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In Reply Refer To:
AESO/SE
22410-2009-F-0353

April 5, 2010

Memorandum

To: Manager, Tucson Field Office, Bureau of Land Management, Tucson, Arizona

From: Field Supervisor

Subject: Biological Opinion on the Proposed Middle Gila Canyons Transportation and Travel Management Plan (File number 6840, AZ-420)

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 March 15, 2009. At issue are effects that may result from the proposed implementation of the Middle Gila Canyons Transportation and Travel Management Plan (Plan) in Pinal and Gila counties, Arizona. Your memorandum concluded that the proposed action may adversely affect the endangered southwestern willow flycatcher (*Empidonax traillii extimus*) and its critical habitat and the threatened spikedace (*Meda fulgida*) and its critical habitat.

Your memorandum also requested our concurrence that the proposed action is not likely to adversely affect the endangered lesser long-nosed bat (*Leptonycteris curasoae*) and threatened bald eagle (*Haliaeetus leucocephalus*). We concur with your determinations, and have provided our rationale in Appendix A.

You also requested our concurrence that the proposed action is not likely to adversely affect the candidate Acuña cactus (*Echinomastus erectocentrus* var. *acunensis*). You further requested conference on the candidate yellow-billed cuckoo (*Coccyzus americanus occidentalis*). Interagency consultation need not be performed for candidate species, so these analyses will not be included in this document. We can provide technical assistance upon request, but note that you have already developed conservation measures to avoid and minimize effects to these species.

This biological opinion is based on information provided in: (1) the March 2009 Biological Evaluation (BE) transmitted with your memorandum; (2) verbal and written interactions between our respective staffs; and (3) other published and unpublished sources of information.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

March 15, 2009:

We received your request for formal consultation on the proposed action.

July 15, 2009:

We transmitted a memorandum requesting a 60-day extension of the consultation to you.

July 22, 2009:

We received your July 21, 2009, memorandum granting our 60-day extension request.

February 9, 2010:

We submitted a second request for an extension of the consultation period to you.

March 4, 2010:

We transmitted a draft BO to you for review and comments.

March 23, 2010:

We received an advanced version of your March 26, 2010, memorandum containing comments of our March 4, 2010, draft biological opinion.

BIOLOGICAL OPINION

Description of the Proposed Action

A complete description of the proposed action is found in the Biological Evaluation transmitted with your March 15, 2009, memorandum. The Middle Gila Canyons transportation planning area is comprised of approximately 96,320 acres of public land administered by the BLM, and is bounded by US Highway 60, State Route (SR) 79, SR 177, and Pinal County's Florence-Kelvin Highway. The proposed Transportation and Travel Management Plan (TMP) identifies the BLM system of roads/primitive roads/trails and establishes designations for their use and maintenance. Route-specific designations are shown in Table 1 of Appendix B of the TMP, listed by route inventory evaluation number. The proposed transportation and travel management designations are shown on Map 3 in the BE. The proposed designations identify the transportation asset types, functional classification, maintenance intensity, and access vehicle type for each route proposed for the BLM transportation plan.

Asset types consist of roads, primitive roads, and non-motorized trails. The proposed asset type for each route is shown on Table 1 of Appendix B of the TMP. Asset type designations are indicated on Map 3 of the TMP for routes on non-Federal lands only if they are considered essential for access to the BLM lands, or for travel within the public lands in the area. Descriptions of the three asset types are provided below. An inventory of mileages by asset type appears in Table 1 of the BE.

Roads (28.8 miles) are routes that will be open to all motorized vehicle use year-round. Roads will generally accommodate low volume two way recreational and commercial rural traffic, and may be passable by passenger car and large vehicle types (motor homes, trailer combination vehicles, and haul trucks). Some roads may accommodate resource extraction traffic by heavy trucks. They will be maintained annually to allow safe passage and prevent damage to adjacent land, and spot repairs will be completed as needed. These include the main access roads from the public highways to the public lands. They presently carry most of the traffic into and out of the planning area generated by existing land uses (mining, grazing, public recreation, non-Federal land in-holdings, other). Typical travel way width is 22 ft. or wider depending on traffic type, alignment and topography, with or without shoulders and maintained drainage depending on terrain. The typical right of way is 30 ft. to 60 ft. wide depending on actual travel-way width, topography and need to maintain cut/fill slopes.

Primitive Roads (231.9 miles) are routes that will be open to motorized vehicle use year-round. They are existing unimproved routes, typically single lane 8 to 10 ft wide and accommodate full size four-wheel drive vehicles, unless otherwise specified. These routes will generally accommodate single lane travel, with passing turnouts or widening as needed. Maintenance objectives will vary depending on functional class and maintenance intensity, and the type of access served by a given route. Maintenance work will be only as needed to repair or stabilize erosion, control drainage and provide adequate clearance. The typical right of way is 30 ft. total width. Non-Motorized trails (17.8 miles) include the Arizona Trail, two wilderness trails in the White Canyon Wilderness, and segments of existing routes with potential for developing trails identified in the Pinal County Open Space and Trails Plan. The typical right of way for non-motorized trails is 15 ft. total width. Trail standards will typically accommodate hiking, equestrian and mountain bike (tread width, grades, and clearance) uses, except wilderness trails which will only accommodate hiking and equestrian use with wilderness management constraints.

Approximately 147.8 miles of inventoried motor routes will be closed to motor vehicles to avoid impacts to sensitive resources on the public lands, and will not be designated into the BLM transportation system. Approximately 7.6 miles of abandoned routes found to be reclaiming or reclaimed will be designated for restoration and closed to motor vehicle use. Approximately 167.0 miles of linear features on BLM land that were not serving a motorized access purpose and are largely reclaimed (old mining access ways, fence lines, pipelines and other disturbances) will be identified as closed to motor vehicles and the natural reclamation process allowed to continue. Approximately 12.6 miles of inventoried motor routes providing OHV recreation opportunities related to rock crawling will not be identified as transportation assets, but will be identified as specialized recreation sites.

