United States Department of the Interior
U.S. Fish and Wildlife Service
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Phoenix, Arizona 85021-4951
Telephone: (602) 242-0210 FAX: (602) 242-2513

In Reply Refer To:
AESO/SE
22410-2007-F-0409

November 1, 2007

Mr. Hal A. Nielson
Rural Development Specialist
U.S. Department of Agriculture
Rural Development
340 North 600 East
Richfield, Utah 84701

Dear Mr. Nielson:

This biological opinion responds to 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). We received your July 18, 2007, request for formal consultation on July 24, 2007. At issue are impacts that may result from the proposed Fredonia Town Culinary Water Improvement Project located in Coconino and Mohave counties, Arizona, on the southwestern willow flycatcher (*Empidonax traillii extimus*).

Your July 18 letter included a request for concurrence with a determination that the proposed project is not likely to adversely affect the Siler pincushion cactus (*Pediocactus sileri*). Our concurrence with your determination is in Appendix A.

This biological opinion is based on information provided in a September 2006 biological assessment (BA), telephone conversations, email messages, and other sources of information. Literature cited in this biological opinion is not a complete bibliography of all literature available on the species of concern, road rehabilitation 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

Table 1 is a summary of the consultation history for the proposed project.

Table 1. Consultation history for the Fredonia Town Culinary Water Improvement Project.

Date	*Event*
March 27, 2007	We received a biological assessment of the proposed action and a request for concurrence with no effect determinations.
April 14-July 16, 2007	We conducted informal consultation with the project proponents on the proposed action via telephone, fax, and email communication.
July 24, 2007	We received a request for formal consultation.
August 13, 2007	We responded with a thirty-day letter initiating formal consultation.
October 5, 2007	We issued a draft biological opinion.
October 29, 2007	We were advised there were no comments on the draft biological opinion.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

Rural Development has contributed funding to the Water Improvement Project. Most of the information regarding the proposed action in this document is from the September 2006 BA (Alpine Environmental Resources 2006). The Town of Fredonia proposes to upgrade their existing culinary water supply, storage, and transmission system.

The proposed action includes the underground installation of new pipelines and replacement of old pipelines within the rights-of-way of existing dirt roads and streets of Fredonia. Approximately 17,500 feet of 8-inch, 6,900 feet of 10-inch, and 17,500 feet of 12-inch diameter PVC pipe will be installed.

A new 8-inch pipeline will be installed along the west side of Highway 89A. A new 12-inch pipeline will be installed in an existing dirt road from existing water tanks northwest of Fredonia to an existing reservoir. A new 12-inch pipeline will be installed from a new reservoir across Kanab Creek and through a livestock pasture to Highway 89A. That new pipeline will require new ground disturbance which includes a 40-foot wide construction easement and a 20-foot wide permanent easement for the new pipeline crossing of Kanab Creek.

The proposed improvements include construction of a new 15-million gallon reservoir adjacent to an existing 15-million gallon reservoir. The proposed reservoir will be approximately 3.71 acres in size and on land that was previously disturbed by the construction of the existing reservoir. The proposed action also includes construction of a million gallon/day water treatment facility consisting of a micro-filtration plant and chlorination building. The action area includes the footprint of the proposed improvements including one crossing of Kanab Creek.

Conservation Measures

- Construction of the Kanab Creek crossing will occur between September 15 and April 15.
- Large cottonwood trees will not be removed.
- The contractor will be required to plant live sallow sapling plugs from excavated willows along the Kanab Creek construction scar to re-vegetate the riparian zone.
- Large boulders or a fence will be placed across both ends of the Kanab Creek crossing to prevent livestock and all-terrain vehicle access to the creek at the pipeline crossing.

