bridge) of the proposed Cotton Lane bridge alignment. Flood improvements would include 16,300 feet of bank stabilization along select portions of the five-mile reach of the Gila River. Material used in bank stabilization would be excavated from within the project. Nearly 4.3 million cubic yards of material would be excavated from the channel and 180,000 cubic yards of bank protection would be constructed. In areas up to and above the 10-year flood level, soil cement would be used in combination with fill. Within the channel, approximately 160 acres of non-native salt cedar (*Tamarix* sp.) forest would be removed. Flood control measures would remove the 100-year floodplain designation from approximately 2,300 acres of land.

Segment 3, King Ranch Roadway Segment and Segment 4 : Estrella Mountain Ranch Segment: This segment involves a 1.89-mile six-lane roadway segment and intersection. These segments involve the construction of a four-lane facility from the bridge to its intersection with Estrella Parkway. The intersection at Estrella Parkway will be a roundabout design.

Project Construction Methodology: The proposed project would require the following primary construction methods: new and existing roadway construction, bridge construction, and channel improvement/flood control protection construction. Primary activities associated with each method are:

New Roadway Construction: Clearing the proposed footprint of obstacles and vegetation, grading, placing embankments, compacting, trenching storm drains and other new utility locations, placing aggregate base and asphalt pavement, and installing signage and striping.

Existing Roadway Widening/Modifications: Temporarily shift traffic away from work zone, clearing of proposed footprint of obstacles and vegetation outside of existing pavement, pavement removals, utility adjustments/relocations, grading, placing embankments, compacting, trenching storm drains and other new utilities, placing aggregate base and asphalt pavement, installing signage and striping, and shifting traffic to permanent configuration.

Bridge Construction: Clearing bridge site of existing features, install drilled shaft foundations (70 for Gila River Bridge, 14 for BID Bridge), constructing pier columns, construct pier and abutment caps, place girders, construct concrete decks, construct sidewalks/barriers on decks, paint/stain bridges, install roadway striping and lighting (if applicable).

Channel Improvements: Install temporary and delineated access points to river channel, clear targeted areas of excavation of existing vegetation, excavate and haul channel material out of river bottom, install hardened bank protection, install soft bank protection, clean up and restoration of temporary impact areas.

Channel work within jurisdictional waters is expected to begin in June 2006 and be completed prior to the monsoon season. The bridge is expected to be built within a year. No definitive timeframe has been established for the conservation measures.

Conservation Measures identified in the Mitigation Plan

The following mitigation plan has been prepared in conjunction with the application for a permit under Section 404 of the CWA, and is to be implemented as part of the proposed action.

On-Site Measures: A component of the mitigation plan would be habitat enhancement and creation in three separate areas, two of which are on AGFD Public Land Order (PLO) 10-15 lands, referred to as Plots 1 and 2 in the draft mitigation plan and one plot located on property known as the King Ranch, adjacent to the Gila River (Plot 3). These sites were chosen because of their close proximity to the river, which ensures the groundwater table is within 4–8 feet of the surface, based on groundwater testing and modeling conducted for the El Rio Watercourse Master Plan. This should require less excavation to reach a reliable source of water for created wetlands.

On Plot 1, approximately 44 acres would be restored/created. This plot currently consists of fallow agricultural land with native shrubs and widely dispersed native mesquite (*Prosopis* sp.). The majority of the restoration / creation on Plot 1 would consist of a combination of open water, emergent vegetation and cottonwood (*Populus fremontii*)/willow (*Salix* sp.) galleries. A smaller upland bench of native mesquite may be added to provide a buffer to the plot.

On Plot 2, which consists of open fields of salt bush and quail brush associated with lowland pockets of vegetation, approximately 88 acres would be restored / created. A large wash that

flows, due to effluent discharge, through an overstory of salt cedar and native mesquite and bisects Plot 2.

On both sites this includes a total of about 10 - 15 acres of open water, 25 acres of mesquite, 40 - 50 acres of cottonwood/willow, and 20 – 30 acres of cattail marsh. In addition to possibly providing habitat for Yuma clapper rail, southwestern willow flycatcher and yellow-billed cuckoo, restoration/creation of these habitats may also benefit western red bat, western yellow bat, elf owl, gilded flicker, Gila woodpecker, vermilion flycatcher, Arizona Bell's vireo, Sonoran yellow warbler, and summer tanager. No intentional introduction of any species is planned.

A linear series of ponds and backwaters would be created to sequentially establish (1) open water, (2) a wide edge of emergent vegetation, (3) a bench of native willow/cottonwood, and (4) if conditions dictate, a bench of native mesquite bosque. The open water and associated emergent vegetation will be sinuous in design to maximize the acreage of suitable edge and backwater habitat for Yuma clapper rail. Within the open-water areas, raised loafing bars for waterfowl and wading birds will be created. Various channels will flow through the cottonwood/willow gallery to mimic natural flycatcher habitat and increase its humidity.

Soil testing would be conducted to determine if and in which specific locations on the plots, salinity levels are appropriate for the desired vegetation. In locations where current salinity is beyond the threshold to support the establishment of the proposed vegetation, the soil will be treated, flushed, or removed to create conditions favorable to their establishment.

Salt cedar would be manually controlled on both plots either by complete removal of the tree and stump by grubbing, or by tree-cutting and treating stumps with an herbicide. This eradication should allow native mesquite currently on the sites to flourish, creating a native mesquite bosque. Salt cedar control will occur before riparian galleries become suitable breeding habitat for the flycatcher and not after.