New roads and trails may be developed, or existing roads may be reconstructed or improved on a case-by-case basis to meet emerging access needs related to allowable multiple uses of the public lands. Under the proposed plan, the feasibility of developing a bypass route to avoid traversing the SCIP diversion dam facilities will be pursued. Relocation of a portion of the Battle Axe Road from SR177 to Walnut Canyon is anticipated as part of the initial stages of Asarco's Copper Butte Mine development in accordance with the Ray Land Exchange Agreement. New road construction or reconstruction is subject to case-by-case, site-specific review for compliance with environmental and other laws, and mitigation identified at the time the projects are carried out (cultural surveys, engineering, and construction). Transportation improvements will be in accordance with appropriate standards depending on the route-specific designations and management objectives. Transportation improvements by other parties (county or other government agencies, or private

sector entities) will be in accordance with public land right-of-way regulations or cooperative agreements.

The proposed action also includes site improvements and developments though, under the proposed TMP, the area will remain with minimal improvements or developments for public recreational use. Minor site work and improvements will be completed at portal sites, trailhead sites, and interpretive sites, generally aimed at correcting safety problems, preventing site degradation, or mitigating unacceptable impacts.

Approximately 147.8 miles of inventoried motorized routes are not identified for motor vehicle travel and will be closed to motor vehicle use. These routes will be physically closed by various means depending on site specific conditions, or obliterated and reclaimed to restore near natural contours and vegetation cover as deemed appropriate on a case-by-case basis.

Monitoring and Adaptive Management

Ongoing monitoring activities will address the condition of roads and trails, traffic and use type, volume and distribution, condition of public use areas and sites, compliance with designations and use restrictions, wildlife habitat, and cultural resource properties. Baseline condition surveys and studies will be completed as appropriate, and monitoring indicators will be defined. The results of monitoring will be used to evaluate implementation progress and the effectiveness of the plan in achieving outcomes and desired conditions, identify adaptive measures, and respond to changing conditions, access and management needs. Route designations or other proposed actions in this plan could be modified based on monitoring results. All required clearances and analyses would precede needed modifications. Condition surveys will be completed annually to identify road and trail maintenance, erosion control and stabilization projects. Road and trail maintenance will be scheduled to correct drainage and erosion problems, with priority given to the main access routes. Wildlife habitat surveys and studies will be pursued with priority on riparian, xeric desert washes, and desert tortoise and desert bighorn sheep habitat.

Description of the Proposed Conservation Measures

General Conservation Measures

CM-1: Cross country travel by motorized vehicles for working livestock, for hunting or to retrieve game, or other activities will not be allowed. Exceptions may be authorized on a case-by-case basis, and approved under the appropriate land-use authorization and subject to stipulations that may be deemed necessary.

CM-2: Interpretive efforts will be increased to promote a greater appreciation and respect for historic, cultural, and natural resource values in the area, and promote stewardship and involvement of visitors in taking care of sensitive areas (wildlife, habitat, cultural sites and properties, riparian areas, aquatic habitat, etc).

General Rehabilitation and Restoration Measures

Rehabilitation and Restoration Measure (RR) -1 When rehabilitating important areas for federally listed species that have been damaged by fire or other activities, the biologist will give careful consideration to minimizing long-term impacts. Someone who is familiar with resource impacts and the needs of the affected species will contribute to rehabilitation plan development. Appropriate timing of rehabilitation and spatial needs of federally listed species will be addressed in rehabilitation plans.

RR-2: Seed from regionally native or sterile alien (non-native) species of grasses and herbaceous vegetation will be used in areas where reseeding is necessary following ground disturbance to stabilize soils and prevent erosion by both wind and water.

RR-3 Sediment traps or other erosion control methods will be used to reduce or eliminate influx of ash and sediment into aquatic systems.

RR-4: Use of motorized vehicles during rehabilitation or restoration activities in suitable or occupied habitat will be restricted, to the extent feasible, to existing roads, trails, or washes, and to temporary access roads. If off-road travel is deemed necessary, any cross-country travel paths will be surveyed prior to use and will be closed and rehabilitated after rehabilitation or restoration activities are completed.

RR-5: All temporary roads, vehicle tracks, skid trails, and off-road vehicle (ORV) trails resulting from fire suppression and illegal activities will be rehabilitated (water bars, etc.), and will be closed or made impassible for future use.

RR-6: (Recommended) Develop public education plans that discourage or restrict fires and fire-prone recreation uses during high fire-risk periods. Develop brochures, signs, and other interpretive materials to educate recreationists about the ecological role of fires, and the potential dangers of accidental fires.

Riparian, Wetland, and Aquatic Conservation, Rehabilitation, and Restoration Measures

The following Conservation Measures will be implemented during operations in riparian, wetland, or aquatic habitats, unless firefighter or public safety, or the protection of property, improvements, or natural resources, render them infeasible during a particular operation. Necessary modifications of the Conservation Measures or impacts to federally protected species and habitat during operations will be documented by the Resource Advisor, and coordinated with the FWS.

RA-1: Crossings of perennial streams in suitable or occupied habitat for federally protected species will not be permitted, unless an established road already exists or where dry, intermittent sections occur.

RA-2: Avoid the use of chemicals in riparian habitats or within 300 feet of aquatic habitats, particularly sites occupied by federally protected species.

