

**United States Department of the Interior**  
**U.S. Fish and Wildlife Service**  
**2321 West Royal Palm Road, Suite 103**  
**Phoenix, Arizona 85021-4951**  
**Telephone: (602) 242-0210 FAX: (602) 242-2513**

In Reply Refer To:  
AESO/SE  
02-21-97-F-0229 R1

March 22, 2006

Mr. Tom Puto, Project Manager  
Federal Highway Administration  
12300 West Dakota Avenue  
Lakewood, Colorado 80228

Re: Sunrise Park-Big Lake Road - Forest Highway 43

Dear Mr. Puto:

Thank you for your request for reinitiation of formal consultation pursuant to section 7 of the Endangered Species Act of 1973 (16 U.S.C. 1531-1544), as amended (Act). Your request for formal consultation was dated February 9, 2006, and received by us on February 10, 2006. This biological opinion analyzes the effects of the proposed reconstruction of 11.3 miles in Section 2 of the Sunrise Park-Big Lake Road, also known as Forest Highway 43 (FH 43), on the recently designated southwestern willow flycatcher (*Empidonax trailli extimus*) critical habitat (50 FR 60886, October 19, 2005). The project is located within the Apache-Sitgreaves National Forests in Apache County, Arizona.

This biological opinion is based on information provided in the January 2006 Addendum A to the biological assessment; June 19, 2003, biological assessment; April 27, 2004, biological opinion, 2003; and other sources of information. Literature cited in this biological opinion is not a complete bibliography of all literature available on the habitat of concern, road construction and its effects, or on other subjects considered in this opinion. A complete administrative record of this consultation is on file at this office.

### **Consultation History**

- July 23, 2003: Federal Highway Administration (FHWA) requested formal consultation for the proposed reconstruction of the Sunrise Park-Big Lake Road.
- September 26, 2003: A concurrence regarding effects to the southwestern willow flycatcher was sent to FHWA.

- April 27, 2004: A final biological opinion was issued regarding the effects of the proposed reconstruction of 11.3 miles in Section 2 of the Sunrise Park-Big Lake Road, also known as FH 43, on the threatened bald eagle (*Haliaeetus leucocephalus*) and Apache trout (*Oncorhynchus apache*).
- February 9, 2006: FHWA requested reinitiation of formal consultation for the proposed reconstruction of the Sunrise Park-Big Lake Road for the recently designated southwestern willow flycatcher critical habitat.
- March 3, 2006: FHWA indicated in an email that they did not need to review a draft biological opinion.

## **BIOLOGICAL OPINION**

### **DESCRIPTION OF THE PROPOSED ACTION**

The proposed action consists of reconstructing the existing unpaved road (FH 43) to provide a consistent alignment with adequate sight distance and width for anticipated future traffic volume. Figures 1 and 2 in Appendix A map the existing and new highway alignments.

The action area for this project is 11.3 miles of FH 43. FH 43 will be a two-lane asphalt road with two 12-foot travel lanes and two 3-foot shoulders. The action area includes all staging/borrow pits and right of way access. The action area also includes the East and West Fork Little Colorado River drainages and a small portion of the Black River drainage. Additionally, the action area traverses the Big Lake Recreational Area and Lee Valley Recreational Area which are destination sites of FH 43. Figures 1, 2, and 3 in Appendix A map the project components.

For a complete description of the proposed action please refer to the previous biological opinions, Federal Highway Environmental Assessment (FHWA 2004), and biological assessments (FHWA 2002 and 2006). We have highlighted portions of work that will occur within or near designated critical habitat.

### Sheep Crossing

One realignment section occurs where FH 43 crosses the West Fork of the Little Colorado River (WFLCR) at Sheep Crossing. A 167-foot bridge is proposed to span the WFLCR and replace the existing structure. To correct the existing sharp curve and poor sight distance, the new bridge will be constructed about 850 feet downstream of the existing bridge location. This location allows a larger curve, which would be more similar to the remainder of the route and provide safer sight distance. The road will be moved farther away from the Mount Baldy Wilderness area, expanding the buffer zone between the highway and the wilderness. Proposed design speed for the curve is 37 mph. This realignment will result in 0.3 mile of new disturbance.