STATUS OF THE SPECIES

The southwestern willow flycatcher (flycatcher) is a small grayish-green passerine bird (Family Tyrannidae) measuring approximately 5.75 inches. The song is a sneezy "fitz-bew" or a "fit-a-bew", the call is a repeated "whitt". It is one of four currently recognized willow flycatcher subspecies (Phillips 1948, Unitt 1987, Browning 1993). It is a neotropical migrant that breeds in the southwestern U.S. and migrates to Mexico, Central America, and possibly northern South America during the non-breeding season (Phillips 1948, Stiles and Skutch 1989, Peterson 1990, Ridgely and Tudor 1994, Howell and Webb 1995). The historical breeding range of the flycatcher included southern California, Arizona, New Mexico, western Texas, southwestern Colorado, southern Utah, extreme southern Nevada, and extreme northwestern Mexico (Sonora and Baja) (Unitt 1987).

The flycatcher was listed as endangered without critical habitat on February 27, 1995 (USFWS 1995). Critical habitat was originally designated on July 22, 1997 (USFWS 1997). On October 19, 2005, critical habitat was re-designated (USFWS 2005). A total of 737 river miles in southern California, Arizona, New Mexico, southern Nevada, and southern Utah were included in the final designation. A final recovery plan for the flycatcher was completed in March 2003 (USFWS 2002).

The flycatcher breeds in dense riparian habitat from sea level in California to approximately 8,500 feet in Arizona and southwestern Colorado. Historical egg/nest collections and species descriptions throughout its range describe widespread use of willow (*Salix* spp.) for nesting (Phillips 1948, Phillips et al. 1964, Hubbard 1987, Unitt 1987, San Diego Natural History Museum 1995). Currently, flycatchers primarily use Geyer willow (*Salix geyeriana*), coyote willow (*Salix exigua*), Goodding's willow (*Salix gooddingii*), boxelder (*Acer negundo*), saltcedar (*Tamarix* sp.), Russian olive (*Elaeagnus angustifolio*), and live oak (*Quercus agrifolia*) for nesting. Other plant species less commonly used for nesting include: buttonbush (*Cephalanthus* sp.), black twinberry (*Lonicera involucrata*), cottonwood (*Populus* spp.), white alder (*Alnus rhombifolia*), blackberry (*Rubus ursinus*), and stinging nettle (*Urtica* spp.). Tamarisk is an important component of flycatcher nesting and foraging habitat in Arizona and other parts of the species range. In 2001 in Arizona, 323 of the 404 (80 percent) known flycatcher nests (in 346 territories) were in tamarisk (Smith *et al*. 2002). Based on the diversity of plant species composition and complexity of habitat structure, four basic habitat types can be described for the

southwestern willow flycatcher: monotypic willow, monotypic exotic, native broadleaf dominated, and mixed native/exotic (Sogge *et al*. 1997).

Flycatcher habitat is dynamic and can change rapidly: nesting habitat can grow out of suitability; saltcedar habitat can develop from seeds to suitability in five years; heavy runoff can remove/reduce habitat suitability in a day; or river channels, floodplain width, location, and vegetation density may change over time. Flycatcher use of habitat in different successional stages may also be dynamic. For example, over-mature or young habitat not suitable for nest placement can be occupied and used for foraging and shelter by migrating, breeding, dispersing, or non-territorial individuals (McLeod *et al*. 2005, Cardinal and Paxton 2005). That same habitat may subsequently grow or cycle into habitat used for nest placement. Flycatcher habitat can quickly change and vary in suitability, location, use, and occupancy over time (Finch and Stoleson 2000).

There are currently 275 known flycatcher breeding sites in California, Nevada, Arizona, Utah, New Mexico, and Colorado (all sites from 1993 to 2005 where a resident flycatcher has been detected) holding an estimated 1,214 territories (Durst *et al*. 2006). Approximately 50 percent of the 1,214 territories currently estimated throughout the range of the species are located at four general locations (Cliff/Gila Valley, New Mexico; Roosevelt Lake, Arizona; San Pedro River/Gila River confluence, Arizona; Middle Rio Grande, New Mexico).