On Plot 3, a series of ponds 10-15 feet deep will create 3–5 acres of open-water environment. Ponds will be sinuous with numerous connected backwaters to maximize the acreage of emergent vegetation for clapper rail habitat. The ponds will be hydrologically connected to the Gila River by a naturally contoured gated channel but will be protected up to a 100-year flood event by natural levees.

In the area between the ponds, approximately 20–25 acres of native cottonwood/willow and/or mesquite bosque habitat will be established to help stabilize water temperatures and to provide wildlife habitat. Shallow streams will flow throughout the cottonwood/willow gallery to provide habitat elements for flycatcher.

With the creation of the ponds and riparian gallery, the wildlife habitat value of the area will be considerably improved from a low-quality cobble/strand habitat to a native riparian and aquatic habitat. Currently, the area is protected from all but the largest of flow events by a natural cobble bar.

Soil testing will also be conducted on this site to ensure proper placement of various habitat components along with salt cedar eradication and control.

The goal of the habitat enhancement/creation sites on these three plots would be to create a multistoried riparian environment that would provide a combination of open water, emergent vegetation, and xeroriparian and/or riparian galleries. Emergent native vegetation would be established in sufficient width and continuity around the open water to attract clapper rail. Native mesquite and cottonwood/willow galleries would be created outside of the boundaries of the emergent vegetation and open water. Sufficient understory and overstory densities would be established along with a perennial supply of water within 100 feet to allow the riparian areas to develop into suitable habitat for flycatcher.

Off-Site Measures: Another component of the mitigation plan would be multiple land purchases downstream from the footprint of the bridge, but still considered part of the action area. This would address a desire to create a continuous wildlife corridor from the Powers Butte Wildlife Area, approximately 20 miles downstream from the project area, to as far upstream as possible, to protect existing habitat from future development. A total of 682 acres have been identified. Approximately 594 acres are referred to as Priority 1 lands and 88 acres as Priority 2 lands in the draft mitigation plan.

Priority 1 lands currently have suitable habitat for clapper rail and flycatcher. Some of the identified lands are currently occupied by clapper rail, but are not known to be occupied by breeding flycatchers. Priority 2 lands would connect AGFD properties, but does not currently contain habitat for endangered species. Lands will be purchased and deeded to AGFD, becoming part of its wildlife area properties.

Acquisition would protect a continuous 15-20 mile corridor for wildlife in perpetuity. The largest parcel identified is currently owned by the Arizona State Land Department. Acquiring state trust land through the public auction process usually takes approximately 5 years, and there is no guarantee that the permittee will be the successful bidder. If circumstances prevent this component of mitigation from being executed within 5 years, a contingency plan of in-lieu fees would be developed. The Corps will coordinate this effort with FWS and AGFD.

Planting and Maintenance: Either hand or mechanized planting techniques will be employed. Within restored cottonwood/willow galleries, natural densities and patterns observed in and around breeding flycatcher sites will be mimicked as close as possible. The area where the cottonwood/willow gallery will be established on Plot 1 will be laser-leveled to ensure complete and even coverage by flood irrigation. An alfalfa cover crop will be planted in the fall or late winter prior to the planting of the trees. Alfalfa grows to a height of about 18 to 24 inches, adds nitrogen in the soil, and is non-aggressive. It will last for a few years in areas that have not been shaded by taller cottonwood/willow and should not compete with the plantings as other grasses may. On Plot 2, tree spacing will be the same as Plot 1; however, due to the existing conditions, the galleries of cottonwood/willow will be clustered and may not be as large.

Goodding's willow (*Salix gooddingii*) will be planted with 6-foot in-line spacing in rows 38 inches apart. Coyote willow (*Salix exigua*) will be planted with 4-foot in-line spacing in rows 38 inches apart around the edges of the Goodding's willow, creating a dense buffer. In addition, coyote willow will be planted with 4-foot in-line spacing in rows 38 inches apart randomly in clumps within the area of Goodding's willow. Potted Fremont cottonwoods will be randomly planted throughout the site to mimic the presence of sentinel cottonwoods observed in occupied flycatcher habitat.

The Goodding's willow will be used to provide canopy cover and dense structure along the length and center of the site, and coyote willow will be used to provide both a buffer and dense understory that flycatcher have been observed to prefer. Planting will take place in early spring.

A combination of groundwater, natural inflow, and irrigation will be used on Site 1 to provide adequate water to the tree plantings. Irrigation channels will be contoured among the riparian vegetation, taking advantage of the natural topography. Irrigation gates will be placed to properly distribute the irrigation water.

On Plot 2, a combination of groundwater, treated effluent, and irrigation will be used to provide adequate water to the tree plantings. Irrigation channels will be contoured among the riparian vegetation, taking advantage of the natural topography. Irrigation gates will be placed appropriately to properly distribute the irrigation water. It is also anticipated that portions of the effluent flow could be redirected to provide additional water to support the site's vegetation.

Flood irrigation in the appropriate seasons, even after the adequate establishment of a root structure on planted trees, will be used to provide moist soil surfaces to create favorable conditions for long-term (at least within the five year monitoring plan) vegetation survival and regeneration during the natural seed dispersal period. In addition, flood irrigation and irrigation directed through the various canals during breeding season (May through September) will be used to create moist soil conditions for the flycatcher.

