

BIOLOGICAL OPINION SUMMARY
Salt River Project 500 KV Powerline

Date of opinion: October 17, 1997

Action agency: United States Forest Service, Tonto National Forest, Payson Ranger District

Project: Maintenance of a portion of Salt River Project's 500 Kilovolt powerline on the east side of the Tonto National Forest.

Location: Gila County, Arizona

Listed species affected: Mexican spotted owl (*Strix occidentalis lucida*), listed as threatened.

Biological opinion: The proposed project is not likely to jeopardize the continued existence of the threatened Mexican spotted owl.

Incidental take statement:

Anticipated take: Take of one pair of owls due to harassment. Exceeding this level may require reinitiation of formal consultation.

Reasonable and prudent measures: Two reasonable and prudent measures were provided, as follows: 1) Minimize adverse effects by using seasonal restrictions; and 2) The Forest Service as part of their action will provide a means to determine the level of incidental take that actually results from the project.

Terms and conditions: Terms and conditions implement reasonable and prudent measures and are mandatory requirements. Terms and conditions were provided, as follows: 1) Conduct maintenance activities from September 1 through February 28 so that the action does not disturb spotted owls during the breeding season; and 2) Provide the Service with a report following completion of maintenance activities detailing the number of tree greater than nine inches dbh removed from the PAC and describing the corridor that results from removal of up to 345 trees in the two PACS.

Conservation recommendations: Implementation of conservations recommendations is discretionary. One conservation recommendation was provided.



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Fish and Wildlife Service

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In Reply Refer To:
AESO/SE
2-21-97-F-356

October 17, 1997

Mr. Charles R. Bazan
Forest Supervisor
Tonto National Forest
2324 East McDowell Road
Phoenix, Arizona 85006

Dear Mr. Bazan:

The U.S. Fish and Wildlife Service has reviewed the Biological Assessment and Evaluation for the maintenance activities of the Salt River Project's 500 Kilovolt (KV) powerlines located in Gila County, Arizona. Your July 28, 1997, request for formal consultation was received on July 31, 1997. This document represents the Service's biological opinion on the effects of that action on Mexican spotted owls (*Strix occidentalis lucida*) in accordance with section 7 of the Endangered Species Act of 1973, as amended, (16 U.S.C. 1531 et seq.).

This biological opinion is based on information provided in the July 28, 1997, BAE, and telephone conversations with the Zone Biologist for the Payson Ranger District. Literature cited in this biological opinion is not a complete bibliography of all literature available on Mexican spotted owls (spotted owls), the effects of powerline maintenance on spotted owls, or on other subjects considered in this opinion. A complete administrative record of this consultation is on file in this office.

The Service has determined that the project as proposed will not jeopardize the continued existence of the spotted owl.

CONSULTATION HISTORY

A BAE, dated July 28, 1997, was received by the Service on July 31, 1997. The Service responded with a 30-day letter on August 22, 1977.

BIOLOGICAL OPINION

DESCRIPTION OF PROPOSED ACTION

Salt River Project's 500 KV powerlines extend across the east end of the Tonto National Forest in a north-south alignment. The needed maintenance activities are located at Township 11 North, Range 15 East, sections 27 and 34, and at Township 10 North, Range 15 East, section

30. According to the BAE, powerlines are designed to sag. As electrical demand increases, more electricity is transmitted through the power lines, and the amount of sag increases. Maintenance personnel with Salt River Project have determined that trees within two spotted owl Protected Activity Centers (PACs) need to be removed to prevent contact with power lines during periods of increased electrical demands.

Maintenance personnel have modelled the maximum amount of sag that should occur along the powerlines and based their maintenance needs on these models. Within the Upper Valentine PAC (#120509), the largest trees are located in the bottom of the canyon, and slightly up the north facing slope of the canyon. The majority of the trees are Douglas fir (*Pseudotsuga menzeisii*), but five to eight are ponderosa pine (*Pinus ponderosa*). Diameter at breast height (dbh) for these trees ranges from 14 to 34.4 inches. The majority of the trees have a dbh of 20 inches or greater, and the tallest tree is 113 feet tall. There are 35 to 45 trees identified for removal from this area. On the south facing slope, maintenance workers estimate that there are 200 to 300 trees needing to be removed. The majority of the trees are seedlings and small saplings with a few pole sized trees (smaller than nine inches dbh). The trees are primarily ponderosa pine and oaks (*Quercus* spp.)