While numbers have significantly increased in Arizona (145 to 495 territories from 1996 to 2005) (English *et al*. 2006), overall distribution of flycatchers throughout the state has not changed. Currently, population stability in Arizona is believed to be largely dependent on the presence of two large populations (Roosevelt Lake and San Pedro/Gila River confluence). Therefore, the result of catastrophic events or losses of significant populations either in size or location could greatly change the status and survival of the species. Conversely, expansion into new habitats or discovery of other populations will improve the known stability and status of the flycatcher.

Since listing in 1995, at least 154 Federal agency actions have undergone (or are currently under) formal section 7 consultation to address effects to the species. Many activities continue to adversely affect the distribution and extent of all stages of flycatcher habitat throughout its range (development, urbanization, grazing, recreation, native and non-native habitat removal, dam operations, river crossings, ground and surface water extraction, etc.). Stochastic events also continue to change the distribution, quality, and extent of flycatcher habitat.

ENVIRONMENTAL BASELINE

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

A. STATUS OF THE SPECIES WITHIN THE ACTION AREA

The portion of Kanab Creek that will be crossed by the new pipeline is flycatcher habitat. The riparian zone is 50-400 feet wide and greater than 200 feet long with a patch size greater than 0.5 acre. It is a dense mixture of native cottonwood, willows, and tamarisk. The zone is mostly a closed canopy with dense marsh understory and saturated soil. It is relatively undisturbed with steep sandy banks.

The nearest known location of breeding flycatchers is a record for Kanab Creek at the town of Kanab, Utah, which is approximately 4-5 miles north of the proposed Kanab Creek crossing (G. Beatty, FWS, personal communication 2007). In 2002, two flycatcher territories were observed at that location.

No records of flycatchers are known for the portion of Kanab Creek that will be crossed by the pipeline. However, no surveys for flycatchers have been conducted in the area of the proposed crossing.

The proposed project is not within designated flycatcher critical habitat.

B. FACTORS AFFECTING THE SPECIES' ENVIRONMENT WITHIN THE ACTION AREA

Previous section 7 consultations that may have considered projects in the project area or vicinity include those regarding land sales, rest area construction, wastewater treatment facilities, and road construction/maintenance. Similar other factors associated with urban development north of Fredonia, and livestock grazing and human recreation, may also have affected the species environment in the action area.

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.

In general, flycatchers can be affected in two major ways. Degradation or loss of habitat is one major category. The other major category is disturbance of regular behavior (feeding, sheltering, breeding) of individuals by noise or other project activity. The proposed 40-foot wide construction easement and 20-foot wide permanent easement for the new pipeline crossing of Kanab Creek will affect a linear 40-foot by 350-foot strip of flycatcher habitat in Kanab Creek. Except for large cottonwoods, all vegetation may be removed from the 40-foot wide construction easement. After the project is completed, there may be some long-term recovery of flycatcher habitat in the non-permanent easement portion of the crossing. However, the vegetation removed in the permanent easement is not likely to recover to become flycatcher habitat.

The action will result in degradation or loss of 0.3-0.5 acre of unsurveyed flycatcher habitat. The patch of flycatcher habitat that will be affected is approximately 0.5 acre in size. Approximately 0.3 acre of vegetation in flycatcher habitat will be removed by construction of the pipeline; this habitat will be degraded or lost. Furthermore, the overall functionality (foraging, breeding, and sheltering) of the entire 0.5-acre patch to flycatchers will be reduced. Flycatchers are known to establish territories elsewhere in Kanab Creek close to the project area. Because the area has not been surveyed, the extent of occupied flycatcher habitat in Kanab Creek in the vicinity of the project area is unknown.

Because of vegetation removal along the pipeline route, this portion of flycatcher habitat in Kanab Creek will become unavailable for use by flycatchers. Such degradation or loss will result in loss of foraging habitat and suitable places for nest construction. The degradation and loss will also result in the reduction of the extent and density of the habitat, which will open up the habitat to predators and reduce its functionality for both nesting and sheltering. Opening up the habitat will make any nests constructed in this area more vulnerable to nest parasitism by brown-headed cowbirds (*Molothrus ater*), which is a known risk factor to flycatcher reproduction. Conservation measures to place large boulders or a fence at the disturbed areas will limit grazing and the use of all-terrain vehicles.