By using three separate and distinct restoration prescriptions, the plots will serve not only as mitigation sites but will also provide information regarding the effectiveness of the various methodologies.

A minimum of one-gallon plants will be used for mesquite. In addition, locally obtained pole plantings may be used for the cottonwood, and willow plantings. Plant stock will be obtained from local commercial nurseries, supplemented by trees and shrubs salvaged on-site and stock obtained from other sites along the Gila River. The seed source for all nursery-grown plants will assure that only locally adapted native plants are used.

Pre-construction Surveys: Pre-construction surveys for flycatcher will be performed in accordance with protocol (Sogge *et al.* 1987, USFWS 2000) the season prior to initiation of construction activities within habitat determined suitable through expert opinion, coordination with FWS, and the application of Sogge *et al.* (1987) and USFWS (2002a). If

territorial flycatchers are detected, all construction activities will be prohibited within a 1,000-foot buffer zone from nests determined by protocol (Rourke *et al.* 1999), and no suitable habitat will be removed from the action area. In the absence of territorial flycatchers, any removal of suitable habitat will avoid the breeding season, May through August, and be completed prior to the following breeding season. If territorial flycatchers are detected, the Corps and applicant will contact the FWS to discuss the issue and evaluate the need for reinitiation of consultation. Since suitable habitat does not currently exist in the action area, this would only apply if habitat becomes suitable before commencement of construction.

When channel improvements activities are conducted near Jackrabbit Trail, pre-construction surveys for clapper rail will be performed in accordance with approved survey protocol (available from FWS) prior to ground disturbing activities. Buffer zones will be established 1,000 feet from this site and trespass will be prohibited within the buffer. If rails are detected at this site, no construction related activities or disturbance will be permitted within the known breeding season of March through May.

Monitoring Plan: Monitoring of the mitigation sites will be conducted quarterly for five years following completion. If the mitigation areas are meeting the 80 percent survivorship requirement two years after planting is completed, the supplemental water may be discontinued. Monitoring may continue quarterly for an additional two years to ensure that the mitigation sites are self-sustaining.

MCDOT proposes that AGFD be responsible for maintaining the mitigation areas on Plots 1 and 2 once the five-year monitoring period has been successfully completed. However, it is unclear if AGFD will have the resources to commit to maintenance. During the monitoring period, the developers of King Ranch or their designee will be responsible for all mitigation site maintenance and monitoring. Short-term maintenance (within the monitoring period required by the Corps permit) may include staking, fertilizing, weeding in the immediate area of the vegetation to be reestablished, control of invasive plant species, including salt cedar, and maintenance of irrigation pumps and drip irrigation system.

During the construction phase of the mitigation areas, monitoring will be conducted by the developers of King Ranch monthly to ensure compliance with the provisions of the Section 404 permit and mitigation plan. Monthly monitoring reports will be prepared and submitted to the Corps for review. These reports will include a description of all ongoing work affecting jurisdictional waters and any recommendations to ensure compliance with the permit. After mitigation plantings and pond construction at the sites are complete, a field inspection will be conducted to document completed conditions. Post-construction monitoring will be completed quarterly for all of the mitigation sites. Permanent photopoints will be established at a minimum of two discrete locations within each site when the as-built conditions are documented.

Reporting: Quarterly monitoring reports will be submitted to the Corps. These reports will document the existing conditions, as indicated by the tree measurements and overall health of the sites. They will also include all pictures taken from the established photo points, along

with any recommendations to ensure success. Annual reports will be submitted to the Corps and FWS, and will include, at minimum: a description of as-built conditions; a list of individuals or companies who completed monitoring activities; results of the monitoring effort, including measured growth and percent survival; copies of color photos taken from permanent photo points; copies of field notes; recommendations for additional plantings or other corrective measures; and notification of completed mitigation commitments.

The first monitoring report will be due one year after the date of the issuance of the Section 404 permit. Project monitoring will continue annually until each element of the mitigation plan has been accepted by the Corps. This process may be extended if the implementation period continues beyond what is anticipated to establish the plantings and meet success criteria. Notification will be made to the Corps when success criteria have been achieved and maintained three years after drip irrigation is discontinued. Notification will be in annual monitoring reports or by letter, as appropriate.

Soil Salinity: Baseline salinity levels in various locations on each site will be determined by obtaining soil salinity samples at approximately 10 samples per 40 acres at appropriate locations. If warranted, approximately 10 samples per 40 acres will be taken annually until a steady state has been achieved and salinity has not increased. Thereafter, soil sampling will be conducted every 2–5 years unless data indicate a need to return to annual sampling.

Microclimate: Once vegetation has become established and has developed a stratified structure, microclimate conditions of temperature, relative humidity, and soil moisture will be recorded using HOBO^{®1} data loggers and soil moisture probes. Approximately 2 - 3 data loggers per 40 acres will be placed either randomly or in a stratified design within the riparian areas of each site.

Post-construction Surveys: Flycatcher surveys will be conducted after at least two growing seasons, depending on when the land cover type structure and density indicate the habitat has achieved the reference conditions (i.e. suitability). Surveys will be conducted using approved protocols (Sogge *et al.* 1987, USFWS 2000). If territorial flycatchers are detected, the Corps and applicant will contact the FWS and evaluate the need for reinitiation of consultation.