### Conservation Measures

As part of the project, FHWA has proposed the following conservation measures to reduce the short- and long-term impacts of the proposed action. These actions are considered integral to the proposed action.

#### Railroad grade removal and Stream Restoration

The proposed new bridge over the WFLCR will directly impact approximately 0.59 acre of riparian habitat due to the placement of roadway embankment, bridge abutments, and piers. The total footprint of the improvement is approximately 0.88 acre. This includes the permanent riparian impact of 0.59 acre, and the temporary construction impact to erect the bridge.

To offset these impacts, FHWA proposes to remove the railroad embankment that crosses the WFLCR, approximately 2,300 feet upstream of the new bridge. The railroad embankment occupies approximately 0.35 acre of the WFLCR floodplain. The railroad embankment is approximately 20 ft high and 90 ft wide at its base. It extends across the stream and floodplain. It crosses the WFLCR using two 60-inch culverts that regularly clog with debris which results in a damming effect on the river. The culverts have also resulted in constricted flows, channelization of the river below the culverts and, in doing so, have altered the natural hydrological function of the river.

Removal of the railroad embankment will consist of the following actions: access to the north end of the embankment will be established from the existing road which will require the reopening of approximately 0.2 mile of abandoned road. This re-opened road will be converted to a multi-use trail at completion to replace the existing multi-use trail that crosses the railroad embankment. The south end can be accessed by an existing road. Heavy equipment, such as loaders, bulldozers, and dump trucks, will be used to remove the embankment. Soil removed will be used for fill at other locations of the FH 43 reconstruction. The slopes will be re-contoured to the natural slope and the area will be reseeded with native seed and replanted with native willows.

As a result of a higher stream bed on the upstream side of the culvert in relation to the downstream side, in-stream weir-type structures will be installed in place of the embankment to prevent scour and reduce sediment movement down stream. It may be necessary to divert the WFLCR during the construction phase. Silt fences and other erosion control devices will be installed and maintained during the removal of the embankment/culverts.

Refer to the Conceptual Stream Restoration Plan prepared by Ecosystem Management for complete details of the area and project design (Ecosystem Management 2002).

#### East Fork Little Colorado River Willow Restoration

The existing East Fork Little Colorado River (EFLCR) road crossing will require widening to comply with expected increased traffic, hydraulic, and safety concerns. This will result in

the loss of some riparian and willow habitat adjacent to the new bridge. In order to mitigate this loss and promote willow habitat, an elk exclusion fence would be installed from the Phelps Cabin Research Natural Area (RNA) southwest (upstream) of the existing roadway to a point approximately 500 feet northeast (downstream) of the existing roadway. The total length of the fence is approximately 3,000 ft and would eliminate herbivory by ungulates, which are believed to be the primary cause for willow decline at this location. The elk exclusion fence will consist of two cells, 246 to 328 feet wide, separated by the proposed roadway. The total area to be fenced is approximately 33 acres.

### **STATUS OF THE SPECIES AND CRITICAL HABITAT (range wide and/or recovery unit)**

The southwestern willow flycatcher was listed as endangered, without critical habitat, on February 27, 1995 (USFWS 1995). Section 4(a)(1) of the Act lists five factors that must be considered when determining if a species should be designated as threatened or endangered. The southwestern willow flycatcher was determined to be endangered by numerous threats causing extensive loss of habitat, lack of adequate protective regulations, and other natural or manmade factors including brood parasitism by the brown-headed cowbird (USFWS 1995). Critical habitat was later designated on July 22, 1997, (USFWS 1997) but subsequently set aside as a result of a court finding. On October 19, 2005, the Fish and Wildlife Service re-designated critical habitat for the southwestern willow flycatcher (USFWS 2005).