RA-3: Priority for placement of camps, staging areas, and aircraft landing or refueling sites will be outside riparian habitats or river/stream corridors occupied by federally protected species.

RA-4: When using water from sources supporting federally protected species, care must be taken to ensure adverse impacts to these species are minimized or prevented. Consider replacing water when appropriate. Unused water from fire abatement activities will not be dumped in sites occupied by federally protected aquatic species to avoid introducing non-native species, diseases, or parasites.

RA-5: Use of containment systems for portable pumps to avoid fuel spills in riparian or aquatic systems will be required.

RA-6: (Recommended) Develop and implement restoration plans for affected riparian or aquatic habitats, including long-term monitoring, to document changes in conditions in the riparian zone and watershed that maintain flood regimes and reduce fire susceptibility. Monitor stream water quality and riparian ecosystem health to determine effects of management activities. Coordinate efforts and results with the FWS and AGFD.

RA-7: Monitor Cochran Crossing for off road activities in the floodplain and streambed.

Species-Specific Conservation Measures

Southwestern Willow Flycatcher

WF-1: Implement the Conservation Measures for Management Activities in Riparian and Aquatic Habitats.

WF-2: Avoid developing access roads that would result in fragmentation or a reduction in habitat quality

WF-3: Vegetation treatment projects adjacent to occupied or unsurveyed suitable habitat will only be conducted when willow flycatchers are not present (October 1 – March 31).

Bald Eagle

BE-1: No human activity within ½ mile of known bald eagle nest sites between December 1 and June 30.

BE-2: No tree cutting within ¼ mile of known nest trees.

BE-3: No human activity within ¼ mile of known bald eagle winter roost areas between October 15 and April 15.

BE-4: No tree cutting within the area immediately around winter roost sites as determined by BLM biologists.

BE-5: No helicopter or aircraft activity within ½ mile of bald eagle nest sites between December 1 and June 30 or winter roost sites between October 15 and April 15.

Yellow-billed Cuckoo

YC-1: Implement the Conservation Measures for Management Activities in Riparian and Aquatic Habitats.

Spikedace

LM-1: Implement the Conservation Measures for Management Activities in Riparian and Aquatic Habitats for occupied reaches and critical habitat.

LM-2: All reasonable efforts shall be made to minimize disturbance within the wetted areas of the Gila River or tributary channels.

LM-3: No heavy equipment will be used off-road during projects within the wetted areas of the Gila River.

LM-4: All reasonable efforts will be made to ensure that no pollutants, or chemicals associated with projects or activities enter surface waters of reaches occupied by these two fish species.

Flowering Plants

The following Conservation Measure for known locations and unsurveyed habitat of all federally protected plant species within the planning area will be implemented during the life of the plan to the extent possible:

PL-1: During project-related construction and staging activities, no personnel will be permitted within 100 meters of identified individuals or populations, nor will off-road vehicles be allowed within the 100-meter buffer area in habitat occupied by federally protected plant species. One of the primary threats to many of these plant species is trampling and/or crushing from personnel and vehicles.

Lesser Long-nosed Bat

LB-1: Instruct all special Recreation Permit holders in the identification of agave and columnar cacti and the importance of their protection.

LB-2: Prior to implementing any activities, pre-project surveys will be conducted for paniculate agaves and saguaros that may be directly affected by activities.

LB-3: Protect long-nosed bat forage plants -- saguaros and high concentrations of agaves -- from recreational activities, and from modification by management activities to the greatest extent possible. "Agave concentrations" are contiguous stands or concentrations of more than 20 plants per acre. Avoid driving over plants or piling slash on top of plants, Staging areas for crews or equipment will be located in disturbed sites, if possible.

LB-4: No seeding/planting of nonnative plants will occur in any treatment site with paniculate agaves or saguaros. Trail crew members and the project foreperson will be briefed on threatened and endangered species concerns and mitigative measures.

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 Final Rule (70 FR 60886: FWS 2005). The 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.

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 action area includes those portions of the overall TMP planning area in which the proposed action directly or indirectly affects threatened and endangered species. Indirect effects may result from activities occurring in upland areas and thus, the action area includes the Gila River and the contributing watershed area north of the river. The action area thus delimited is within the Middle Gila/San Pedro Critical Habitat Unit as described in the Final Rule (FWS 2005) and encompasses southwestern willow flycatcher survey sites from the Kelvin Bridge (Site number GRSN020) downstream to South Butte. Cochran Crossing, located on the Gila River between the San Pedro River confluence and the Ashurst-Hayden Diversion Dam, is the only location where elements of the proposed action specifically intersect critical habitat.

Southwestern willow flycatchers are abundant at certain locations within the Gila/San Pedro Critical Habitat Unit, though the majority of the territories are in locations along the lower San Pedro River. The Gila River in the action area has been regulated by Coolidge Dam, which impounds the river to form San Carlos Reservoir. The Bureau of Indian Affairs operates the reservoir to meet the agricultural water needs of downstream users such as the Gila River Indian Community and the San Carlos Irrigation and Drainage District (collectively, the San Carlos Irrigation Project) (USBR 2003). Water releases occur year-round with the highest generally occurring during summer months (FWS 2004).