Cuckoo presence/absence surveys will be conducted after 3 - 5 growing seasons, depending on when the land cover type structure and density indicate the habitat has achieved the reference conditions.

Clapper rail surveys will be conducted once emergent vegetation has been established using the established protocol (available from FWS). If clapper rails are detected, the Corps and applicant will contact the FWS and evaluate the need for reinitiation of consultation

Success Criteria: The success criteria for the planted trees on all plots will require 80 percent of the trees planted to be alive and flourishing five years after planting and three years after drip irrigation has been discontinued. Planted trees would be measured to provide

¹ Use of trade names is not an endorsement by the FWS.

information on growth rates. The indicators of success will include a demonstrated increase in basal diameter, canopy width, and canopy height of trees during the period after drip irrigation has ceased (two years after planting). A comparison of reference plot densities of native vegetation currently existing in the Gila River in the vicinity will be used to evaluate the health of the vegetation. The emergent vegetation should expand to fill in the areas between the original plantings. Overall health of the wetlands and controlled expansion of the cattail areas will also be used as indicators of success. An increase in bird and mammal species diversity and density will serve as an indicator of overall site health.

STATUS OF THE SPECIES

Southwestern Willow Flycatcher

The southwestern willow flycatcher was listed as endangered, without critical habitat on February 27, 1995 (USFWS 1995). A total of 737 river miles across southern California, Arizona, New Mexico, southern Nevada, and southern Utah were designated as critical habitat on October 19, 2005 (USFWS 2005). A final recovery plan was signed on August 30, 2002. Detailed information on habitat, breeding biology, territory size, dispersal patterns, management, and recovery criteria can be found in the listing rule, designation of critical habitat, and the recovery plan.

Reasons for decline have been attributed to primarily loss, modification, and fragmentation of riparian breeding habitat, along with a host of other factors including loss of wintering habitat and brood parasitism by the brown-headed cowbird (*Molothrus ater*) (Sogge *et al.* 1997, McCarthy *et al.* 1998). Habitat loss and degradation are caused by a variety of factors, including urban, recreational, and agricultural development, water diversion and groundwater pumping, channelization, dams, and livestock grazing. Fire is an increasing threat to willow flycatcher habitat (Paxton *et al.* 1996), especially in monotypic saltcedar vegetation (DeLoach 1991) and where water diversions and/or groundwater pumping desiccates riparian vegetation (Sogge *et al.* 1997). Willow flycatcher nests are parasitized by brown-headed cowbirds, which lay their eggs in the host's nest. Feeding sites for cowbirds are enhanced by the presence of livestock and range improvements such as waters and corrals; agriculture; urban areas; golf courses; bird feeders; and trash areas. When these feeding areas are in close proximity to flycatcher breeding habitat, especially coupled with habitat fragmentation, cowbird parasitism of flycatcher nests may increase (Hanna 1928, Mayfield 1977a,b).

There are currently 265 known southwestern willow flycatcher breeding sites in California, Nevada, Arizona, Utah, New Mexico, and Colorado (all sites from 1993 to 2004 where a resident flycatcher has been detected) holding an estimated 1256 territories (Table 1) (Durst *et al.* 2005). The survival and recovery of the flycatcher is not dependent on having a few locations with large numbers of birds, but rather properly distributed populations placed close together functioning as a group of meta-populations (USFWS 2002a). Modeling has indicated that persistence of flycatcher populations is reduced when populations are small and widely distributed (Lamberson *et al.* 2000). Conversely, meta-populations are more stable when sub-populations are large and close together. There needs to be considerable

progress to reach greater meta-population stability through developing larger sites in closer proximity to each other (USFWS 2002a).

From 1995 to 2005, at least 143 Federal agency actions have undergone (or are currently under) formal section 7 consultation throughout the flycatcher's range. Many activities continue to adversely affect the distribution and extent of all stages of flycatcher habitat throughout its range (development, urbanization, grazing, recreation, native and non-native habitat removal, dam operations, river crossings, ground and surface water extraction, etc.). Stochastic events also continue to change the distribution, quality, and extent of flycatcher habitat.

Anticipated, actual, and/or temporary loss of flycatcher habitat associated with Federal or federally permitted projects (i.e. modification of Roosevelt Dam, operation of Lower Colorado River dams, etc.) has resulted in biological opinions and Habitat Conservation Plans (HCPs) that led to acquisition, development, and protection of property specifically for the southwestern willow flycatcher to remove jeopardy, mitigate, reduce and/or minimize take or adverse affects. A small portion of the lower San Pedro River was acquired by the Bureau of Reclamation as a result of raising Roosevelt Dam and is now currently under the management of The Nature Conservancy. Commitments to acquire and manage unprotected habitat specifically for breeding flycatchers have been made for loss of flycatcher habitat along the Lower Colorado River (Operations of Colorado River dams and 4.4 Plan/Change in Points of Diversion, Lower Colorado River Multi-Species Conservation Program (LCR MSCP), Tonto Creek and Salt River (raising of Roosevelt Dam, operation of Roosevelt Dam) in Arizona, and Lake Isabella, California (operation of dams). The Roosevelt Lake HCP completed by Salt River Project (SRP) has resulted in acquisition of over 1000 acres along the Verde River, San Pedro River, and Gila River. The Army Corps of Engineers has acquired approximately 1000 acres along the South Fork Kern River as a result of operations of Isabella Dam. Various Regional HCPs have been developed in southern California that have protected southwestern willow flycatcher habitat (San Diego MSCP, Western Riverside County HCP, Carlsbad Habitat Mitigation Plan).