A final Recovery Plan for the southwestern willow flycatcher was signed by the U.S. Fish and Wildlife Service's Region 2 Director on August 30, 2002 (USFWS 2002). The Plan describes the reasons for endangerment, discusses the current status of the flycatcher, addresses important recovery actions, includes detailed issue papers on management, and provides recovery goals.

#### Critical Habitat

Stream segments within 21 Management Units found in five Recovery Units were designated as critical habitat. Stream segments occur in southern California, southern Nevada, southwestern Utah, Arizona, New Mexico, and south-central Colorado. In Arizona there are critical habitat segments in Apache, Cochise, Gila, Graham, Greenlee, La Paz, Maricopa, Mohave, Pima, Pinal, Yavapai, and Yuma counties. These areas of critical habitat are expected to provide sufficient riparian habitat for breeding, non-breeding, dispersing and migrating southwestern willow flycatchers and to sustain southwestern willow flycatchers across their range. The primary constituent elements essential to the conservation of the southwestern willow flycatcher as described in the rule are:

1. Riparian habitat in a dynamic successional riverine environment (for nesting, foraging, migration, dispersal, and shelter) that comprises:
  - a. Trees and shrubs that include Goodings willow (*Salix gooddingii*), coyote willow (*Salix exigua*), Geyers willow (*Salix geyerana*), arroyo willow (*Salix lasiolepis*), red willow (*Salix laevigata*), yewleaf willow (*Salix taxifolia*), pacific willow (*Salix lasiandra*), boxelder (*Acer negundo*), tamarisk (*Tamarix*

*ramosissima*), and Russian olive (*Eleagnus angustifolia*). Other plant species used for nesting have been buttonbush (*Cephalanthus occidentalis*), cottonwood (*Populus deltoids*), stinging nettle (*Urtica dioica*), alder (*Alnus rhombifolia*, *Alnus oblongifolia*, *Alnus tenuifolia*), velvet ash (*Fraxinus velutina*), poison hemlock (*Conium maculatum*), blackberry (*Rubus ursinus*), seep willow (*Baccharis salicifolia*, *Baccharis glutinosa*), oak (*Quercus agrifolia*, *Quercus chrysolepis*), rose (*Rosa californica*, *Rosa arizonica*, *Rosa multiflora*), sycamore (*Platanus wrightii*), giant reed (*Arundo donax*), false indigo (*Amorpha californica*), Pacific poison ivy (*Toxicodendron diversilobum*), grape (*Vitis arizonica*), Virginia creeper (*Parthenocissus quinquefolia*), Siberian elm (*Ulmus pumila*), and walnut (*Juglans hindsii*)

- b. Dense riparian vegetation with thickets of trees and shrubs ranging in height from 6 to 98 feet. Lower-stature thickets (6 to 13 ft tall) are found at higher-elevation riparian forests and tall-stature thickets are found at middle- and lower-elevation riparian forests;
  - c. Areas of dense riparian foliage at least from the ground level up to approximately 13 ft above ground or dense foliage only at the shrub level, or as a low, dense tree canopy;
  - d. Sites for nesting that contain a dense tree and/or shrub canopy (the amount of cover provided by tree and shrub branches measured from the ground) (*i.e.*, a tree or shrub canopy with densities ranging from 50 percent to 100 percent);
  - e. Dense patches of riparian forests that are interspersed with small opening of open water or marsh, or shorter/sparser vegetation that creates a mosaic that is not uniformly dense. Patch size may be as small as 0.25 acre or as large as 175 acre; and
2. A variety of insect prey populations found within or adjacent to riparian floodplains or moist environments, including: flying ants, wasps, and bees (Hymenoptera); dragonflies (Odonata); flies (Diptera); true bugs (Hemiptera); beetles (Coleoptera); butterflies/moths and caterpillars (Lepidoptera); and spittlebugs (Homoptera).