The hydrology of the Gila River reach downstream of Coolidge Dam exhibits a highly altered magnitude, frequency, duration, and rate of change. These changes to the base and flood flow hydrographs have contributed to appreciable alterations in the riparian community within the critical habitat, which consists largely of tamarisk (FWS 2002, USBR 2003). The Arizona Game and Fish Department (AGFD) performed a long-term study (1996-2007) within an area located downstream of Coolidge Dam (Ellis *et al.* 2008). AGFD examined the influence of variation in streamflow on the abundance of flycatcher territories detected in the Gila River study area; all linear

regressions showed a positive relationship between Gila River streamflow and the number of southwestern willow flycatcher territories (Ellis *et al.* 2008). The 1996-2007 territory abundance data (Ellis *et al.* 2008; Appendix I) represent the baseline status of southwestern willow flycatchers in the action area, and are incorporated herein via reference. In summary, the number of territories has varied from as low as 10 in 1996, when four sites were surveyed, to as high as 64 in 2007, when 22 sites were surveyed.

While the abundance of southwestern willow flycatcher territories is linked to the artificial hydrograph of Coolidge Dam, we hypothesize that longer-term riparian successional processes may also influence the abundance of territories over time. Regardless, hydrologic variability does account for variation in the numbers of territories and thus, the overall abundance of southwestern willow flycatchers on the Gila River within the action area is similarly variable.

Southwestern willow flycatchers have been detected in the action area, most recently in 2008 at North Butte (approximately 1.5 river miles downstream from Cochran (SWCA 2009)). The fate of the single North Butte nest was not determined. The Cochran Crossing site is surveyed for southwestern willow flycatchers by SWCA Environmental Consultants, Inc. (SWCA) and is labeled as GRSN032 in annual reports compiled by the Arizona Game and Fish Department (AGFD) (Ellis *et al.* 2008). Southwestern willow flycatchers have not been found breeding at Cochran Crossing (SWCA 2009).

The Gila River within the TMP action area exhibits all of the PCEs of southwestern willow flycatcher critical habitat in at least some locations, including the presence of riparian plant species in a dynamic riverine environment; a specific, suitable structure of this vegetation; and the presence of insect populations for food. The operations of Coolidge Dam, however, do affect the dynamism of the riparian ecosystem by altering the magnitude, frequency, duration, and rate of change of the middle Gila River hydrograph. The primary manifestation of this effect is that the middle Gila River has a relatively high proportion of tamarisk within its riparian community. Regardless, the critical habitat along the Gila River below Coolidge Dam is, and may continue to be utilized extensively for breeding (Ellis *et al.* 2008) and will continue to serve as a migration corridor for additional occupied reaches of the Gila River upstream.

Effects of the Proposed Action – Southwestern Willow Flycatcher

Construction would occur in habitats adjacent to sites potentially occupied by southwestern willow flycatchers. Effects would include increased visitor use along the Gila River, reduction in the number of vehicle crossings of the Gila River in Critical Habitat, and increased possibility of wildfire affecting southwest willow flycatcher habitat.

The proposed action's construction of trails, roads, and portals will have no direct effect to individual southwestern willow flycatchers. Under the proposed plan, the area will remain with minimal improvements or developments for public recreational use. Minor site work and improvements will be completed at portal sites, trailhead sites, and interpretive sites, generally aimed at correcting safety problems, preventing site degradation, or mitigating unacceptable impacts. Any of these activities will be scheduled to take place during the non-breeding season in areas within the Gila River floodplain, when the flycatcher is not present.

The recreational use associated with implementation of the TMP will also have no direct effects to individual southwestern willow flycatchers. A special Recreation Permit (SRP) is required for use of public land in connection with commercial, competitive, and organized group activities in accordance with public land regulations. Activities associated with operations under permits includes temporary occupancy of sites for parking, camping, staging for trips into the area from access points, and travelling on BLM roads and trails. The permitted activities generally occur on previously disturbed areas away from the flycatcher habitat along the river, and impacts have been largely mitigated by permit administration, except for the increased public awareness among new visitors attracted to events, contributing to increasing visitation trends. Presently, large organized group (200 to 400 units) camping and staging activities are accommodated off the public lands on State trust or private lands well away from the Gila River floodplain.

The proposed action will indirectly affect southwestern willow flycatchers and the species breeding, dispersal, and migration habitat. Indirect effects to the willow flycatcher would be primarily due to changes in habitat quality and quantity from the proposed management activities. Some of the changes could be an improvement in habitat along the river due to the closing of several current crossings on the river and limiting the vehicular disturbance in the breeding season to only one unimproved crossing along the almost 20 river miles within the project area.

An increase of recreational activities could increase the potential for cowbird parasitism of local flycatchers during the breeding season due to the increased public awareness among new visitors attracted to events.

The PCEs of southwestern willow flycatcher 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.

The proposed action will prevent successional processes (first and second PCEs) from occurring naturally at Cochran Crossing, where vehicles are permitted to cross the Gila River, an area which the BLM estimates at one (1) acre. The BLM further estimates that turnouts and portal construction may disturb up to 21 acres of watershed associated with existing roadways. The 1-acre of direct impacts at Cochran Crossing and the sedimentation resulting from 21 acres of disturbance within the watershed to these PCEs is anticipated to be immeasurably small relative to the amount of critical habitat present at the Management Unit (23,949 acres) and rangewide (120,824 acres) scales and thus, will have no measurable effect on the recovery of 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.

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.

Within the action area, cumulative effects result from activities on Private, State, and Federal (BLM) lands. 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 (outside of the purview of the TMP) within and adjacent to the Gila River.

Cumulative effects resulting from upland, land-disturbing activities (livestock grazing, road use) will continue to deliver sediment to the action area. Upstream water withdrawals for agricultural, industrial, and residential use will continue to reduce baseflows, and impairments to water quality from past and present mining activities are also anticipated to continue.