Table 1. Rangewide population status for the southwestern willow flycatcher based on 1993 to 2004 survey data for Arizona, California, Colorado, New Mexico, Nevada, Utah, and Texas ¹ .				
State	Number of sites with territories 1993-04 ²	Percentage of sites with territories 1993-04	Number of territories ³	Percentage of total territories
Arizona	112	42.3 %	544	43.3 %
California	91	34.3 %	200	15.9 %
Colorado	5	3.8 %	65	5.2 %
Nevada	13	4.9 %	68	5.4 %
New Mexico	36	13.6 %	372	29.6 %
Utah	3	1.1 %	7	0.6%
Texas	?	?	?	?
Total	265	100 %	1256	100 %

¹Durst *et al.* 2005.
²Site boundaries are not defined uniformly throughout the bird's range.
³Total territory numbers recorded are based upon the most recent years survey information from that site between 1993 and 2004.

Yuma Clapper Rail

The Yuma clapper rail was listed as an endangered species on March 11, 1967, under endangered species legislation enacted in 1966 (Public Law 89-669). Only populations in the United States were listed; those in Mexico were not. There is no critical habitat for the species. The Yuma Clapper Rail Recovery Plan (FWS 1983) was signed in 1983. The species is also protected under the Migratory Bird Treaty Act (MBTA).

The Yuma clapper rail is a marsh bird found in dense cattail or cattail-bulrush marshes along the lower Colorado River (LCR) from the Southerly International Boundary to the lower Muddy River and Virgin River in Utah above those rivers' confluence with Lake Mead. Significant populations are found in the Imperial Valley near and around the Salton Sea in California, and along the lower Gila River and the Gila River near the Phoenix Metropolitan area in central Arizona. The populations in Mexico are found along the LCR in the delta, marshes associated with tributaries to the LCR, and the Cienega de Santa Clara (Hinojosa-Huerta *et al.* 2000). Survey detections for the United States habitats have fluctuated between 467 and 809 over the last 10 years (FWS survey data). Those figures represent birds counted, and are not statistical population estimates. The population in Mexico was estimated statistically at 6,300 birds in 2000 (Hinojosa-Huerta *et al.* 2001), but declined to 4,850 by 2002, likely due to overgrowth of cattails (Hinojosa-Huerta *et al.* 2003). Changes in water flow between 2002-2003 to the Cienega improved habitat quality and counts of rails increased.

Yuma clapper rails may be somewhat migratory, although the extent to which birds move seasonally is not known. They are capable of significant movements, and dispersal away from existing population centers is a source of individuals to augment or initiate outlier populations. Life history information for the species is summarized in the Recovery Plan and other papers (Todd 1986, Eddleman 1989). No significant new life history information has been developed since these papers were published; however, basic information on the potential of adverse effects to reproductive success relating to selenium concentrations in habitats occupied by clapper rails has been developed (Andrews *et al.* 1997, Garcia-Hernandez *et al.* 2001, King *et al.* 1993, 2000, 2003; Roberts 1996).

Threats to the Yuma clapper rail population in the United States include the loss of marsh habitats to channelization or other river maintenance, lack of long-term management of existing marshes to maintain their suitability as habitat, lack of protection for habitat areas related to land ownership and water supply issues, and the presence of environmental contaminants such as selenium in the LCR and Salton Sea.

Since 1983, FWS-Arizona Ecological Services Office has completed 36 formal section 7 consultations involving the Yuma clapper rail. Of those, 15 were completed prior to 1991, and most of those involved Reclamation's dredging, bank stabilization, and dike construction projects, and general management plans by BLM along the LCR and lower Gila River. Habitat losses due to Reclamation activities were offset by the creation of mitigation areas and backwaters as part of those projects. From 1991-2005, the 21 formal consultations

involved use of prescribed fire to benefit habitat and management plans for wildfire, permits under section 404 of the Clean Water Act, and large-scale agency plans by Reclamation, BLM, and Environmental Protection Agency (EPA). There was one jeopardy opinion issued for the rail for EPA's use of pesticides, but reasonable and prudent alternatives were provided. The Roosevelt HCP in Gila County, Arizona (USFWS 2003) and the Lower Colorado River Multi-Species Conservation Program (LCR MSCP 2004) are the only completed HCPs that address taking of the species.

The FWS-Carlsbad Fish and Wildlife Office also processes informal and formal consultations concerning the Yuma clapper rail in California. Many of those address issues with irrigation-system maintenance and other projects in the Imperial Valley. A formal consultation for a geothermal plant adjacent to the Sonny Bono Salton Sea National Wildlife Refuge was recently completed. The most significant recent formal consultation addressed Reclamation's voluntary fish and wildlife conservation measures and associated conservation agreements with California water agencies in 2002 (USFWS 2002b). That consultation is connected to the 400,000 acre-feet per year of water exchanges that were the subject of consultation between FWS-AESO and Reclamation (USFWS 2001) and addresses effects to listed species near the Salton Sea from water conservation actions of Imperial Irrigation District. Reclamation and state partners will fund the conservation measures (USFWS 2002b).