In the Upper Canyon PAC (#120510), four ponderosa pine trees ranging from eight to 10 inches dbh would be removed. These trees are located on the north side of the canyon near the top of the slope, and are right at the PAC boundary.

The cover letter for the BAE notes that there have been several lawsuits against utility companies where fires have started due to a lack of vegetation management along powerline corridors. The Forest Service notes that a catastrophic wildfire along the 500 KV powerline identified in the project could result in a major interruption of power to multiple states.

STATUS OF THE SPECIES (Rangewide and Recovery Unit)

The Mexican spotted owl was proposed for listing on November 4, 1995 (56 CFR 56344) and was listed as threatened on March 16, 1993 (58 FR 14248). The Mexican spotted owl was originally described from a specimen collected at Mount Tancitaro, Michoacan, Mexico, and named *Syrnium occidentale lucidum*. The spotted owl was later assigned to the genus *Strix*. Specific and subspecific names were changed to conform to taxonomic standards and the subspecies became *S. o. lucida*. The American Ornithologists' Union currently recognizes three spotted owl subspecies, including the California (*S. o. occidentalis*), Mexican (*S. o. lucida*), and Northern (*S. o. caurina*). The Mexican spotted owl is mottled in appearance with irregular white and brown spots on its abdomen, back, and head. The spots of the Mexican spotted owl are larger and more numerous than in the other two subspecies giving it a lighter appearance. Several thin white bands mark an otherwise brown tail. Unlike most owls, spotted owls have dark eyes.

The Mexican spotted owl is distinguished from the California and Northern subspecies chiefly by geographic distribution and plumage. The Mexican spotted owl has the largest geographic

range of the three subspecies. The range extends from the southern Rocky Mountains in Colorado and the Colorado Plateau in southern Utah southward through Arizona and New Mexico and, discontinuously through the Sierra Madre Occidental and Oriental to the mountains at the southern end of the Mexican Plateau.

Using starch-gel electrophoresis to examine genetic variability among the three subspecies of spotted owls, Barrowclough and Gutierrez (1990) found the Mexican spotted owl to be distinguishable from the other two subspecies by a significant variation, which suggests prolonged geographic isolation of the Mexican subspecies and indicates that the Mexican spotted owl may represent a species distinct from the California and Northern spotted owls.

The current known range of the spotted owl extends north from Aguascalientes, Mexico through the mountains of Arizona, New Mexico, and western Texas, to the canyons of southern Utah and southwestern Colorado, and the Front Range of central Colorado. Although this range covers a broad area of the southwestern United States and Mexico, much remains unknown about the species' distribution within this range. This is especially true in Mexico where much of the owl's range has not been surveyed. Information gaps also appear for the species' distribution within the United States. It is apparent that the owl occupies a fragmented distribution throughout its United States range corresponding to the availability of forested mountains and canyons, and in some cases, rocky canyon lands.

The primary administrator of lands supporting owls in the United States is the Forest Service. According to the Recovery Plan for the Mexican spotted owl (USDI 1995), 91 percent of owls known to exist in the United States between 1990 and 1993 occurred on land administered by the Forest Service (U.S. Fish and Wildlife Service 1995). The majority of known owls have been found within Region 3 of the Forest Service, which includes 11 National Forests in New Mexico and Arizona. Forest Service Regions 2 and 4, including two national forests in Colorado and three in Utah, support fewer owls.

The range of the Mexican spotted owl in the United States has been divided into six recovery units (RUs) as discussed in part II.B. of the Recovery Plan (USDI 1995). An additional five RUs were designated in Mexico. While the Recovery Plan (USDI 1995) provides distribution, abundance, and density estimates by RU, a reliable estimate of the numbers of owls throughout its entire range is not currently available due to the availability of only limited information. Owl surveys conducted from 1990 through 1993 indicate that the species persists in most locations reported prior to 1989, with the exception of riparian habitats in the lowlands of Arizona and New Mexico, and all previously occupied areas in the southern states of Mexico. Increased survey efforts have resulted in additional sightings for all recovery units.

