



United States Department of the Interior



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In Reply Refer to:
AESO/SE
02EAAZ00-2011-F-0535

May 30, 2012

Sallie D. McGuire
Chief, Arizona Branch
Department of the Army
Los Angeles District, Corps of Engineers
Arizona-Nevada Area Office
3636 North Central Avenue, Suite 900
Phoenix, Arizona 85012-1939

RE: Maintenance of San Pedro Road (Dudleyville Crossing) on the San Pedro River, Pinal County, Arizona (File number SPL-2008-261-RJD)

Dear Ms. McGuire:

Thank you for your 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). Your request was dated August 12, 2011, and was received by us on August 15, 2011. At issue are the effects that may result from the proposed restoration and maintenance of San Pedro Road (more commonly referred to as Dudleyville Crossing), an at-grade crossing of the San Pedro River within a right-of-way (ROW) located between (but not reaching to) Camino Rio Road on the west and Dudleyville Road on the east. Your August 12, 2011, correspondence concluded that the proposed action may adversely affect the endangered southwestern willow flycatcher (*Empidonax traillii extimus*), the endangered spikedace (*Meda fulgida*), and the species' respective critical habitat.

This biological opinion is based on information provided in: (1) your August 12, 2011, letter; (2) the December 2010, *Biological Evaluation of the San Pedro Road at Dudleyville Crossing Project in Pinal County, Arizona* (BA), prepared by SWCA Environmental Consultants, Inc. (SWCA) for the proposed action; (3) the August 9, 2011, Technical Memorandum prepared by SWCA for Pinal

County; (4) verbal and written interactions between our respective staffs; and (5) other published and unpublished sources of information. Literature cited in this biological opinion is not a complete bibliography of all literature available on the species of concern, and its effects, or on other subjects considered in this opinion. A complete administrative record of this consultation is on file at this office.

Please note that this biological opinion does not rely on the regulatory definition of “destruction or adverse modification” of critical habitat at 50 CFR 402.02. Instead, we have relied upon the statute and the August 6, 2004, Ninth Circuit Court of Appeals decision in *Gifford Pinchot Task Force v. U.S. Fish and Wildlife Service* (No. 03-35279) to complete our analysis with respect to critical habitat.

Consultation History

April 21, 2011: Our respective staffs discussed records of southwestern willow flycatcher occupancy at and near the Dudleyville Crossing site via electronic mail.

June 14, 2011: We met with representatives of Pinal County and the county’s biological consultants (SWCA, Inc.) at the Dudleyville Crossing site to discuss the project and the need for formal consultation to address its effects. Your staff joined the aforementioned individuals during a conference call conducted after the site visit.

August 15, 2011: We received your August 12, 2011, request for formal consultation, which transmitted the BA and Technical Memorandum for the proposed action.

October 21, 2011: We transmitted a Draft BO to you.

January 18, 2012: We received your January 13, 2012, letter transmitting your and Pinal County’s January 10, 2012, written comments on our Draft BO. Pinal County’s written comments, enclosed a January 10, 2012, Technical Memorandum from SWCA, Inc.

February 23, 2012: We published a Final Rule uplisting both spikedace and loach minnow from threatened to endangered and designating critical habitat for the species (77 FR 10810). Of relevance to this biological opinion, spikedace critical habitat no longer exists within the action area.

BIOLOGICAL OPINION

Description of the Proposed Action

A complete description of the proposed action is found within the December 2010 BA. The project is summarized briefly, below.

The project area, which totals approximately 2.3 acres, is located within the 2,000-foot-long, 50-foot-wide San Pedro Road ROW as shown in Figure 2 of the BA, in a portion of the N ½ of Section 17, Township 6 South, Range 16 East, Gila and Salt River Baseline and Meridian. Pinal County will be submitting a Section 404 of the Clean Water Act permit application to the U.S. Army Corps of Engineers (USACE) for maintenance to the ROW and San Pedro Road within the project area.