The primary constituent elements described above are results of the dynamic river environment that germinates, develops, maintains, and regenerates the riparian forest and provides food for breeding, non-breeding, dispersing, territorial, and migrating southwestern willow flycatchers.

Placed in the context of the subspecies' wide geographic distribution, the disjunct nature of the populations, the dynamic aspects of its habitat, its endangered status, and its recovery goals, each stream segment identified within the Management Units is essential for the conservation of the southwestern willow flycatcher (USFWS 2002). Segments are distributed throughout a large portion of the subspecies' range in order to help avoid catastrophic losses and to provide metapopulation stability, gene flow, and connectivity.

Each segment is essential because it contains one or more of the primary constituent elements and, as a result, provides flycatcher habitat for breeding, feeding, sheltering, and migration that subsequently provide metapopulation stability, gene flow of the subspecies, and connectivity between neighboring Management Units and Recovery Units. Each segment contributes to the conservation role of critical habitat by providing for the numerical and habitat-related goals identified in the Recovery Plan (USFWS 2002). Each segment was identified in the Recovery Plan as an area that sustains flycatcher habitat. The distribution and abundance of territories and habitat within each segment are expected to shift over time as a result of natural disturbance events such as flooding that reshape floodplains, river channels, and riparian habitat. The factors affecting critical habitat within all Management Units are similar to the listing factors described above.

#### Past consultations

Since critical habitat was finalized in October 2005, one formal biological opinion has been issued for southwestern willow flycatcher critical habitat in Arizona. While many opinions were issued for the previous critical habitat designation, the stream reaches and primary constituent elements have changed.

#### **ENVIRONMENTAL BASELINE [in the action area]**

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.

Critical habitat designated within the project area includes:

1. East Fork Little Colorado River downstream of Forest Service Road 113 (FH 43 road) (Appendix A, Map 1).
2. Approximately 170 feet east of the Mt. Baldy Wilderness on the WFLCR to the confluence of the Little Colorado River (LCR) and down the LCR below the confluence of South Fork of the LCR off the Forest (Appendix A, Map 1).

#### East Fork Little Colorado River

Although they are declining in some locations, willows (*Salix spp.*) are the dominant woody species along the EFLCR riparian corridor. Outside of the willows is a sedge/grass meadow which is more expansive downstream of FH 43. Five different willow species have been identified along the EFLCR upstream of Colter Reservoir: *Salix arizonica* (Arizona willow), *S. bebbiana* (Bebb's willow), *S. geyeriana* (Geyer's willow), *S. monticola* (mountain willow), and *S. boothii* (Booth's willow) (Ecosystem Management 2002).

The willow stand downstream from FH 43 is in relatively poor condition according to a report prepared for FHWA by Ecosystem Management (Ecosystem Management 2002). Except for Bebb's willow, which has a higher, more umbrella-shaped canopy, live willows consist of green shoots surrounded by a tangle of dead branches according to the report (Ecosystem Management 2002). The riparian vegetation along the EFLCR is utilized by both cattle and elk. The traditional season of use by cattle has been July to October. Elk have year-round access to the EFLCR, but their effects on the riparian area are most likely concentrated from spring to winter. Large amounts of elk droppings were noted along the EFLCR, especially downstream from FH 43 (Ecosystem Management 2002).

#### West Fork Little Colorado River

There is a railroad embankment that crosses the WFLCR, approximately 2,300 feet upstream of FH 43. Upstream of this embankment, there is an herbaceous wetland dominated by sedges (*Carex sp.*). There are a few willows growing on the margins of the floodplain immediately upstream of the embankment. Downstream of the embankment, a dense willow community grows on the streambanks. The dominant upland trees are subalpine fir (*Abies lasiocarpa*), Engelmann spruce (*Picea engelmannii*), and quaking aspen (*Populus tremuloides*). Upstream of the embankment, a reservoir of sediment has been impounded in an area which extends approximately 185 feet upstream and 108 feet across the stream.