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 Middle Gila Canyons TMP, 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:

- Southwestern willow flycatchers are known to occur on the Gila River within the action area, but in low numbers and not in all years.
- Implementing the Conservation Measures (see the Description of the Proposed Conservation Measures section, above and Section 7.0 in the BE) would greatly minimize negative impacts to nesting willow flycatchers, as well as occupied, suitable, and potential habitat, although flycatchers may still experience some minor residual effects from the proposed management activities.
- Conservation measures CM-1, RR-3, RR-4, RR-5, RA-1, RA-1, RA-3, RA-6, RA-7, WF-1, WF-2, and WF-3 will minimize the contribution of roads to alterations in peak flow hydrology and sedimentation in the Gila River.
- Conservation measures CM-1, CM-2, RR-1, RR-2, RR-4, RR-5, RR-6, RA-2, RA-3, RA-5, RA-6, RA-7, WF-1, WF-2, WF-3, YC-1, and LM-1 will minimize the effects of activities to upland and riparian vegetation. Measure WF-3 also requires that vegetation management activities will only occur in occupied or unsurveyed habitat during the non-breeding season (October 15 to April 15).
- The conservation measures mentioned above as being protective of aquatic ecosystems and riparian vegetation, as well as measures RA-4, RA-5, LM-2, LM-3, and LM-4, will minimize the effects of TMP implementation to aquatic ecosystems, which partially support insects upon which southwestern willow flycatchers feed.
- Overall, the proposed activities are not expected to affect the numbers, reproduction, or distribution of the southwestern willow flycatcher.
- The proposed action is anticipated to reduce the threat of catastrophic wildfires in some riparian areas by using a variety of restoration activities, which is expected to benefit the species and its suitable and potential habitat.

- The effects to the PCEs of southwestern willow flycatcher critical habitat that may remain under full implementation of the Conservation Measures are small in scale and unlikely to result in the adverse modification or destruction of the critical habitat. These residual effects are immeasurably small relative to the amount of critical habitat available in the Middle Gila/San Pedro Management Unit (23,949 acres) and throughout the species' range (120,824 acres). The ability of the area to continue to contribute to the recovery of the southwestern willow flycatcher will not be reduced.

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 2007). The primary constituent elements (PCE) of spikedace critical habitat include: (1) permanent and flowing water with low levels of pollutants; (2) sand, gravel, and cobble substrates with low or moderate amounts of fine sediment and substrate embeddedness; (3) streams that have low gradients appropriate for each species; appropriate water temperatures for each species; pool, riffle, run, and backwater components; and abundant aquatic insect food; (4) habitat with no or low levels of detrimental, non-native fish species that allows persistence of spikedace and the species' habitat; and (5) areas within perennial, 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.

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.

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.

The Middle Gila River reach from the San Pedro River confluence downstream to the Ashurst/Hayden Diversion Dam is critical habitat for spikedace. This reach is subject to regulated discharges from Coolidge Dam, and is occupied by large numbers of nonnative fishes (USBR 2003). As such, the primary constituent elements pertaining to habitat free of injurious nonnative species is highly affected under baseline conditions, while the remaining PCEs pertaining to physical habitat vary on an intra- and interannual basis depending on local hydrology (especially discharges from Aravaipa Creek and the lower San Pedro River) and the operations of Coolidge Dam.

Effects of the Proposed Action - Spikedace

Spikedace are immeasurably rare in the middle Gila River, so the likelihood of spikedace occupying this reach of the Gila River at Cochran crossing is remote. The effects discussed herein are to the species' habitat, including critical habitat.

The proposed action includes the continuing use of the Gila River crossing at Cochran. Currently, the Cochran crossing is used heavily by motor vehicle traffic on weekends and moderately on week days. Vehicle traffic and road maintenance may result in fish mortality from driving through the river; release of toxic substances (e.g. gas and oil) into the water; direct loss of individual fish, larvae, or eggs crushed by tires or from stranding on land from vehicle splash, especially larval and juvenile fish; and decreased water quality from sediment disturbed by repeated crossing. Most direct changes in water quality from vehicle traffic would be chronic, long-term, but limited to a short distance of stream. Riparian vegetation is excluded from the road bed allowing for a small area (less than 1 acre) of increased erosion and decreased riparian function. By closing the river bed adjacent to the crossing to vehicles and limiting traffic to horseback and pedestrian use, the adverse impacts associated with the present use of the crossing would be reduced, benefitting critical habitat and reducing the potential for fish mortality.

A special Recreation Permit (SRP) is required for use of public land in connection with commercial, competitive, and organized group activities in accordance with public land regulations. Activities associated with operations under permits include temporary occupancy of sites for parking, camping, staging for trips into the area from access points, and travelling on BLM roads and trails. The permitted activities generally occur on previously disturbed areas away from the critical habitat along the river, and impacts have been largely mitigated by permit administration, except for the increased public awareness among new visitors attracted to events, contributing to increasing visitation trends.

Recreational use associated with implementation of the TMP will also indirectly affect spikedace. Indirect effects to spikedace would be primarily due to changes in habitat quality from the proposed management activities. Some improvement in habitat along the river due to the closing of all access to the river, except for a single crossing is anticipated. This will reduce bank damage associated with sedimentation and degradation of water quality from vehicle traffic in the river bed during periods of low flow.

Presently, large organized group (200 to 400 units) camping and staging activities are accommodated off the public lands on State trust or private lands well away from the Gila River floodplain (critical habitat). Disturbance on these areas is of unknown acreage, but likely contributes to soil disturbance, resulting in increased rates of sediment input to ephemeral drainages and ultimately the Gila River.

Under the proposed plan, the area will have few additional improvements or developments for public recreational use. Minor site work and improvements will be completed at portal sites, trailhead sites, and interpretive sites, generally aimed at correcting safety problems, preventing site degradation, or mitigating unacceptable impacts. It is anticipated that turnouts and portal construction may disturb up to 21 acres of watershed associated with existing roadways.