Maintenance will be limited to a 20 x 2,000-foot (0.92-acre) central section within the existing 50-foot right of way. Clean fill material from a local sand and gravel supplier will be employed on the road when needed for smoothing out ruts, ripples, and other deleterious effects from weather and traffic use. Work performed within the flowing segment of the San Pedro River will only take place following events that

create significant ruts, scouring, debris and sediment, and other impediments in the ROW (see BA for details). Adjacent vegetation will be trimmed where it presents a hazard for vehicles (i.e., overhanging or partially detached branches that could fall on the road or removal of weeds/shrubs that sprout on the road itself, or downed trees across the road); removal of vegetation will not take place except to remove debris or growth within the existing roadway. Proposed activities to be permitted are described by Pinal County as follows:

1. Routine (monthly) maintenance of San Pedro Road within the Pinal County ROW:
Maintaining the east and west roadway approaches to the crossing will involve grading an approximately 20-foot-wide section of roadway with a Caterpillar 140H Motor Grader. The motor grader will be used to blade the existing dirt road, and level out any irregularities, wash-boards, or ruts in the approaches to the low water crossing. These vertical differences, of approximately 6 inches or less, will be bladed smooth to ensure safe crossing of the river. A 4,000-gallon water truck would assist with dust control by keeping moisture on the roadway within the work area. No imported fill material would be necessary at any location, and the entire work area would be outside the typical flow of constant water.

2. Maintenance following typical precipitation events:

Maintaining the east and west roadway approaches to the crossing will involve grading an approximately 20-foot wide section of roadway with a Caterpillar 140H Motor Grader and a Caterpillar 966 Loader, and importing approximately two to three loads (cubic yards to be determined) of clean fill material with a 15-ton capacity, 10-wheeler end-dump truck. The clean fill material would be acquired from the Pinal County San Manuel Pit, which is located approximately 25 miles south of the project site. The motor grader and loader would also be used to peel back the existing saturated material to the sides of the roadway. Once saturated material has dried, it will be returned to the roadway with the motor grader. The entire work area would be outside the typical flow of constant water.

3. Maintenance following rare, major precipitation events (i.e., 25-, 50-, and 100-year floods):

Maintaining the east and west roadway approaches to the crossing will involve grading an approximately 20-foot-wide section of roadway with a Caterpillar 140H Motor Grader and a Caterpillar 966 Loader. The east and west approaches will be bridged by hauling the saturated excess deposited material off site with the loader and a 15-ton capacity, 10-wheeler end dump truck. To maintain pre-flood grade of the low water crossing, and the existing pre-flood flow of the river, the loader and end dump truck would also be used to assist in the delivery and installation of approximately two to three loader buckets of 6-inch minus river rock that would be installed within the area of typical flow at the low water crossing. Approximately two to three loads of clean fill material would be delivered by the end dump truck, and the loader and end dump truck would also be used to spot-dump clean fill material and back-drag any low spots. The 6-inch minus river rock and clean fill material will be acquired from the Pinal County San Manuel Pit. The motor grader will be used to blade the existing dirt road, and level any irregularities, wash-boards, or ruts. These vertical differences will be bladed smooth to ensure safe crossing of the river.

Status of the Species - Southwestern Willow Flycatcher

The rangewide status of the southwestern willow flycatcher was described in detail in our July 17, 2008, biological opinion on right-of-way maintenance within utility corridors on National Forests in Arizona (File number 22410-2007-F-0365), and is incorporated herein via reference. Additional information can be found in the species' Recovery Plan (FWS 2002).

Southwestern willow flycatcher critical habitat is described in the listing Final Rule (FWS 2005; 70 FR 60886), the critical habitat final rule (FWS 2007; 72 FR 13356), and the revised critical habitat proposed rule (FWS 2011; 76 FR 50542). The current primary constituent elements (PCE) of critical habitat include the presence of riparian plant species in a dynamic (successional) riverine environment (for nesting, foraging, migration, dispersal, and shelter), a specific, suitable structure of this vegetation, and the presence of insect populations for food (FWS 2007). The proposed physical and biological factors of the PCEs in the proposed rule are similar (FWS 2011).