Fletcher (1990) calculated that 2,074 owls existed in Arizona and New Mexico in 1990 using information gathered by Region 3 of the Forest Service. Fletcher's calculations were modified by McDonald *et al.* (1991), who estimated that there were a total of 2,160 owls in the United States. However, these numbers are not reliable estimates of current population size for a variety of statistical reasons. While the number of owls throughout its range is currently not

available, the Recovery Plan (USDI 1995) reports an estimate of owl sites based on 1990 - 1993 data. An owl "site" is defined as a visual sighting of at least one adult owl or a minimum of two auditory detections in the same vicinity in the same year. Surveys from 1990 through 1993 indicate one or more owls have been observed at a minimum of 758 sites in the United States and 19 sites in Mexico. The greatest concentration of known owl sites in the United States occurs in the Upper Gila Mountain (55.9 percent), followed by the Basin and Range-East (16.0 percent), Basin and Range-West (13.6 percent), Colorado Plateau (8.2 percent), Southern Rocky Mountain-New Mexico (4.5 percent) and southern Rocky Mountain-Colorado (1.8 percent) RUs. At best, total numbers in the United States range from 777 individuals assuming each known site was occupied by a single owl, to 1,554 individuals assuming each known site was occupied by a pair of owls.

Past, current, and future timber-harvest practices in the Region 3 of the Forest Service, in addition to catastrophic wildfire, were cited as the primary factors leading to listing of the spotted owl as a threatened species. Fletcher (1990) estimates that 420,000 hectares (1,037,000 acres) of habitat were converted from suitable (providing all requirements of the owl, e.g., nesting, roosting, and foraging) to capable (once suitable, but no longer so). Of this, about 78.7 percent, or 330,000 hectares (816,000 acres) was a result of human management activities, whereas the remainder was converted more or less naturally, primarily by wildfire. Other factors which have or may lead to the decline of this species include a lack of adequate regulatory mechanisms. In addition, the Recovery Plan (USDI 1995) notes that forest management has created ecotones favored by great horned owls, and there is, as a result, an increased likelihood of contact between spotted owls and great horned owls (a potential competitor and predator). Increases in scientific research, birding, educational field trips, and agency trips are also likely to occur. Finally, there is a potential for increasing malicious and accidental anthropogenic harm. Based on short-term population and radio-tracking studies, and longer-term monitoring studies, the probability of an adult Mexican spotted owl surviving from one year to the next is 0.8 to 0.9. Juvenile survival is considerably lower at 0.06 to 0.29, although it is believed these estimates may be artificially low due to the high likelihood of permanent dispersal from the study area and the lag of several years before marked juveniles reappear as territory holders and are detected as survivors through recapture efforts (White *et al.* 1995). Little research has been conducted on the causes of mortality of the spotted owl, but predation by great horned owls, northern goshawks, red-tailed hawks, and golden eagles, starvation, and accidents or collisions may all be contributing factors.

Little is known about the reproductive output for the spotted owl. It varies both spatially and temporally (White *et al.* 1995), but the subspecies demonstrates an average annual rate of 1.001 young per pair. There is inadequate data at this time to estimate population trend. Little confidence in initial estimates has been expressed, and is due to its reliance on juvenile survival rates which are believed to be biased low, and due to the insufficient time period over which studies have been conducted.

ENVIRONMENTAL BASELINE

The Forest Service has formally consulted on 195 timber sales and other projects in Arizona and New Mexico since August 1993. These projects have resulted in the anticipated incidental take of 79 owls. In addition, the Bureau of Indian Affairs has consulted on one timber sale on the Navajo Reservation which resulted in an anticipated take of four owls, and a highway reconstruction project which resulted in the anticipated take of two owls. The Federal Highway Administration in Arizona has consulted on one highway construction project that resulted in an undetermined amount of incidental take. The take associated with this action will be determined following further consultation. Additionally, the biological opinion for the Kachina Peaks Wilderness Prescribed Natural Fire (PNF) Plan (#2-21-94-F-220) determined that no incidental take would occur. However, direct take of Mexican spotted owls is anticipated for the Kachina PNF as follows: 1) one spotted owl or one pair of spotted owl adults and/or associated eggs/juveniles; B) harm and harassment of spotted owls located in up to two PACs per year; 3) disturbance to spotted owls and habitat modification of a total of seven PACs during the life of the Kachina Burn Plan related to management ignited fire occurring in PACs for which the nest site information is three or more years old; 4) harm and harassment of spotted owls and habitat caused by PNF for which adequate surveys have not been conducted; and 5) harm and harassment of spotted owls and habitat modification of up to one PAC and 500 acres of potential nest/roost habitat caused by wildfire as an indirect result of PNF during the life of the Kachina Burn Plan.