Construction of the pipeline crossing at Kanab Creek will occur between September 15 and April 15. Thus, disturbance of breeding flycatchers is not anticipated.

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.

Non-Federal actions that are reasonably certain to occur in the action area include urban development, livestock grazing, and human recreation. The effects of these actions will contribute to additional habitat fragmentation and disturbance, depending on the distance to the creek.

CONCLUSION

After reviewing the current status of the southwestern willow flycatcher, the environmental baseline for the action area, the effects of the proposed project, and the cumulative effects, it is our biological opinion that the Fredonia Town Culinary Water Improvement Project, as proposed, is not likely to jeopardize the continued existence of the southwestern willow flycatcher.

We present this conclusion for the following reasons:

1. The proposed action is of limited scope and duration. Approximately 0.3 acre of vegetation in flycatcher habitat will be removed by construction of the pipeline. The overall functionality of the 0.5-acre patch to flycatchers will be reduced. However, this represents only a small portion of the suitable flycatcher habitat in Kanab Creek.

2. The portion of the project affecting flycatcher habitat will be conducted outside of the flycatcher breeding season, so no disturbance to nesting in the area will occur.

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 regulation 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 defined 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 (50 CFR 17.3). "Harass" is defined 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 (50 CFR 17.3). "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

We do not anticipate that the proposed action will incidentally take flycatchers. The degradation and loss of habitat would adversely affect any flycatchers that may have a pattern of breeding in the area and will reduce the amount of habitat available for future migration, foraging, and reproduction. Although the habitat has not been surveyed for flycatchers, the action will be conducted outside of the breeding season.

Disposition of Dead or Injured Listed Species

Upon locating a dead, injured, or sick listed species, initial notification must be made to our Law Enforcement Office, 2450 West Broadway Road, Suite 113, Mesa, Arizona 85202 (telephone: 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 if possible, and any other pertinent information. The notification shall be sent to the Law Enforcement Office with a copy to this office. Care must be taken in handling sick or injured animals to ensure effective treatment and care, and in handling dead specimens to preserve the biological material in the best possible state.

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.

We have not identified any conservation recommendations.

REINITIATION NOTICE

This concludes formal consultation on the action(s) outlined in the 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.

In keeping with our trust responsibilities to American Indian Tribes, by copy of this memorandum, we will notify the Chemehuevi Tribe, the Hopi Tribe, and the Kaibab Band of Paiute Indians, which may be affected by the proposed action and encourage you to invite the Bureau of Indian Affairs to participate in the review of your proposed action. We also encourage you to coordinate the review of this project with the Arizona Game and Fish Department.

We appreciate your efforts to identify and minimize effects to listed species from this project. For further information, please contact Bill Austin at (928) 226-0614 (x102) or Brenda Smith (x101).

Sincerely,

/s/ Steven L. Spangle
Field Supervisor

cc: Chairperson, Chemehuevi Tribe, Havasu Lake, CA
Chairperson, Hopi Tribe, Kykotsmovi, AZ
Chairperson, Kaibab Band of Paiute Indians, Fredonia, AZ
Environmental Specialist, Environmental Services, Western Regional Office, Bureau of Indian Affairs, Phoenix, AZ
Chief, Habitat Branch, Arizona Game and Fish Department, Phoenix AZ
Regional Supervisor, Arizona Game and Fish Department, Flagstaff, AZ

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APPENDIX A - CONCURRENCE

We concur with your determination that the proposed project may affect, but is not likely to adversely affect, the Siler pincushion cactus. We base this concurrence on the following.

The proposed pipeline route from the new reservoir to Highway 89A is the only route that will result in new ground disturbance. The portion of that pipeline route from the new reservoir to the Kanab Creek crossing and some other areas of new surface disturbance (including the proposed new reservoir) were surveyed for the species on August 30, 2006. The portion of that proposed pipeline route from the Kanab Creek crossing to Highway 89A was surveyed for the species on June 11, 2007. No individuals of the species were observed.