ENVIRONMENTAL BASELINE

The environmental baseline includes past and present impacts of all Federal, State, or private actions in the action area, the anticipated impacts of all proposed Federal actions in the action area that have undergone formal or early section 7 consultation, and the impact of State and private actions which are contemporaneous with the consultation process. The environmental baseline defines the current status of the species and its habitat in the action area to provide a platform to assess the effects of the action now under consultation.

We provided technical assistance for this project on December 16, 2005, (22410-2006-TA-0085) as it relates to our March 7, 2003, concurrence with the Corps "Guidelines to ensure the Nationwide Permit program will not adversely affect the cactus ferruginous pygmy-owl."

Status of the southwestern willow flycatcher within the action area

Due to reduced habitat quality along this stretch of the Gila River, it is likely that only migrant willow flycatchers currently use the area for stopover during migration. There are no known resident flycatchers nesting within the project limits. Tape playback surveys were conducted in and adjacent to the project area in 2002, 2004, and 2005, but there were no detections (Baker 2005a). Within the action area, along the floodplain east of the Citrus Road alignment, there are stands of salt cedar and cottonwood. These areas lack dense understories and tall canopies that are typical of suitable breeding habitat for the flycatcher (Baker 2005a). The project area does not contain permanent or semi-permanent water, which is important for flycatchers. Flycatcher territories have been detected three miles upstream near the confluence of the Salt River within the Tres Rios Project area where discharge of

effluent provides a permanent water source. This water does not reach the Cotton Lane project area as surface flow.

The project is within the Hassayampa-Agua Fria Management Unit of the Gila Recovery Unit for the recovery of the southwestern willow flycatcher (USFWS 2002). Critical habitat has been designated for the Gila Recovery Unit, but does not occur in the action area. Delisting of the flycatcher is predicated on the attainment of recovery goals for each management unit within a recovery unit. A recovery goal of 25 territories has been established for the Hassayampa-Agua Fria Management Unit. In 2004 there was one territory established within this management unit (Durst *et al.* 2005).

Factors affecting the southwestern willow flycatcher within the action area

Prior to the 20th century, the majority of the action area likely consisted of impressive cottonwood-willow gallery forests and large mesquite bosques supported by perennial water flow. Native wildlife would have included an abundance of waterfowl, songbirds, big game, small mammals, reptiles, amphibians, and native fish. Suitable habitat for the flycatcher was surely present.

The Gila River has since experienced a multitude of anthropogenic impacts resulting in dramatic changes in hydrologic regime and biological resources. Mining in the late 1800s resulted in the cutting of miles of mesquite thickets for charcoal. During the same time period, ranching and farming contributed to ecosystem degradation through the stocking of thousands of heads of cattle and construction of canals diverting the entire flow of the river in some areas. Coupled with these forces were the introductions of various non-native plants and animals.

Perhaps the most profound human impacts have been the dams and diversions constructed for irrigation, water storage, and flood control. Dams upstream along the Gila include: Coolidge Dam built 65 miles upstream of Florence in 1929, Ashurst-Hayden Dam built at Florence in 1928, Gillespie Dam built just north of Gila Bend in 1921, and Painted Rock Dam built along the lower Gila in 1959. Although outside of the action area, these projects have caused dramatic modifications to the aquatic and riparian environments resulting in significant declines and shifts in biotic communities along the Gila River, including the action area. Suitable habitat for the flycatcher in the Hassayampa/Gila Management Unit is now scarce. Habitat along the Gila River is limited to areas where water is present in the form of effluent or irrigation return flow. The action area does not currently contain suitable breeding habitat.

Status of the Yuma clapper rail within the action area

The Yuma clapper rail is not known to occur within the portions of action area where the bridge, channelization, and active restoration would occur. Information is limited for the remainder of the action area, including the mitigation lands, and The King's Ranch area. The likelihood of occurrence in these areas is remote based on the lack of suitable habitat, though some portions contain surface water at least on a seasonal basis. Significant areas of cattails

are not present to provide clapper rail habitat in the action area where the bridge, channelization, and active restoration would occur. There is suitable occupied habitat for the rail within the action area on lands proposed for acquisition and preservation. There is also suitable unoccupied habitat in the action area upstream of Estrella Parkway and downstream of the Tuthill Road and Jackrabbit Road Bridge.

Rails likely move through the action area, as there are known occurrences of rails upstream and downstream of the area of the bridge, channelization, and restoration. For instance, there are rails near the 115th Avenue Bridge approximately 5 miles upstream and near the MC 85/Gila River Bridge crossing approximately 10 miles downstream (AGFD 2005). In 2003, rails were also believed to be detected audibly in the Tres Rios project area, near 91st Avenue about 5 miles east of the project area. (AGFD 2003).

Factors affecting the Yuma clapper rail within the action area

The same anthropogenic disturbances discussed for the flycatcher are pertinent to the clapper rail as well. Prior to human-induced changes of 20th century, the action area likely contained suitable habitat for the rail. Suitable habitat along the Gila River is now limited to areas where permanent water is present in the form of effluent or irrigation return flow and where substrates are suitable for the establishment of marsh vegetation.

EFFECTS OF THE ACTION

Effects of the action refer to the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated and/or interdependent with that action, that will be added to the environmental baseline. Interrelated actions are those that are part of a larger action and depend on the larger action for their justification. Interdependent actions are those that have no independent utility apart from the action under consideration. Indirect effects are those that are caused by the proposed action and are later in time, but are still reasonably certain to occur.