Although there is a history of cattle grazing, recreation is currently the primary land use in the project area. A trail to the Mount Baldy Wilderness area is located along the northwest side of the river. Fishing within the stream is a common activity.

### **EFFECTS OF THE ACTION**

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

#### **East Fork Little Colorado River**

Designated critical habitat starts below the FH 43 road crossing where a new crossing will be constructed. The crossing will be modified from a small single culvert to a large fish passable arch culvert with additional side culverts intended to restore hydrologic function. The improved crossing will be within approximately the same footprint as the old crossing. The direct impacts to designated critical habitat below the crossing will be insignificant because none of the primary constituent elements will be measurably impacted. The road crossing modifications are intended to mimic the hydrological function of the unrestricted flow of the river. This should result in a long-term improvement to the primary constituent elements associated with habitat conditions below the crossing.

Approximately 2,956 feet of the best willow habitat on the EFLCR near FH 43 will be excluded from all grazing by constructing a 7-foot high elk-proof fence. This fence will also reduce impacts to riparian habitat associated with horseback user recreation activities. The long-term goal is to maintain the elk-proof fence enclosure until the willow community is highly developed and robust enough to persist with browsing from elk. It is estimated that it will take at least 20 years before the willows in the enclosure become highly developed. At that time, the enclosure will be removed and relocated down stream to keep expanding the willow habitat. Construction of the elk enclosure fence will not adversely affect any primary constituent elements of critical habitat. Conversely, the long-term benefits of this activity should result in improvements to the primary constituent elements. Primarily the activity will protect riparian vegetation allowing it to develop into suitable nesting habitat.

### **West Fork Little Colorado River**

The construction of the new bridge on the WFLCR will be approximately 328 feet below the old bridge. The new bridge will require the placement of two new piers, rip rap, and approach embankments. The total footprint of this construction in riparian and adjacent upland habitat is estimated to be .88 acres. The entire footprint is not within willow habitat. Approximately 0.20 acre is in riparian/willow habitat, the remainder is upland but within the floodplain. It is estimated that up to 10 young willow plants will be removed and then replanted after rip rap placement and pier construction are complete. The total potential willow flycatcher habitat that is expected to be impacted by the roadway embankment, bridge abutments, and piers is 0.59 acre. This acreage includes temporary access routes along side the abutments during construction. The direct impacts to the primary constituent elements within critical habitat associated with this construction include: the removal of approximately 10 small (less than 9 ft) willow plants, short-term increase in sedimentation and potential disturbance to riparian habitat. Approximately 0.20 acre of designated critical habitat will be permanently impacted by the new bridge supports and will never be able to develop into suitable habitat.

The removal of the railroad grade will result in the short-term disturbance of approximately 0.35 acres within the floodplain. Upstream of the railroad grade crossing the stream will be diverted and the natural stream meander reestablished using heavy equipment. This will result in short-term impacts to approximately 1 to 2 acres of willow/riparian habitat. Once the railroad grade is removed and meander reestablished, the area will be replanted with willows. This will result in a net gain of 0.35 acre of willow habitat. There will be a short-term adverse effect to one of the constituent elements of the riparian vegetation, followed by a long-term beneficial improvement to this component in this stretch of habitat.

### **CUMULATIVE EFFECTS**

Cumulative effects include the effects of future State, tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act. Since the entire project area is within the Apache-Sitgreaves National Forests, all legal actions likely to occur are considered Federal actions.

## CONCLUSION

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 statutory provisions of the Act to complete the following analysis with respect to critical habitat.”