Environmental Baseline – Southwestern Willow Flycatcher

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.

The basis for the action being considered in this Biological Opinion is the issuance of a Department of the Army permit, which will allow for the future maintenance of the crossing. The current crossing has been in place, by some accounts, for approximately 100 years, but absent issuance of the permit, baseline conditions moving forward would have involved the crossing returning to equilibrium with the adjacent, less-affected habitat. While the past and present existence of the crossing is part of the environmental baseline, the future existence of the crossing in an open state, lawfully maintained in accordance with the permit, will be considered in subsequent sections pertaining to the effects of the proposed action.

The action area for the proposed action includes the Dudleyville Crossing ford and the areas up- and downstream that will be indirectly affected by maintenance activities and trespass from the county-owned area. The road bed exhibits some aspects of infrastructure that would be considered a Riparian Developed Area, as defined in the 2005 Final Rule and 2012 Proposed Rule for southwestern willow flycatcher (70 FR 60886 and 76 FR 50542, respectively). Our 2005 Final Rule's description of Riparian Developed Areas referred to infrastructure, however, that does not grow riparian vegetation, such as agricultural fields, roads, houses, landscaped areas surrounding houses, cement pads, bridge footings, bases of utility structures, and existing gravel pits. Our 2012 Proposed Rule states that critical habitat will not include manmade structures (such as buildings, aqueducts, runways, roads, and other paved areas) and the land on which they are located. The area occupied by Dudleyville Crossing is not paved and, absent the Department of the Army Permit allowing for future maintenance, could grow riparian vegetation and subsequently develop PCEs.

The affected area is located within a contiguous patch of mixed broadleaf gallery forest that, in various locations over time, has supported southwestern willow flycatcher territories and nests. The site is, at present, unlikely to support breeding activities. Surveyors with SWCA completed a southwestern willow flycatcher presence/absence survey for the proposed project area during the 2010 breeding season (May-July) but no flycatchers were detected within the survey area (See BA Appendix A). Based on these survey results, the action area may, at present, be only marginally suitable for willow flycatchers. Although willow flycatchers have been detected within the surveyed area in previous years by the Arizona Game and Fish Department (AGFD) and the Bureau of Reclamation (Ellis *et al.* 2008), the site has been declining in suitability for willow flycatchers in recent years. Atypical drying of the river by June in 2009 and 2010 appears, anecdotally, to be related to increased ground water pumping in upstream areas. Southwestern willow flycatcher territories at this site (which includes areas north of the project area that were not surveyed in 2010) have decreased by approximately 12 territories in five years (15 territories in 2005; 3 territories in 2010) (English *et al.* 2006; Celeste Andresen, The Nature Conservancy, personal communication, September 27, 2010). In 2010, the nearest southwestern willow flycatcher resident detected in the vicinity of the project area, by The Nature Conservancy personnel, was approximately 0.56 mile north of the ROW. A short portion of the far eastern end of the project area (approximately 270 feet of San Pedro Road ROW) overlaps with the approximate location of the 2005–2006 willow flycatcher territories (see BA Appendix A, Figure 1).

The action area is also within the 23,949-acre Middle Gila/San Pedro Critical Habitat Unit as described in the Final Rule (FWS 2005). Multiple sites in the reach have been surveyed for the presence of southwestern willow flycatchers (site number AZSP00101) since 1993, with occupancy peaking at 43 territories in 2002 (Ellis *et al.* 2008). The lower San Pedro River and the greater Middle Gila/San Pedro Critical Habitat Unit represents an appreciable proportion of the southwestern willow flycatcher territories rangewide.

The PCEs of critical habitat include: (1) riparian plant species in a dynamic (successional) riverine environment and a specific, suitable structure of this vegetation; and (2) the presence of insect populations for food. The road prism itself lacks the PCEs of southwestern willow flycatcher critical habitat but PCEs are present in the adjacent, affected reaches of the San Pedro River. We note that the Middle Gila/San Pedro Critical Habitat Unit has been proposed for retention in the current Proposed Rule (FWS 2011) and reiterate that the physical and biological factors of the proposed PCEs are functionally the same as the present PCEs (FWS 2011).