The proposed project lies within the Upper Gila Mountains RU, as described in the Recovery Plan (USDI 1995). This RU is a relatively narrow band bounded on the north by the Colorado Plateau RU and to the south by the Basin and Range West RU. The southern boundary of this RU includes the drainages below the Mogollon Rim in central and eastern Arizona. The eastern boundary extends to the Black, Mimbres, San Mateo, and Magdalena Mountain ranges of New Mexico. The northern and western boundaries extend to the San Francisco Peaks and Bill Williams Mountains north and east of Flagstaff, Arizona. This is a topographically complex area consisting of steep foothills and high plateaus dissected by deep forested drainages. This RU can be considered a "transition zone," because it is an interface between two major biotic regions: the Colorado Plateau and Basin and Range Provinces (Wilson 1969).

Habitat within this RU is administered by the Kaibab, Coconino, Apache-Sitgreaves, Tonto, Cibola, and Gila National Forests. The north half of the Fort Apache and northeast corner of the San Carlos Indian Reservations are located in the center of this RU and contain an important habitat link between owl subpopulations at the western and eastern ends of the RU and the subpopulations directly south within the Basin and Range West RU.

This RU consists of deep forested drainages on the Mogollon Plateau. Vegetation generally consists of pinyon/juniper (*Pinus/Juniperus* spp.) woodland, ponderosa pine/mixed conifer forest, some spruce (*Picea* spp.)/fir forest, and deciduous riparian forest in mid- and lower-elevation canyon habitat. Climate is characterized by cold winters. More than half of the precipitation falls during the growing season. Much of the mature stand component on the gentle slopes

surrounding the canyons has been partially or completely harvested. Most of the forest habitat on steeper ground that may serve as spotted owl nesting habitat is in suitable condition. Mexican spotted owls are widely distributed and use a variety of habitats within this RU. Owls most commonly nest and roost in mixed-conifer forests dominated by Douglas fir and/or white fir (*Abies concolor*) and canyons with varying degrees of forest cover (Ganey and Balda 1989; USDI 1995). Owls also nest and roost in ponderosa pine-Gambel oak (*Quercus gambellii*) forest, where they are typically found in stands containing well-developed understories of Gambel oak (USDI 1995).

This RU contains the largest known concentration of spotted owls with approximately 55 percent of the known spotted owl territories located here (USDI 1995). This RU is located near the center of the spotted owl's range within the United States and is contiguous to four of the other five RUs within the United States. Because of its central location and its large and relatively continuous distribution of spotted owls, the Mexican Spotted Owl Recovery Team believes that the population in this RU could be uniquely important to the overall stability and persistence of the spotted owl population in the United States. Specifically, this population could serve as the source population, providing immigrants to smaller, more isolated populations in other RUs. Although the Recovery Team has no data on dispersal patterns or movements between RUs, they believe that this population should be maintained at current levels and with at least the current level of connectivity within the RU (USDI 1995). Significant discontinuities that develop in the spotted owl's distribution within this RU, and the loss of habitat to support the local subpopulations, may compromise the recovery of the species.

EFFECTS OF THE ACTION

The direct effects of the action are the removal of up to 345 trees in two Mexican spotted owl PACs. Within the Upper Valentine PAC, the proposed action would result in the removal of up to 45 trees greater than nine inches dbh in the bottom of the canyon and on its north-facing slope. An additional 200 to 300 trees would need to be removed from the south-facing slope. The trees removed are located approximately 0.80 miles from the known nest site for the owls occupying this PAC. Within the Upper Canyon PAC, the proposed project would result in the removal of four ponderosa pine trees between eight and 10 inches dbh, which are located on the north side of the canyon approximately 0.80 miles from the known nest site. All work would be completed outside the breeding season for Mexican spotted owls.