The use and maintenance of roads within the scope of the TMP will also indirectly affect the spikedace. At the 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.

Hydrological modifications resulting from water displacement by roads can include increased drainage density (formation of new drainages and connectivity of road-caused drainages to the natural network); increased drainage efficiency; changes to timing or magnitude of peak flows; increased moisture accumulations down slope; transfer of moisture between watersheds; and reduced onsite soil moisture, base flow, or groundwater (Moll 1999). The road network has not been evaluated for the magnitude of hydrologic modification and is largely the result of historic road construction related primarily to past mining activity.

The study area encompasses over 90,000 acres and 981 miles of road and linear features of which nearly 600 miles are on BLM lands. The majority of the roads were put in place for mining purposes decades ago and most continue to be used to this day. The road related watershed disturbance on BLM is estimated at 359 acres that will be reduced slowly to about 180 acres as reclamation and stabilization occur. The addition of small road segments on the Battle Ax Road and a bypass to the SCIP closure at the Ashurst-Hayden Dam will add a small amount of additional disturbance. Sediment discharge from roads will likely be cut in half (or more) by stabilizing closed and undesignated roads and other linear features. Further mitigation will be accomplished by drainage erosion control work (water bars, detention ponds, or stabilization of the tread). Once drainage is corrected, periodic inspection and maintenance would minimize sediment sources from the BLM transportation system. The system is anticipated to receive more than 30 miles of repair and stabilization annually.

Interrelated to the BLM road segments are approximately 545.6 miles of secondary and tertiary road located on adjacent state, military and private lands. These roads will receive traffic from BLM and facilitate traffic reaching BLM as the system throughout the study area is interconnected. The additional sediment from roads (approximately 661 acres) not on BLM lands would collect in washes and eventually be transmitted to the Gila River within critical habitat.

Routes across perennial or nearly perennial waters are avoided or mitigated by closing crossings/access points on the Gila River at 21 points, closing Martinez Canyon to vehicle entry, and by rerouting the road in Walnut Canyon. This will increase riparian cover on banks and reduce sediment production that can degrade water quality in critical habitat.

Approximately 86 miles of motor routes will be designated in washes, and traffic will affect water quality of seasonal water flows and pools in the intermittent stream channels. Small quantities of OHV-dispersed chemicals may enter intermittent and ephemeral channels. The chemicals released may include butadiene, benzene, ethyl benzene, xylenes and toluene, which are toxic. These chemicals come from 2-stroke engine exhaust and spilled petroleum products. Sediments stirred by traffic and small amounts of motor vehicle fluids are likely to enter surface waters. Risk of contaminants entering intermittent waters and the Gila River at Cochran will be highest from leaky vehicles brought into the area, and accidental spills, particularly in the extreme primitive roads at

rock crawling obstacle sites. The risk of accidental spills will be reduced somewhat by the special vehicle equipment requirements and through visitor awareness and education efforts, and by enforcing current regulations (43 CFR 8340), which prohibit spilling or draining vehicle fluids.

Nearly all drainages in the planning area discharge into the Gila River above the Ashurst- Hayden Dam. The sediment input into these drainages has been increased by past mining activity, the existing road network, and other linear disturbances. Countering this increase in sediment is the upstream collection of sediment in San Carlos Reservoir. This reservoir detains the entire sediment load from 12,886 mi² (8,274,000 acres) of watershed. If it were not for current and past watershed development, it is likely that the residual sediment supply from San Carlos Dam to the Ashurst-Hayden dam would be lower than historical levels. The Arizona Department of Environmental Quality (ADEQ) has listed the reach of river from the San Pedro confluence to Mineral Creek as impaired from excess sediment that posed a risk to aquatic life. The extensive mining, roads and old mine dumps in the area present large and extensive sources of sediment in close proximity to the Gila River and its tributaries. The reach of the Gila River through the study area was not listed as impaired by ADEQ. Given the chronic oversupply of sediment from upstream sources, additional sources of sediment are anticipated to aggravate already poor water quality conditions. On the other hand it is known that ephemeral and intermittent drainages store sediment produced from upland sources (Levick *et al.* 2008). How much this storage mitigates sediment production in the project area is not known, and reliable estimations are problematic.

Of the five PCEs of spikedeace critical habitat, three are affected by the road network and associated development to some degree: permanent, flowing water with no or low levels of pollutants; streams that have an abundant aquatic insect food base; and sand, gravel, and cobble substrates with low or moderate amounts of fine sediment and substrate embeddedness (FWS 2007). The Conservation Measures (see the Description of the Proposed Conservation Measures section, above and Section 7.0 in the BE) are anticipated to minimize these effects through reductions in erosion and sedimentation, attenuation of elevated peak flows, reduced impacts to vegetation, and other measures to protect water quality. The residual effect to critical habitat is thus anticipated to have no appreciable effect to the recovery of the southwestern willow flycatcher.

Cumulative Effects – Spikedace

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.