Status of the Species - Spikedace

The rangewide status of the spikedace was described in detail in our February 9, 2009, biological opinion on the Fossil Creek Range Allotment Management Plan (File number 22410-2007-F-0197), and is incorporated herein via reference. Additional information on the spikedace and its critical habitat can be found in the critical habitat final rule (72 FR 13356: FWS 2005), the proposed rule (75 FR 66482; FWS 2010), and the most recent final rule (77 FR 10810) as discussed below.

The primary constituent elements (PCE) of spikedace critical habitat include:

1. Habitat to support all egg, larval, juvenile, and adult spikedace, which includes:
 - a. Perennial flows with a stream depth generally less than 1 m (3.3 ft), and with slow to swift flow velocities between 5 and 80 cm per second (1.9 and 31.5 in. per second).
 - b. Appropriate stream microhabitat types including glides, runs, riffles, the margins of pools and eddies, and backwater components over sand, gravel, and cobble substrates with low or moderate amounts of fine sediment and substrate embeddedness;
 - c. Appropriate stream habitat with a low gradient of less than approximately 1.0 percent, at elevations below 2,100 m (6,890 ft); and
 - d. Water temperatures in the general range of 8.0 to 28.0 °C (46.4 to 82.4 °F).
2. An abundant aquatic insect food base consisting of mayflies, true flies, black flies, caddisflies, stoneflies, and dragonflies.
3. Streams with no or no more than low levels of pollutants.
4. Perennial flows, or interrupted stream courses that are periodically dewatered but that serve as connective corridors between occupied or seasonally occupied habitat and through which the species may move when the habitat is wetted.
5. No nonnative aquatic species, or levels of nonnative aquatic species that are sufficiently low as to allow persistence of spikedace.
6. Streams with a natural, unregulated flow regime that allows for periodic flooding or, if flows are modified or regulated, a flow regime that allows for adequate river functions, such as flows capable of transporting sediments.

The appropriate and desirable level of these factors may vary seasonally and is highly influenced by site-specific circumstances. Therefore, assessment of the presence/absence, level, or value of the key components must include consideration of the season of concern and the characteristics of the specific location. The key components are not independent of each other and must be assessed holistically, as a functioning system, rather than individually. In addition, the key components need to be assessed in relation to larger habitat factors, such as watershed, floodplain, and streambank conditions; stream channel geomorphology; riparian vegetation; hydrological patterns; and overall aquatic faunal community structure.

On October 28, 2010, we published a proposed rule to uplist both the spikedace and loach minnow from threatened to endangered species and to redesignate the species respective' critical habitat, with some changes (FWS 2010). Notwithstanding the proposal to uplist the spikedace, the species' status was accurately described in the Fossil Creek BO. The lower San Pedro River, including the action area, was among the reaches proposed to be removed from spikedace critical habitat. On February 23, 2012, in our final rule (77 FR 10810), we officially removed spikedace critical habitat from the mainstem San Pedro, including the action area.

Environmental Baseline – Spikedace

Spikedace were last detected in the lower San Pedro River in 1991(USBR 1992). Recent surveys of the Dudleyville area failed to locate spikedace (BLM 2009). Because of the species' small size and low numbers, it is difficult to detect. While we believe that spikedace may remain present in the lower San Pedro and Middle Gila Rivers, particularly following floods that may displace individuals from Aravaipa Creek, we feel their abundance is immeasurably low. As stated previously, the action area is no longer designated as critical habitat for the spikedace.

Effects of the Proposed Action – Southwestern Willow Flycatcher

The proposed action is the future implementation of periodic maintenance activities on a 20-foot width of road over up to 2,000 linear feet of ROW. The road prism itself remains generally free of the PCEs of southwestern willow flycatcher habitat, including the PCEs of critical habitat. There are, however, adverse effects both up- and downstream.

Direct effects of sedimentation will be minimized by the proposal to conduct most grading work outside of the portion of the channel in which perennial baseflows occur, although removal of debris will occur in the active channel.

