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U.S. Fish and Wildlife Service
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AESO/SE
CL#20000087
2-21-00-F-136

February 8, 2000

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

Dear Mr. Bazan:

This document transmits the Fish and Wildlife Service's (Service) biological opinion based on our review of the proposed 21 Kilovolt Line Maintenance located in Gila County, Arizona, and its effects on the threatened Mexican spotted owl (*Strix occidentalis lucida*) in accordance with section 7 of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.). Your January 27, 2000, request for formal consultation was received on February 2, 2000.

Your January 3, 2000, concurrence request that the proposed project is not likely to adversely affect the Mexican spotted owl (MSO) was received by our office January 4, 2000. A telephone conversation between Don Pollock of the Payson Ranger District and Doug Duncan of my staff on January 26, 2000, addressed the need for the proposed action to undergo formal consultation as did a telephone conversation between Eddie Alford (Tonto SO) and Doug Duncan (January 31, 2000).

This biological opinion is based on information provided in the December 1999, biological assessment and evaluation (BAE); the January 27, 2000, request for formal consultation; and other sources of information. References cited in this biological opinion are not a complete bibliography of all literature available on the species of concern, the proposed action and its effects, or on other subjects considered in this opinion. A complete administrative record of this consultation is on file at this office.

After reviewing the status of the listed species, the environmental baseline for the action area, the effects of the proposed action, and the cumulative effects, it is the Service's biological opinion that the proposed action is not likely to jeopardize the continued existence of the threatened Mexican spotted owl. Critical habitat was designated for the species on June 6, 1995 (USFWS 1995a), but was later withdrawn (USFWS 1998). Therefore, the proposed project will not adversely modify or destroy any critical habitat.

CONSULTATION HISTORY

A July 14, 1997, BAE determined that certain maintenance activities on the Forest would have no effect to threatened, endangered, or sensitive species or their habitat, so the Service did not consult on this project. A July 28, 1997, BAE was written for maintenance underneath 500 kilovolt (KV) powerlines that passed through two MSO Protected Activity Centers (PACs). This BAE determined that the action would adversely affect the Mexican spotted owl. In a biological opinion (2-21-97-F-356) dated October 17, 1997, the Service anticipated that one pair of owls could be taken as a result of habitat degradation within one of the PACs. An August 14, 1997, BAE determined that maintenance of a portion of a 21 KV line that passed through two MSO PACs in a letter dated November 19, 1997, but determined that the proposed action would not adversely affect the MSO or the integrity of the two PACs. In this action, only seven or eight Douglas fir (*Pseudotsuga menziesii*), between nine and 14 inches diameter breast height (DBH) were proposed for removal.

In the summer of 1998, Arizona Public Service (APS) proposed to the Forest Service to make improvements along additional 21 KV and other smaller powerlines on the Payson and Pleasant Valley Ranger Districts. This proposal included lines not covered under any BAE. The proposal included the removal of trees from under the powerlines. All portions of that proposal that were not within listed species territories were the subject of a BAE dated June 29, 1998. That BAE determined that maintenance of these lines would have no effect on listed species or their habitats. The BAE stated that any lines passing through listed species territories would be the subject of a separate BAE.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

During their reconnaissance of the subject 21 KV powerline, APS identified maintenance needs within one MSO PAC (#120419 - Geronimo). The proposed activities within the Geronimo PAC are located in T 12 N, R 9 E, sections 26 and 36. One recent nearby fire was found to have been caused by arcing from the existing line. The line powers Camp Geronimo, a high use Boy Scout camp that is accessed by a single lane dirt road up a dead end canyon. A fire within the Geronimo PAC could block access from the camp, potentially threatening the lives of campers at the site.

Many locations exist where tree needles and branches are very close (13 cm) to live wires. A thorough walk-through of the line in the Geronimo PAC on November 8, 1999, revealed severely overgrown forest conditions of vegetation that would fall within either "restricted" or "other forest and woodland types" were they not within an existing PAC. A photo journal for the length of the powerline within the PAC, and a vegetative species list for points along the line within the PAC are in the BAE. The reconnaissance was conducted by APS linemen, vegetation

specialists, District forestry personnel, and two District biologists. It is within the best judgement of the personnel that a timely and thorough removal of the identified trees will dramatically reduce the risk of fire and provide greater reliability of this powerline segment.