For this project, the Service is primarily concerned with the effects to the Upper Valentine PAC. It is the Service's opinion that, while the Recovery Plan (USDI 1995) discourages the removal of any trees greater than nine inches dbh, the effect of removing four trees from the Upper Canyon PAC is insignificant and is not likely to adversely affect the owls in that PAC. It should be noted that this decision was reached based on the information provided for this one, site-specific project. As a result, this determination should not be considered precedent-setting for future projects that would result in similar tree removal.

For the Upper Valentine PAC, the Service believes that the removal of up to 345 trees represents a larger impact. The Forest Service indicated that the number of trees to be removed would be between 235 and 345. The Service is providing consultation on removal of 345 trees to avoid future delays in project implementation due to additional consultation needs. The Recovery Plan (USDI 1995) provides guidance on treatments that will lessen fire hazard within PACs. As noted previously, these guidelines indicate that no trees greater than nine inches dbh should be removed from an existing PAC. The proposed project would remove up to 45 trees greater than nine inches dbh within the PAC. Secondly, the removal of an additional 200 to 300 trees results in a decrease in vegetation density within a corridor under the powerlines. Removal of these trees will reduce available cover for prey species. Similarly, for those trees of sufficiently large size, removal may represent loss of protective cover for foraging owls as well.

The duration of these effects is permanent. It is assumed that these utility corridors will continue to be treated to remove vegetation due to the on-going potential for the powerlines to result in a wildfire.

CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, 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 ESA. Because the areas surrounding the proposed site are managed by the Forest Service, no State, local, or private actions are anticipated in the near vicinity.

SUMMARY

In summary, the Service has determined that the removal of trees greater than nine inches dbh within the Upper Canyon and Upper Valentine PACs would not be in compliance with the Recovery Plan (USDI 1995). However, in the Upper Canyon PAC, the removal of four trees of this size class would result in impacts that would be insignificant. The Service has additionally determined that the removal of up to 341 trees in the Upper Valentine PAC is likely to result in adverse effects to the Mexican spotted owl and its habitat.

CONCLUSION

After reviewing the current status of the Mexican spotted owl, the environmental baseline for the action area, the effects of the proposed tree removal and the cumulative effects, it is the Service's biological opinion that the proposed 500 KV project maintenance, as proposed, is not likely to jeopardize the continued existence of the spotted owl. Since critical habitat for the Mexican spotted owl has been enjoined by New Mexico District Court (Coalition of Arizona-New Mexico Counties for Stable Economic Growth versus USFWS, No. 95-1285-M Civil (D.N.M., filed March 4, 1977)), no conferencing or consultation is required for critical habitat for the Mexican spotted owl at this time.

INCIDENTAL TAKE STATEMENT

Sections 4(d) and 9 of ESA, as amended, prohibit taking (harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct) of listed species of fish or wildlife without a special exemption. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering. Harass is defined as 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 any take of listed animal species that results from, but is not the purpose of, carrying out an otherwise lawful activity conducted by the Federal agency or the applicant. 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 a prohibited taking provided that such taking is in compliance with the terms and conditions of this incidental take statement.

The measures described below are non-discretionary, and must be implemented by the agency so that they become binding conditions of any grant or permit issued to the applicant, as appropriate, in order for the exemption in section 7(o)(2) to apply. The Forest Service has a continuing duty to regulate the activity covered by this incidental take statement. If the Forest Service (1) fails to require the applicant to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, and/or (2) fails to retain oversight to ensure compliance with these terms and conditions, the protective coverage of section 7(o)(2) may lapse.

AMOUNT OR EXTENT OF TAKE

The Service anticipates that one pair could be taken as a result of this proposed action due to habitat degradation caused by removal of up to 345 trees. The incidental take is expected to be in the form of harass, as defined above. This determination is based on an analysis of the information provided in the BAE which indicates that habitat within the PAC will be altered by removal of up to 345 trees.

If, during the course of the action, the amount or extent of the incidental take anticipated is exceeded, the Forest Service must reinstate consultation with the Service immediately to avoid violation of section 9. Operations must be stopped in the interim period between the initiation and completion of the new consultation if it is determined that the impact of the additional taking will cause an irreversible and adverse impact on the species, as required by 50 CFR 402.14(i). An explanation of the causes of the taking should be provided to the Service.

EFFECT OF THE TAKE

In the accompanying biological opinion, the Service determined that this level of anticipated take is not likely to result in jeopardy to the species or destruction or adverse modification of critical habitat.