One category of indirect, adverse effects results from the maintenance of the road crossing in a cross section that appreciably differs from the geometry of the adjacent river reach. The effects of roads and road networks to streams is well documented in the scientific literature (Furniss *et al.* 1991; Forman and Alexander 1998; Trombulak and Frissell 2000; Brooks and Lair 2005). Observations made by FWS staff indicate that the San Pedro River in the reach within which the Dudleyville crossing is located exhibits a defined low-flow channel with moderately well-developed floodplains and high-flow channels. Observations of the Dudleyville Crossing made over the years indicate that the road's cross section is not maintained with a similar geometry and thus, there is constant aggradation and degradation of the road and adjacent stream channels as geomorphic processes struggle to reach equilibrium. The results are the elevated delivery of sediment downstream and the suppression of flood terraces and reduced recruitment of riparian vegetation up- and, to a greater extent, downstream of the crossing.

The other category of adverse effects results from the use of the Dudleyville Crossing as an entry point for trespass vehicle use on the adjacent, privately-owned parcels. While not part of the proposed action and possibly unlawful by nature, the continued use and maintenance of the crossing will allow ongoing impacts in habitat previously or presently occupied by southwestern willow flycatchers, as well as habitat that might otherwise become suitable were it not affected by this activity.

The aggregate effect of the proposed maintenance activities and the associated trespassing will be continued geomorphic instability in the adjacent reaches, reduced recruitment of wood riparian vegetation, and continued trespass activities. The entire San Pedro River supports southwestern willow flycatcher migration and dispersal. Maintenance of 0.92-acre of the approaches and the ford at Dudleyville Crossing thus also constitutes a small, but measureable, effect to forage and cover resources for birds originating from outside the action area.

Riparian ecosystems are successional by nature, and exist in dynamic equilibrium with hydrologic processes. Portions of the lower San Pedro River are likely to transition into and out of conditions suitable for southwestern willow flycatcher nesting. These riparian successional processes will be continually suppressed to varying degrees within Dudleyville Crossing, eliminating the potential for riparian vegetation within the 20-foot road width as well as in the immediately adjacent area to gain the species composition, structure, and/or density suitable for nesting. Maintenance of the crossing will modestly, but perpetually, affect the interior-edge ratio of the riparian patch through which the road travels, further impeding the patches' ability to support nesting and potentially favoring edge-oriented species, such as the nest-parasitic brown-headed cowbird (*Moluthrus ater*).

The crossing is also within close proximity to a site in which southwestern willow flycatchers nested in the past. We anticipate, however, that adequate sites within the greater Dudleyville Crossing survey area (which includes adjacent private lands) will remain unaffected by the road and trespass activities and that the density of the remaining riparian vegetation will sufficiently buffer those sites from the effects of the road maintenance.

The riparian patch bisected by the crossing is critical habitat for the southwestern willow flycatcher. The proposed action will affect the existing and proposed PCEs pertaining to the presence of riparian vegetation, the structure of that vegetation, and the dynamism of the riverine environment. Riparian vegetation, already of a suitable structure, will not be directly removed at the onset of the proposed action, though maintenance of Dudleyville Crossing will impede successional processes over the long term.

The maintenance on up to 2,000 linear feet (and 0.92 acre) of road crossing will result in ongoing suppression of habitat value in adjacent areas, although this represents a relatively small impact when compared to the 23,949-acre Middle Gila/San Pedro Management Unit and the 120,824 acres of critical habitat rangewide. The magnitude of these effects is too small to affect recovery of the species.

Effects of the Proposed Action – Spikedace

Spikedace are immeasurably rare in the lower San Pedro River, so the likelihood of spikedace occupying the river reach at Dudleyville Crossing (and being harmed or killed) is remote. The effects discussed in our October 21, 2011, draft BO on the subject action were to the species' habitat, including critical habitat. As stated above, spikedace critical habitat is no longer designated within the action area and thus, effects to the PCEs will no longer be analyzed.