After reviewing the current status of the southwestern willow flycatcher critical habitat, the environmental baseline for the action area, the effects of the proposed action and the cumulative effects, it is our biological opinion that the proposed paving and reconstruction of portions of FH 43, as proposed, is not likely to destroy or adversely modify designated critical habitat for the southwestern willow flycatcher. We present this conclusion for the following reasons:

1. Except for 0.20 acre that will be lost, the adverse effects to critical habitat will be transitory and are expected to be of short duration.
2. The conservation measures being proposed will result in a net benefit to constituent elements of southwestern willow flycatcher critical habitat in the action area. These conservation measures will help ensure that critical habitat develops into functional habitat in order to serve the intended conservation role for the species.

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

## INCIDENTAL TAKE STATEMENT

Section 9 of the 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

The FWS does not anticipate that the proposed action will incidentally take any species for the following reasons:

- This consultation addresses effects to SWWF critical habitat, and consideration of incidental take of the species is not relevant.
- Effects to the species were addressed in a previous informal consultation (02-21-97-I-0229, September 26, 2003).

### **CONSERVATION RECOMMENDATIONS**

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.

1. Develop and promote an outreach presentation that educates and explains the importance of protection of all species, with an emphasis on recovering listed species. For example, outreach materials at Sheep's Crossing could inform recreationists about Apache trout, Southwestern willow flycatcher, and the importance of riparian habitat.

In order for the FWS to be kept informed of actions minimizing or avoiding adverse effects or benefiting listed species or their habitats, the FWS requests notification of the implementation of any conservation recommendations.

### **REINITIATION NOTICE**

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

The FWS appreciates the Federal Highway Administrations efforts to identify and minimize effects to listed species from this project. For further information please contact Jennifer Graves (x232) or Debra Bills (x239).

Please refer to the consultation number, 02-21-97-F-0229 R1, in future correspondence concerning this project.

Sincerely,

/s/ Steven L. Spangle  
Field Supervisor

cc: Forest Supervisor, Apache-Sitgreaves National Forests, Springerville, AZ  
(Attn: Cathy Taylor)  
Greg Beatty, US Fish and Wildlife Service, Phoenix, AZ

Bob Broscheid, Arizona Game and Fish Department, Phoenix, AZ

W:\Jennifer Graves\Section 7\Formals\Highway 43\SWWF Critical Habitat BO.doc:egg

## LITERATURE CITED

- Ecosystem Management, Inc. 2002. Conceptual Stream Restoration Plan, Federal Highway Administration, Arizona Forest Highway 43, Apache-Sitgreaves National Forests, Apache County, Arizona. Ecosystem Management, Albuquerque, NM.
- Federal Highway Administration (FHWA). 2002. Biological Assessment for Federal Highway Administration Arizona Forest Highway 43 Project. Central Federal Lands Division, Colorado.
- Federal Highway Administration (FHWA). 2004. Environmental Assessment for Arizona Forest Highway 43, Sunrise Park – Big Lake Road. Central Federal Lands Highway Division, Colorado.
- Federal Highway Administration (FHWA). 2006. Addendum A to the Biological Assessment for Federal Highway Administration Arizona Forest Highway 43 Project. Central Federal Lands Division, Colorado.
- U.S. Fish and Wildlife Service (USFWS). 1995. Final rule determining endangered status for the southwestern willow flycatcher. *Federal Register* 60:10694-10715.
- U.S. Fish and Wildlife Service (USFWS). 1997. Final determination of critical habitat for the southwestern willow flycatcher. *Federal Register* 62(140):39129-39146.
- U.S. Fish and Wildlife Service (USFWS). 2002. Southwestern Willow Flycatcher Recovery Plan, Region 2, Albuquerque, NM.
- U.S. Fish and Wildlife Service (USFWS). 2005. Final Rule: Designation of Critical Habitat for the Southwestern Willow Flycatcher (*Empidonax traillii extimus*). *Federal Register* 70:60886-61009.