REASONABLE AND PRUDENT MEASURES

The Forest Service has demonstrated that the proposed project is necessary to reduce the possibilities of wildfire ignition and power outages resulting from contact or arcing between trees and the powerlines. The Forest Service has already committed to requiring that the action be completed outside of the breeding season for the Mexican spotted owl, and the Service has incorporated this commitment into a reasonable and prudent measure. Additionally, because the project involves existing powerlines, there is no opportunity to relocate the project outside of existing PACs. Similarly, trees identified for removal can not be modified or minimized.

The Service believes the following reasonable and prudent measure(s) are necessary and appropriate to minimize take:

1. Minimize adverse effects by using seasonal restrictions.
2. The Forest Service as part of their action will provide a means to determine the level of incidental take that actually results from the project.

TERMS AND CONDITIONS

In order to be exempt from the prohibitions of section 9 of ESA, the Forest Service must comply with the following terms and conditions, which implement the reasonable and prudent measures described above. These terms and conditions are nondiscretionary.

- 1.1 Conduct maintenance activities from September 1 through February 28 so that the action does not disturb spotted owls during the breeding season.
- 2.1 Provide the Service with a report following completion of maintenance activities detailing the number of trees greater than nine inches dbh removed from the PAC and the describing the corridor that results from removal of up to 345 trees in the two PACs.

The reasonable and prudent measures, with their implementing terms and conditions, are designed to minimize incidental take that might otherwise result from the proposed action. With implementation of these measures the Service believes that no more than two owls will be incidentally taken. If, during the course of the action, this minimized level of incidental take is exceeded, such incidental take would represent new information requiring review of the reasonable and prudent measures provided. The Federal agency must immediately provide an explanation of the causes of the taking and review with the Service the need for possible modification of the reasonable and prudent measures.

Notice: While the incidental take statement provided in this consultation satisfies the requirements of the Endangered Species Act, as amended, it does not constitute an exemption from the prohibitions of take of listed migratory birds under the more restrictive provisions of the Migratory Bird Treaty Act.

DISPOSITION OF DEAD, INJURED, OR SICK SPOTTED OWLS

Upon locating a dead, injured, or sick spotted owl, initial notification must be made to the Service's Law Enforcement Office, Federal Building, Room 8, 26 North McDonald, Mesa, Arizona (telephone: 602/835-8289) within three working days of its finding. Written notification must be made within five calendar days and should 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 set possible state. If possible, the remains of intact owl(s) shall be provided to this office. If the remains of the owl(s) are not intact or are not collected, the information noted above shall be obtained and the carcass left in place. Injured animals should be transported to a qualified veterinarian by an authorized biologist. Should the treated owl(s) survive, the Service should be contacted regarding the final disposition of the animal.

CONSERVATION RECOMMENDATIONS

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

1. Develop a programmatic Biological Assessment and Evaluation to address all maintenance needs for existing powerlines. This would assist the Forest Service and the Service in completing consultation in a timely manner and avoid the need for expedited consultations in the future.

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

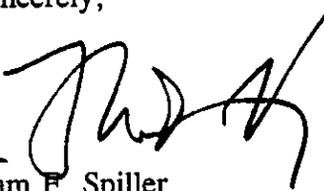
REINITIATION - CLOSING STATEMENT

This concludes formal consultation on the action(s) outlined in the BAE. 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 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 that was 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 if it is determined that the impact of such taking will cause an irreversible and adverse impact to the species.

The Service appreciates your consideration of threatened and endangered species in project planning and implementation. For further information please contact Mary Richardson or Angie Brooks. Please refer to the consultation number 2-21-97-F-356 in future correspondence concerning this project.

Sincerely,

A handwritten signature in black ink, appearing to read 'Sam F. Spiller', with a large, sweeping flourish at the end.

For
Sam F. Spiller
Field Supervisor

cc: Regional Director, Region 2, U.S. Fish and Wildlife Service, Albuquerque, NM (GM)
Field Supervisor, New Mexico Ecological Services Field Office, Albuquerque, NM
(Attn: Sarah Rinkevich)
Zone Wildlife Biologist, Payson Ranger District, Tonto National Forest, Payson, AZ
(Attn: Don Pollock)

Director, Arizona Game and Fish Department, Phoenix, AZ

LITERATURE CITED

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