Direct effects of sedimentation will be minimized by the proposal to conduct work outside of the portion of the channel in which perennial baseflows occur. Indirect effects as described above for the southwestern willow flycatcher are incorporated herein via reference.

Dudleyville Crossing is unpaved, as is Camino Rio Road to the west. At a watershed scale, dirt road networks can modify natural drainage networks and accelerate erosion processes. These changes can alter physical processes that govern stream dynamics including the following: changes in flow regimes, sediment transport and storage, bank and bed configuration, and substrate composition. These changes have been documented to have biological consequences that affect a wide array of ecosystem components

fundamental to fish habitat (Furniss *et al.* 1991). The effects of road networks on aquatic habitat increase with proximity to fish habitat such as stream crossings.

Dudleyville Crossing is located within a relatively straight reach of the San Pedro River, but there is braiding within the main channel as well as perched flood channels. It is likely that, over time, the San Pedro River channel will migrate laterally, either gradually or by an episode of rapid avulsion, allowing new riparian vegetation to become established in other locations within the immediate area and the reach in general. The up-to 0.92 acre of continual impacts and the associated indirect effects will thus create continual, although minor, effects to nominal spikedace habitat. However, the immeasurably low likelihood that the species presently occurs within the action area renders these effects unlikely to affect individuals of and the recovery potential for the species.

Cumulative Effects – Southwestern Willow Flycatcher

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 primary cumulative effects affecting southwestern willow flycatchers in the action area are related to livestock grazing (on State and private lands) and off-highway-vehicle use within and adjacent to the San Pedro River. Cumulative effects resulting from upland, land-disturbing activities (livestock grazing, road use) will continue to deliver sediment to the action area. Impairments to water quality from past and present mining activities are also anticipated to continue.

Cumulative Effects – Spikedace

Effects to spikedace from activities on State and private lands would include the following: (1) changes in land use patterns around designated critical habitat that further fragment, modify, or destroy upland or riparian vegetation, thereby negatively affecting water quality and quantity and the primary constituent elements of critical habitat; (2) encroachment of human development, road networks or recreational sites that remove upland or riparian vegetation, and potentially degrade water quality and habitat quality; (3) water withdrawals or diversions of aquatic habitats that reduce water quantity and quality; (4) additional competition with and predation by alien fish species introduced through fishing or recreational use of critical habitat; (5) agricultural or grazing practices that degrade water quality or destroy potential spawning sites in critical habitat; and (6) increased accidental or intentional fire starts by the public or private landholders on lands adjacent to or upstream from critical habitat or reaches that increase the potential for riparian and catastrophic upland wildfires, as well as loss of vegetation and negative changes to water quality and habitat quality.

Conclusion – Southwestern Willow Flycatcher

After reviewing the current status of the southwestern willow flycatcher, the environmental baseline for the action area, the effects of the proposed maintenance activities at Dudleyville Crossing, and the cumulative effects, it is our biological opinion that the action, as proposed, is neither likely to jeopardize

the continued existence of the southwestern willow flycatcher, nor likely to destroy or adversely modify critical habitat for the species. We present these conclusions for the following reasons:

- Implementation of the proposed action will interfere with the site's adjacent riparian successional processes and may reduce the likelihood that southwestern willow flycatcher nests will be established in the future. We anticipate that adequate riparian vegetation will remain unaffected in these adjacent sites so that the greater Dudleyville Crossing survey area remains capable of supporting nesting activities.
- We do not anticipate that dispersal or migration activities will be measurably affected.
- The low likelihood that individual southwestern willow flycatchers will be affected renders the proposed action unlikely to affect the recovery of the species at the site, critical habitat, and rangewide scales.
- We anticipate minor effects to current (and proposed) PCEs 1 and 2 within up to 0.92 acre of ROW and the indirectly affected area. These represent a small fraction of the 23,949-acre Middle Gila/San Pedro Management Unit and the 120,824 acres of critical habitat rangewide. The ability of the area to continue to contribute to the recovery of the southwestern willow flycatcher will not be measurably affected or diminished.