**Appendix A: MAPS**



**MAP 1: Overview of Project location and southwestern willow flycatcher critical habitat in project area.**

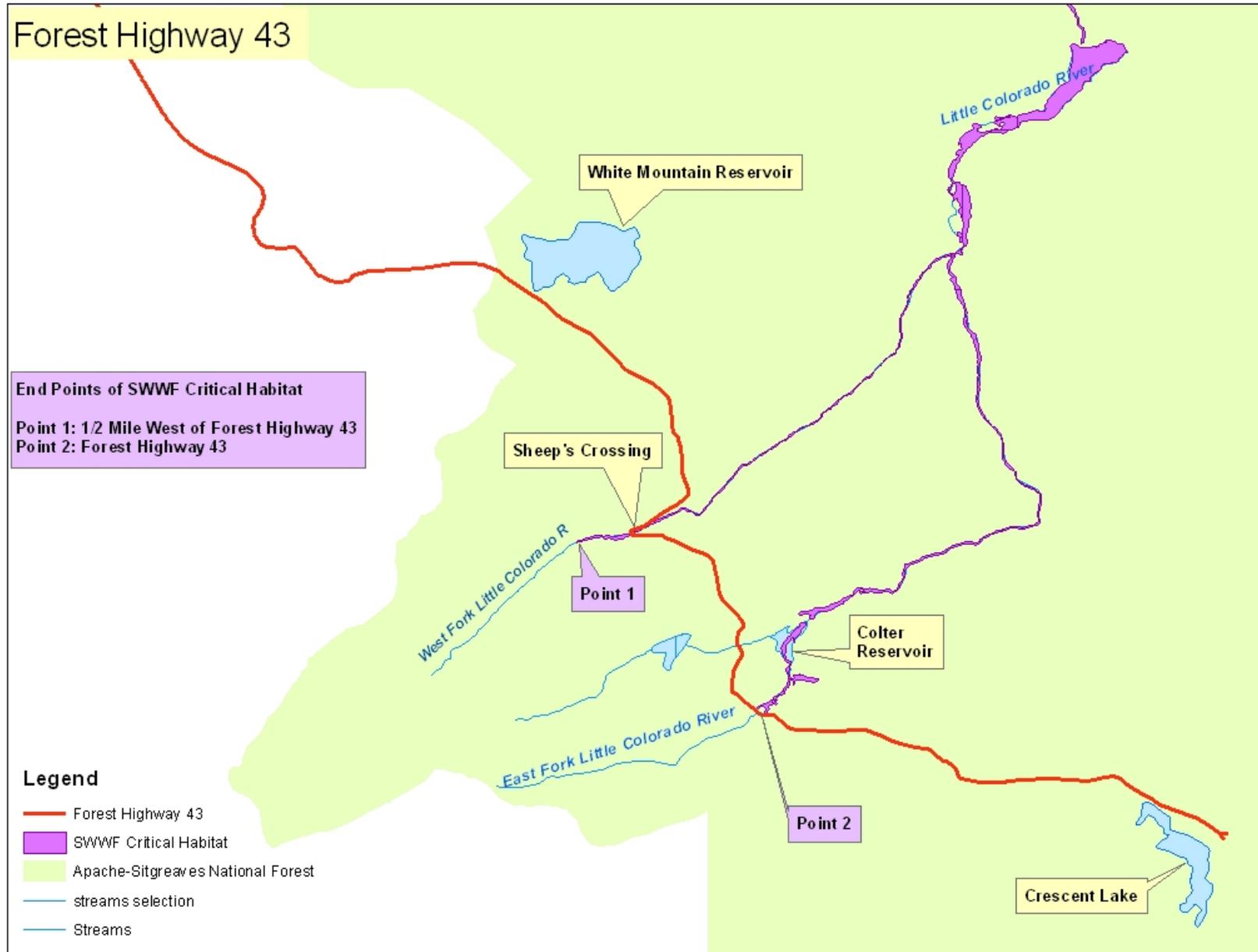


Figure 2: Map of Project Area (Forest Highway 43)