Effects to spikedeace 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; (6) fire management actions by State, county, or city governments or private landholders on lands adjacent to or upstream from occupied sites or reaches that reduce the potential for riparian and catastrophic

upland wildfires, as well as loss of vegetation and negative changes to water quality and habitat quality; 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 – Spikedace

After reviewing the current status of the spikedace, the environmental baseline for the action area, the effects of the proposed Middle Gila Canyons TMP, and the cumulative effects, it is our biological opinion that the action, as proposed, is neither likely to jeopardize the continued existence of the spikedace, nor likely to destroy or adversely modify critical habitat for the species. We present these conclusions for the following reasons:

- Spikedace are immeasurably rare in the Gila River within the action area, and are unlikely to be affected by implementation of the proposed action.
- Site plans for 12.6 miles of technical trail will include annual erosion monitoring. Where erosion is detected, mitigative measures to prevent increased sheet and gully erosion will be implemented.
- Conservation measures CM-1, RR-3, RR-4, RR-5, RA-1, RA-1, RA-3, RA-6, RA-7, WF-1, WF-2, and WF-3 will minimize the contribution of roads to alterations in peak flow hydrology and sedimentation in the Gila River.
- Conservation measures CM-1, CM-2, RR-1, RR-2, RR-4, RR-5, RR-6, RA-2, RA-3, RA-5, RA-6, RA-7, WF-1, WF-2, WF-3, YC-1, and LM-1 will minimize the effects of activities to upland and riparian vegetation, which influence watershed condition and streambank stability, respectively.
- The conservation measures mentioned above as being protective of aquatic ecosystems and riparian vegetation, as well as measures RA-4, RA-5, LM-2, LM-3, and LM-4, will minimize the effects of TMP implementation to aquatic ecosystems, which support the macroinvertebrates upon which spikedace feed.
- A restoration plan for closed roads and trails will be created to delineate and prioritize areas for restoration. Roads and other features will be evaluated for most effective restoration treatment by feature segment. Passive restoration (natural stabilization through colonization by upland plants) will be implemented where feasible.
- Annual condition surveys will be completed to identify road and trail maintenance, erosion control and stabilization projects for designated roads and trails. Road and trail maintenance will be scheduled to correct drainage and erosion problems, with priority given to the main access routes and roads with greater erosion activity.
- Effects to spikedace critical habitat are small in scale and largely minimized. The ability of the critical habitat to contribute to spikedace recovery will not be reduced.

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.

Amount or Extent of Take – Southwestern Willow Flycatcher

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

Amount or Extent of Take – Spikedace

We do not anticipate that the proposed action will result in incidental take of any spikedace because spikedace are immeasurably rare in the action area. The most recent detection in the vicinity of the action area was in 1991 (USBR 1992), and 5-years of surveys have failed to locate spikedace (BLM 2009).

Conservation Recommendation

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 the BLM continue to implement the southwestern willow flycatcher and spikedace recovery plans.

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.

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 BLM's proposed implementation of the Middle Gila Canyons Travel Management Plan. 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.

We appreciate the BLM'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 Sherry Barrett (520) 670-6150, (x223). Please refer to the consultation number, 22410-F-2009-0353 in future correspondence concerning this project.

/s/Sherry Barrett for

Field Supervisor

cc (hard copy):

Field Supervisor, Fish and Wildlife Service, Phoenix, AZ

Assistant Field Supervisor, Fish and Wildlife Service, Tucson, AZ

cc (electronic copy):

Fish and Wildlife Service, Phoenix, AZ(Attn: Greg Beatty and Mary Richardson)

Chief, Habitat Branch, Arizona Game and Fish Department, Phoenix, AZ

Regional Supervisor, Arizona Game and Fish Department, Tucson, AZ

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Appendix A – Concurrences

Lesser Long-nosed Bat

The greatest densities of lesser long-nosed bats are located in northern Mexico and in southern Arizona (FWS 1994). Known major roost sites include 16 large roosts in Arizona and Mexico. According to surveys conducted in 1992 and 1993, the number of bats estimated to occupy these sites was greater than 200,000. Twelve major maternity roost sites are known from Arizona and Mexico. According to the same surveys, the maternity roosts are occupied by over 150,000 lesser long-nosed bats. The numbers above indicate that although a relatively large number of these bats are known to exist, the relative number of known large roosts is small. Disturbance of these roosts and the food plants associated with them could lead to the loss of the roosts. Limited numbers of maternity roosts may be the critical factor in the survival of this species.

Status of Lesser Long-nosed Bat in the Action Area

Records of the lesser long-nosed bat within the action area and within foraging distance (approximately 40 miles) include a suspected roost in Redfield Canyon and known roosts in Youtcy Canyon (A7 Ranch), Wildhorse Mountain, Hot Springs Canyon, and the west side of the Rincon Mountains. Of the San Pedro Valley roosts (which excludes only the western Rincon Mountains), agaves – not columnar cactus - are the most likely target of foraging activities. This could be partially due to that being the time when survey efforts are conducted and so, the potential for lesser long-nosed bats to be foraging on saguaro cactus cannot be ruled out.

Effects of the Proposed Action to Lesser Long-nosed Bat

The primary indirect effects to the lesser long-nosed bat from implementation of the TMP would be from long-term loss of key food resources, such as columnar cacti and agaves. The use of a trail network can be expected to facilitate invasions of nonnative and exotic plants as vehicles or trail users introduce seed and vegetative materials from elsewhere and/or transport invasive species within the TMP planning area. The invasion of alien grass and shrub species have already altered the fuel loadings in habitats used by bats for foraging, increasing the risk and severity of wildland fires within potential foraging habitat. Wildfires can cause rapid and profound changes in foraging habitats for these bats, both in the short-term and long-term, because the agave and columnar cactus species that provide critical food sources may take decades or centuries to recover from fire. In addition, fires now burn hotter and farther in these semi-desert grassland or desertscrub habitats, reducing the natural mosaic pattern (patchy distribution of plants and open space) that would retain patches of suitable foraging habitat for bats. Lesser long-nosed bats may experience positive interdependent effects from reduced road densities and therefore reduced human disturbance within foraging habitats, by minimizing the amount of suitable foraging habitat and key food plants damaged or destroyed by catastrophic wildfires or vandalism occurring in these habitats. In addition, implementing the Conservation Measures (Section 7.0 of the BA) would further minimize or eliminate any long-term loss of food resources, thereby minimizing the indirect threat of affecting the bat species' numbers, reproduction, and distribution. Thus, the potential for negative, indirect effects to the lesser long-nosed bat from recreational use would be so low as to be discountable.