Construction activities would involve the clearing of riparian vegetation, primarily salt cedar. Approximately 160 acres of salt cedar would be cleared in the west end of the project footprint, and scattered strands of scrubby salt cedar would be cleared from other areas throughout the action area.

Hydraulic computer modeling shows that flow velocities through the proposed bridge would be comparable to existing conditions and the average bed elevation would not change significantly, indicating the main channel of the river through the action area will remain relatively stable (West Consultants and River Research 2005). This leads us to believe that there will be no significantly geomorphic changes to the Gila River downstream of the project footprint.

Outside of the project footprint, but still likely to affect the action area, is the proposed King Ranch residential development. King Ranch is a 1,997-acre housing development proposed

for construction just south of the Cotton Lane project. This housing development will likely increase human activity within the action area, particularly recreational activity.

Flood control measures would remove the 100-year floodplain designation from approximately 2,300 acres of land (Baker 2005b). These flood-control features are intended to facilitate residential development, thus increasing human use of the Gila River within the project footprint as well as upstream and downstream. This land encompasses portions of the proposed King Ranch development and agricultural fields. We are unaware of any specific development proposals, except for King Ranch. We have addressed the development of these lands as cumulative effects.

A portion of the proposed action attempts to restore native riparian vegetation communities along this portion of the Gila River. If successful, the proposed action could result in the establishment of cottonwood/willow gallery forests and cattail/bulrush marsh stands. If unsuccessful, planted vegetation could become dead and decadent resulting in a fire hazard. The life of the action is at least five years from completion of plantings for the mitigation plan. The life could be shorter without ongoing maintenance or dynamic interaction with natural geomorphic processes.

Southwestern willow flycatcher

Surveys for flycatcher will be conducted in suitable habitat prior to initiation of construction activities. If territorial flycatchers are located, a 1,000-foot buffer (radius) will be established. Currently, flycatchers are not known to breed in the action area, and suitable nesting habitat is absent. Therefore, the potential for construction activities to affect breeding flycatchers is unlikely or will be avoided. The potential does exist for migrant flycatchers to occur in the action area and possibly be affected by construction activity and noise. Migrants might change or delay their flight or stopover in the area during construction that overlaps with the migratory season. These effects, however, would be difficult to detect or measure, and may not even occur.

The proposed restoration of cottonwood/willow forests appears to have a high likelihood of developing into suitable flycatcher habitat due to the planting density and use of flood irrigation techniques. Approximately 40 - 50 acres of riparian forest may eventually be suitable for nesting by flycatchers within portions of the action area proposed for active restoration. However, it is uncertain that suitable conditions would continue beyond the five-year monitoring and maintenance requirements of the 404 permit. Long-term management of these lands is uncertain. Without commitments to implement a long-term management plan, the security of restored lands cannot be determined. Based on our review of maps and other information, the cottonwood/willow forests may be disconnected from the river by bank protection. Without the influence of scouring flood waters the long-term sustainability of these ecosystems for flycatchers and rails is difficult to predict.

Yuma clapper rail

Clapper rail surveys will be conducted in suitable habitat prior to construction activities. If breeding birds are found, a 1,000-foot buffer will be established. Since rails are not known to breed in the action area of the bridge, channelization, and restoration, the potential for construction activities to affect them should be minimized. The potential does exist for migrant rails to be affected by construction activity and noise. Migrants might change or delay their flight through the area during construction that overlaps with the migratory season. These effects, however, would be difficult to detect or measure, and may not even occur.

If native marsh restoration is successful, rails may be able to forage and breed in the cattail/bulrush stands within the action area. The project may restore approximately 20 - 30 acres of cattail marsh. We believe there is a good chance that cattail/bulrush stands would develop into suitable habitat for the Yuma clapper rail, largely due to cattail's propensity to spread unabated when provided suitable growing conditions. However, it is not certain that suitable conditions for clapper rail would continue beyond the five-year monitoring and maintenance requirements of the 404 permit. Long-term management of the land is not determined. Based on our review of maps and other project information, it seems the restoration of cattail marsh would be disconnected from the river by bank protection. Without the influence of scouring flood waters or active maintenance, cattails are likely to reach densities that are unsuitable for use by the clapper rail.

CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act.

The General Plan for Goodyear indicates that this area is zoned for residential and commercial development. The Goodyear General Plan identifies a 5,340-acre area around the Gila River from Litchfield Road to Perryville Road as the Gila River Corridor and projects a build-out population of over 12,400 residents and an employment base of approximately 2,500 jobs (City of Goodyear 2003). The action area overlaps with the scope of this plan and we reasonable expect that lands removed from the 100-year floodplain would be developed into residential communities, including King Ranch. This would result in an increase of human activity within the Gila River as people move in and utilize the riparian and riverine resources for recreational activities.

The increase in human activity coupled with the restoration of suitable habitat for the southwestern willow flycatcher and the Yuma clapper rail could result in management and regulatory issues relative to threatened and endangered species. Dense cottonwood/willow gallery forests and cattail stands are typically inhospitable for use by recreationists, but increased human presence increases the chances of fire and perhaps off highway vehicle use. Also, the increase in residential areas nearby would increase the number of domestic cats,

dogs, and other pets that may access these riparian and marsh ecosystems. However, the rate and intensity that these future effects would occur is difficult to predict. We believe the cumulative effects of future State, tribal, local, or private actions may require additional review under Section 10 of the ESA.