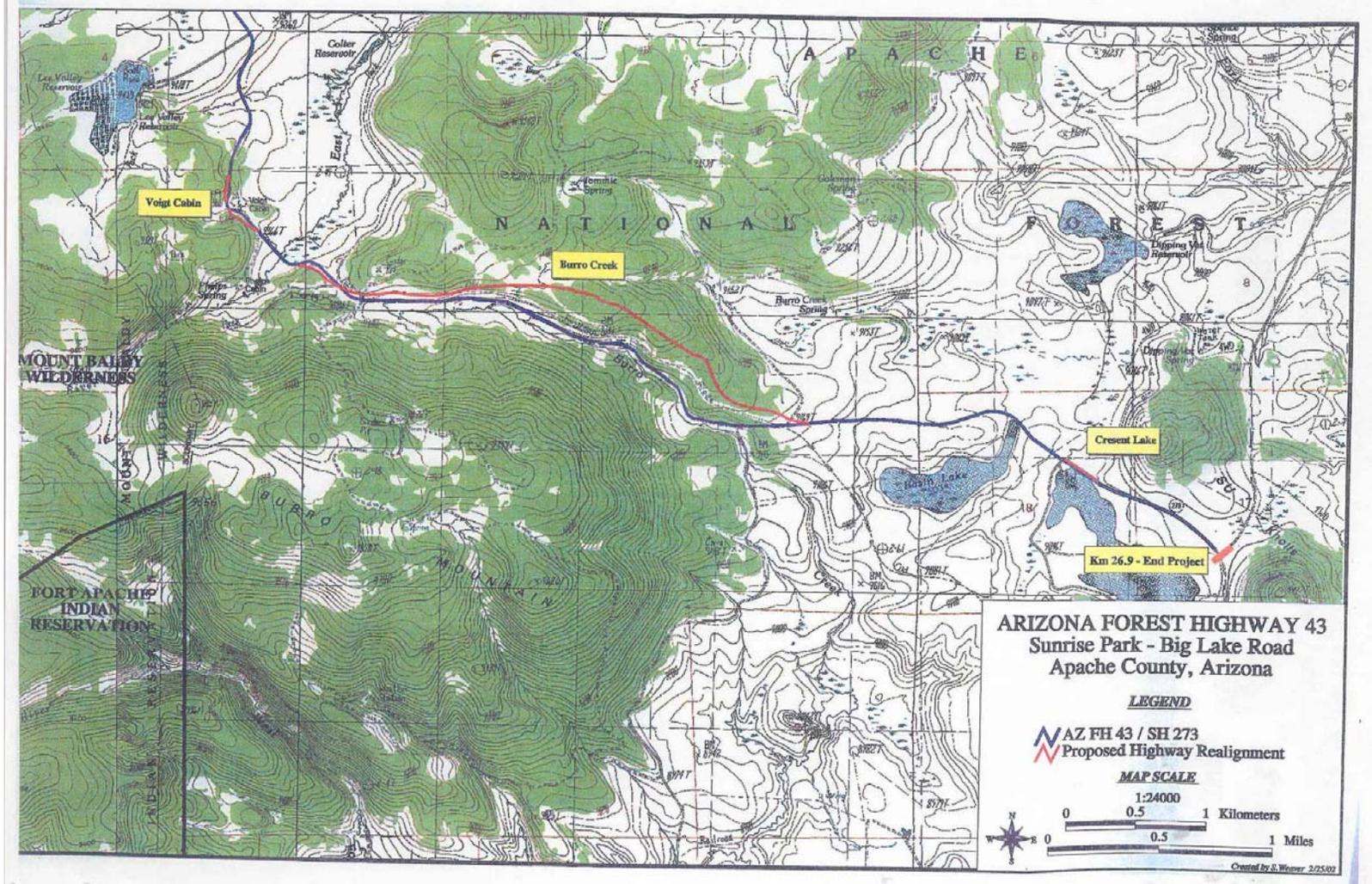




Figure 3: Map of Project Area (Forest Highway 43)