Conclusion – Lesser Long-nosed Bat

After reviewing the current status of the lesser long-nosed bat, the environmental baseline for the action area, and the effects of the action, we concur with your determination that the proposed action is not likely to adversely affect the species for the following reasons:

- Implementation of the TMP will not increase harmful access to the known lesser long-nosed bat roosts within the middle Gila River region, as these are situated outside of the action area.
- Conservation Measures CM-1, RR-1 through RR-5, and LB-1 through LB-4 are anticipated to avoid and minimize effects to lesser long-nosed bat food resources (paniculate agaves and columnar cacti).
- Critical habitat has not been designated for the lesser long-nosed bat; none will be affected.

Bald Eagle

Throughout its range, the bald eagle has suffered population declines from habitat loss, mortality from shooting and poisoning, and reduced reproductive success from ingestion of contaminants (USBR 1999). As a result, the bald eagle was federally listed as endangered on March 11, 1967 (32 FR 4001). Although bald eagles face numerous threats throughout the 48 states, they have recovered from dramatic population declines over the past several decades. Consequently, on July 12, 1995, the bald eagle was downlisted to threatened status (60 FR 35999). On July 6, 1999, further improvement in the bald eagle population made it possible for the FWS to propose delisting of the species (64 FR 36453). The final rule removing the bald eagle in the lower 48 states from the list of endangered and threatened species was published July 9, 2007. That was reversed by court order – an injunction - and the U.S. Fish and Wildlife listed the Desert Bald Eagle as threatened under the Endangered Species Act on March 18, 2008. On February 25, 2010, we published a 12-month finding on the bald eagle, determining that the species in the Sonoran Desert area did not meet the criteria of a distinct population segment, and that it was therefore not a listable. As of this date, the Court has not yet lifted its injunction and the species remains listed.

Status of Bald Eagle in the Action Area

There are no known bald eagle nests within the action area; the nearest territory is at Granite Basin, approximately 20 air miles east of the nearest limits of the TMP planning area. The Granite Basin territory was not occupied in 2009. The Winkelman territory is situated near the confluence of the San Pedro and Gila rivers, approximately 15 air miles from the action area boundaries, but the nest has not been occupied since 1998. The occurrence of bald eagles in the action area would most likely be in association with the foraging and dispersal activities of resident birds, with occasional use by wintering individuals administratively classified as southern bald eagles by nature of their location of occurrence. Populations of bald eagles along the middle Gila River are equally likely to be influenced by nest site and prey availability as they are by ground disturbance associated with the proposed action.

Effects of the Proposed Action to Bald Eagle

Vehicle routes would be used in areas within and adjacent to habitats potentially used by bald eagles. Construction could occur in habitats adjacent to sites potentially occupied by bald eagles. Effects could include increased visitor use along the Gila River, reduction in the number of vehicle crossings of the Gila River in habitat, and an increased possibility of wildfire affecting bald eagle habitat.

Bald eagles would not experience direct effects from project activities within their nesting or winter roosting territories or in foraging areas outside identified territories. If eagles move into the project area, they could be affected by wildfires in the riparian area or displaced by recreationist. Overall, the proposed activities and Conservation Measures would not affect the numbers, distribution, or reproduction of eagles adjacent to the action area.

Indirect effects to the bald eagle include long-term changes in eagle habitat, as well as effects to eagle prey species, or prey species habitat. Sedimentation caused by recreational activity effects fish, reducing visibility and fish production for bald eagle use. The proposed action includes Conservation Measures anticipated to reduce these effects over baseline (i.e. without-project conditions). The long-term effects to nesting habitat and winter roosting habitat from the proposed activities would primarily be positive for eagles by restoring habitats and reducing the risk of catastrophic wildfires.

Nesting and wintering bald eagles forage mainly along rivers and at lakes for fish and waterfowl. Terrestrial, upland species, including road-killed animals, will also be taken by bald eagles. Conservation Measures (see the Description of the Proposed Conservation Measures section, above as well as Section 7.0 in the BE) would be implemented that would minimize the effects to eagle foraging habitat and prey species habitat, which would facilitate hunting conditions for the bald eagle. For these reasons, the potential for negative indirect effects to the species from the proposed activities would be so low as to be discountable.

Conclusion – Bald Eagle

After reviewing the current status of the bald eagle, the environmental baseline for the action area, and the effects of the action, we concur with your determination that the proposed action is not likely to adversely affect the species for the following reasons:

- Implementation of the TMP will not increase harmful access to the known bald eagle nest sites within the middle Gila River region, as these are situated outside of the action area.
- Bald eagles will benefit from the long-term environmental restoration/native vegetation protection and restoration aspects of TMP implementation.
- Disturbance to bald eagles that may forage along the middle Gila River will be infrequent, brief, and not discernable from existing, background levels.

- Conservation Measures RA-1 through RA-3, RA-5, and RA-6 are anticipated to avoid and minimize effects to riparian vegetation, in which bald eagles may potentially nest.
- Conservation Measures CM-1, RR-1 through RR-6, WF-1, WF-2, and LM 1 through 4 are anticipated to avoid and minimize the degree of sedimentation and other contamination to the Gila River, which in turn influences fish abundance and capture probability.
- Conservation Measures BE-1 through BE-5 are anticipated to further reduce impacts to specific attributes of bald eagle habitat.
- Critical habitat has not been designated for the bald eagle; none will be affected.

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