Conclusion – Spikedace

After reviewing the current status of the spikedace, the environmental baseline for the action area, the effects of the proposed maintenance activities at Dudleyville Crossing, and the cumulative effects, it is our biological opinion that the action, as proposed, is not likely to jeopardize the continued existence of the spikedace. We present this conclusion for the following reasons:

- Spikedace may occur in the lower San Pedro River in densities small enough to evade detection by infrequent surveys. The likelihood that an individual will be affected by the proposed action is immeasurably remote.
- The low likelihood that spikedace will be affected renders the proposed action unlikely to affect the recovery of the species at the site, critical habitat, and rangewide scales.
- Spikedace critical habitat does not exist within the action area; therefore, none will be affected. The ability of the remaining areas designated as critical habitat for the species to continue to contribute to the recovery of the spikedace will not be affected.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulations pursuant to section 4(d) of the Act 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 Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

In regard to Pinal County's written comment regarding the contents of this Incidental Take Statement, we note that in the applicable case law, *Arizona Cattle Growers' Association v. United States Fish and Wildlife Service and Bureau of Land Management* (Nos. 99-16102, 99-16103, and 00-15322), the Court found that the FWS may not issue an Incidental take Statement when there is no rational basis to conclude that take will occur. Accordingly, take is not, and need not be, quantified herein.

Amount or Extent of Take – Southwestern Willow Flycatcher

As demonstrated in the Environmental Baseline and Effects of the Proposed Action sections, above, southwestern willow flycatchers are unlikely to be directly or indirectly affected by implementation of the proposed action. We, therefore, do not anticipate that implementation of the proposed action will result in the incidental take of any individuals of the species.

Conservation Recommendation – Southwestern Willow Flycatcher

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act 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.

- We recommend that USACE continue to implement the southwestern willow flycatcher recovery plan.

For us to be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitat, we request notification of the implementation of any conservation recommendations.

Amount or Extent of Take – Spikedace

As demonstrated in the Environmental Baseline and Effects of the Proposed Action sections, above, spikedace are unlikely to be directly or indirectly affected by implementation of the proposed action. We, therefore, do not anticipate that implementation of the proposed action will result in the incidental take of any individuals of the species.

Conservation Recommendation – Spikedace

- We recommend that USACE continue to implement the spikedace and loach minnow recovery plan.

Reporting Requirements/Disposition of Dead or Injured Listed Animals

Upon finding a dead or injured threatened or endangered animal, initial notification must be made to the FWS's Division of Law Enforcement, 2450 West Broadway, Mesa, Arizona (480-967-7900) within three working days of its finding. Written notification must be made within five calendar days and include the date, time, and location of the animal, a photograph, and any other pertinent information. Care must be taken in handling injured animals to ensure effective treatment and care, and in handling dead specimens to preserve biological material in the best possible condition. If feasible, the remains of intact specimens of listed animal species shall be submitted as soon as possible to the nearest FWS or Arizona Game and Fish Department office, educational, or research institutions (e.g., University of Arizona in Tucson) holding appropriate state and Federal permits.

Arrangements regarding proper disposition of potential museum specimens shall be made with the institution before implementation of the action. A qualified biologist should transport injured animals to a qualified veterinarian. Should any treated listed animal survive, the FWS should be contacted regarding the final disposition of the animal.

REINITIATION AND CLOSING STATEMENT

This concludes formal consultation on the Corps of Engineers' issuance of a Department of the Army Permit to allow Pinal County to periodically maintain San Pedro Road at Dudleyville Crossing. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been maintained (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 adversely 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 a listed species or critical habitat that was not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by this action.

This biological opinion contains an analysis of the effects of the proposed action to spikedace, to southwestern willow flycatcher, and to the latter species' critical habitat. The proposed revision to southwestern willow flycatcher critical habitat includes the same reach of the lower San Pedro River and functionally identical PCEs. In the event the southwestern willow flycatcher critical habitat is revised during the term of the proposed action, there will be no need to reinitiate formal consultation under Item 4 in the prior paragraph, above. The remaining causes for reinitiation (Items 1-3), remain applicable.