CONCLUSION

After reviewing the current status of the southwestern willow flycatcher and the Yuma clapper rail, the environmental baseline for the action area, the effects of the proposed Cotton Lane Bridge, Bank Stabilization, and Habitat Modification at the Gila River, and the cumulative effects, it is the FWS's biological opinion that the action, as proposed, is not likely to jeopardize the continued existence of the southwestern willow flycatcher or the Yuma clapper rail. Critical habitat has been designated for the southwestern willow flycatcher; however, this action does not affect that area and destruction or adverse modification of that critical habitat is not anticipated. No critical habitat has been designated for the Yuma clapper rail, therefore none will be affected. This opinion is based on the following:

- Neither species currently breeds within the action area and effects to migrants are likely to be limited as a result of preconstruction survey information and other conservation measures.
- The project is designed to protect a 15-20 mile corridor for wildlife in perpetuity.
- The hydraulic model indicates that no significant hydrogeomorphic changes would occur that may affect habitats downstream of the project footprint.
- The mitigation and monitoring would focus significant effort on restoring and/or creating habitats suitable for use by the flycatcher and clapper rail.
- If either the flycatcher or clapper rail occupies restored and/or created habitats within the five-year monitoring period, the Corps and applicant would notify and coordinate with FWS.

The conclusions of this biological opinion are based on full implementation of the project as described in the Description of the Proposed Action section of this document, including any Conservation Measures that were incorporated into the project design.

INCIDENTAL TAKE STATEMENT

Section 9 of the ESA and Federal regulations pursuant to section 4(d) of the ESA prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. "Harm" is further defined (50 CFR 17.3) to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or

sheltering. “Harass” is defined (50 CFR 17.3) as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering. “Incidental take” is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the ESA provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

AMOUNT OR EXTENT OF TAKE

The FWS does not anticipate the proposed action will incidentally take any southwestern willow flycatcher or Yuma clapper rail for the following reasons:

- No breeding habitat occurs in the action area for either species at this time.
- If habitat becomes suitable and occupied during the five-year monitoring period, the Corps and applicant would notify the FWS and appropriate action would be taken to address issues.
- After the five-year monitoring period, the Corps would turn responsibility over to the local landowner who would be responsible for any future take issues outside the scope of this consultation.

EFFECT OF THE TAKE

In this biological opinion, the FWS has determined that incidental take is not anticipated to occur.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the ESA directs Federal agencies to utilize their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

The mitigation plan clearly states the goal to develop habitats suitable for use by the southwestern willow flycatcher and the Yuma clapper rail. We believe there is a good likelihood that the current proposal would achieve this goal. We commend the Corps and applicant for proposing actions to create and restore habitat and we would like to offer recommendations that may improve the plan.

The Environmental Protection Agency and Arizona Game and Fish Department have provided relevant and useful comments on the Public Notice issued for the 404 permit application. We believe the issues raised in those comments should be given proper

consideration and addressed in an appropriate fashion. It may also be prudent to inform the applicant and other affected landowners of the potential need for a section 10 permit for take of threatened and endangered species that may result in the future.

Accordingly, we offer the following conservation recommendations.

- To improve habitat creation for clapper rail, we recommend that ponded water be less than 12 inches deep, and cattail stands be relatively wide.
- We recommend development and implementation of a long-term management plan including fire management to increase short-term and long-term success of the habitat restoration effort.
- We recommend development and implementation of educational materials and programs to inform future residents of the importance and sensitivity of the restored habitats.
- We recommend that success criteria actually identify quantifiable benchmarks for increases in the identified biotic variables. This will ensure that increases are not merely statistically significant but also biologically significant.
- We recommend the Corps require the applicant to secure funding to monitor these habitats beyond the five-year monitoring and maintenance period through an endowment or other similar process and commit to long-term maintenance of habitat and appropriate ecological conditions (i.e. water availability).
- We recommend the Corps encourage the applicant and other landowners/stakeholders to evaluate the need to develop and implement Safe Harbor Agreements or Habitat Conservation Plans under section 10 of the ESA to address potential future effects of human population growth in the action area on threatened and endangered species.
- We recommend the Corps address the issues related to section 404 of the CWA raised by the Environmental Protection Agency and the Arizona Game and Fish Department during the Public Notice process.

In order for the FWS to be kept informed of actions minimizing or avoiding adverse effects or benefiting listed species or their habitats, the FWS requests notification of the implementation of any conservation recommendations. Additionally, we are available to provide technical assistance in the development and implementation of these conservation recommendations.

REINITIATION NOTICE

This concludes formal consultation on the action(s) outlined in your request for consultation. As provided in 50 CFR Part 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is

authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

The FWS appreciates the Corps' efforts to identify and minimize effects to listed species from this project. For further information please contact Mike Martinez (x224) or Debra Bills (x239). Please refer to consultation number 02-21-04-F-0255 in future correspondence concerning this project.

Sincerely,

/s/ Steven L. Spangle
Field Supervisor

cc: Regional Director, Fish and Wildlife Service, Albuquerque, NM (ARD-ES)
Planning Branch, Maricopa County Department of Transportation, Phoenix, AZ
Non-Game Branch Chief, Arizona Game and Fish Department, Phoenix, AZ

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