We appreciate the USACE's efforts to identify and minimize effects to listed species from this project. For further information please contact Jason Douglas (520) 670-6150 (x226) or Jean Calhoun (520) 670-6150 (x223). Please refer to the consultation number, 02EAAZ00-2011-F-0535 in future correspondence concerning this project.

Sincerely,

/s/ Jean Calhoun for
Steven L. Spangle
Field Supervisor

cc (hard copy):

Steve Spangle, Field Supervisor, Fish and Wildlife Service, Phoenix, Arizona (2)
Jean Calhoun, Assistant Field Supervisor, Fish and Wildlife Service, Tucson, Arizona

cc (electronic copy):

Josh Avey, Chief, Habitat Branch, Arizona Game and Fish Department, Phoenix, Arizona
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Literature Cited

- Brooks, M.L. and B. Lair. 2005. Ecological Effects of Vehicular Routes in a Desert Ecosystem. Report prepared for the United States Geological Survey, Recoverability and Vulnerability of Desert Ecosystems Program. United States Geological Survey, Western Ecological Research Center, Las Vegas Field Station, Henderson, NV. 23pp.
- Brown, D.E. (ed.). 1994. Biotic Communities: Southwestern United States and Northwestern Mexico. Salt Lake City, Utah: University of Utah Press.
- Bureau of Land Management. 2009. Dudleyville Spikedace Survey Report 2005 – 2009. Unpublished trip notes. Bureau of Land Management, Tucson Field Office, Tucson, Arizona.
- Ellis, L.A., D.M. Weddle, S.D. Stump, H.C. English, and A.E. Graber. 2008. Southwestern willow flycatcher final survey and monitoring report. Arizona Game and Fish Department, Research Technical Guidance Bulletin #10, Phoenix, Arizona, USA.
- Forman, R.T.T. and L.E. Alexander. 1998. Roads and Their Major Ecological Effects. *Annual Review of Ecology and Systematics* 29: 207-231.
- Furniss, M.J, T. D. Roelofs, and C.S. Yee. 1991. Road construction and maintenance, in, Influences of forest and rangeland management on salmonid fishes and their habitats. American Fisheries Society Special Publication 19.
- Trombulak, S.C. and C.A. Frissell. 2000. Review of Ecological Effects of Roads on Terrestrial and Aquatic Communities. *Conservation Biology* 14(11): 18-30.
- U.S. Bureau of Reclamation (USBR). 2003. Biological assessment on proposed water exchange by San Carlos Apache Tribe to maintain minimum pool in San Carlos Reservoir in Gila and Pinal counties, Arizona. U.S. Bureau of Reclamation, Phoenix, Arizona.
- _____. 1992. Summary of Fish and Water Quality Sampling along the San Pedro River from Dudleyville to Hughes Ranch near Cascabel, Arizona, October 24 and 25, 1991, and the Gila River from Coolidge Dam to Ashurst/Hayden Diversion Dam, October 28-31, 1991. Unpublished trip memorandum. February 26, 1992. U.S. Bureau of Reclamation, Phoenix, Arizona.
- U.S. Fish and Wildlife Service (FWS). 2011. Endangered and Threatened Wildlife and Plants; Endangered and Threatened Wildlife and Plants; Designation of Revised Critical Habitat for Southwestern Willow Flycatcher; Proposed Rule. *Federal Register* 76(157): 50542-50629.
- _____. 2010. Endangered and Threatened Wildlife and Plants; Endangered Status and Designation of Critical Habitat for Spikedace and Loach Minnow. *Proposed Rule. Federal Register* 75(208): 66482-66552.

- _____. 2007. Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Southwestern Willow Flycatcher (*Empidonax traillii extimus*); Final Rule. Federal Register 70(201): 60886-61009.
- _____. 2005. Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Southwestern Willow Flycatcher (*Empidonax traillii extimus*); Final Rule. Federal Register 70(201): 60886-61009.
- _____. 2002. Southwestern Willow Flycatcher Recovery Plan, Region 2, Albuquerque, NM.