Table 1. Species and size of trees (diameter breast height, diameter root crown for oaks, in inches) slated for removal in the Geronimo PAC during maintenance of the 21 KV line, Tonto National Forest.						
Species	>24"	18-24"	11-18"	9-11"	5-9"	<9"
ponderosa pine	0	1	51		-	147
Douglas fir	0	1	5			
others	0	0	16			
Arizona gray oak	0	0	1	3	1	-
Total	0	2	29	47	148	

There were 226 trees identified for removal (Table 1). They were ponderosa pine (*Pinus ponderosa*), Douglas fir, alligator juniper (*Juniperus deppeana*), and Arizona gray (white) oak (*Quercus griseus*). No trees over 24" DBH were identified for removal. One ponderosa and one Douglas fir (two trees total) over 18" DBH need to be removed. These trees are adjacent to the powerline easement and are leaning toward the lines. Topping these trees is not viable due to location of the trees relative to the powerline, the low level of the lines in this vicinity, and the leaning of the trees. Of the 224 remaining trees proposed for removal, 87% are less than 11" DBH, 66% less than nine inches DBH, and five Douglas fir and 51 ponderosa between 9 and 17 inches DBH. There are one six inch, two nine inch, one 10 inch, and one 13 inch diameter root crown Arizona gray oaks proposed for removal. No cavities are apparent in these five oaks. No Gambel oak (*Q. gambelii*) will be removed.

The BAE describes one small section of the affected area as "restricted habitat" as defined within the MSO recovery plan (USFWS 1995b), if found outside PAC boundaries. This area is located at the extreme southern end of the line within the PAC and is less than 1 acre of the affected area. All other portions of the powerline cross through forest cover types of either ponderosa pine or pinyon juniper woodland, with heavy understories of woodland associated shrubs. Only one snag has been identified for removal, a 17.2" DBH ponderosa pine. Remaining snags within or next to the line can be limbed sufficiently to reduce any threats to the line.

STATUS OF THE SPECIES

The Mexican spotted owl was listed as threatened on March 16, 1993 (USFWS 1993). Critical habitat was designated for the species on June 6, 1995 (USFWS 1995a), but was later withdrawn

(USFWS 1998). The MSO was originally described from a specimen collected at Mount Tancitaro, Michoacan, Mexico, and named *Syrnium occidentale lucidum*. The genus was later changed to *Strix* and specific and subspecific names were changed to conform to taxonomic standards; the subspecies became *S. o. lucida*. The American Ornithologists' Union currently recognizes three spotted owl subspecies; the California, *S. o. occidentalis*; Mexican, *S. o. lucida*; and Northern, *S. o. caurina*.

The MSO is mottled with irregular white and brown spots on its abdomen, back, and head. Mexican spotted owls breed sporadically and do not nest every year. Mexican spotted owls nest, roost, forage, and disperse in a diverse array of biotic communities. Nesting habitat is typically in areas with complex forest structure or rocky canyons, and contains mature or old-growth stands which are uneven-aged, multistoried, and have high canopy closure (Ganey and Balda 1989, USFWS 1991).

Besides forested areas, MSOs inhabit a variety of canyons. These canyons vary from those with a high degree of forested structure (coniferous or hardwood riparian woodlands) to those with little or no tree cover being present. The common characteristic among these canyons is steep to vertical rock walls in all or part of the canyon. These canyons are often used extensively when available. Rock-walled canyons generally are found at elevations below 2,286 m (7,500 ft) above sea level and are occupied by owls as low as 1,128 m (3,700 ft)(Ganey and Balda 1989).

Seasonal movement patterns of MSOs are variable. Some individuals are year-round residents within an area, some remain in the same general area but show shifts in habitat-use patterns, and some migrate considerable distances [20-50 km (12-31 mi)] during the winter, generally migrating to more open habitats at lower elevations (Ganey and Balda 1989, Willey 1993, Ganey et al. 1998).

The Mexican Spotted Owl Recovery Plan (USFWS 1995b) provides for three levels of habitat management: protected areas, restricted areas, and other forest and woodland types. "Protected habitat" includes all known owl sites, and all areas in mixed conifer or pine-oak forests with slopes greater than 40 percent where timber harvest has not occurred in the past 20 years, and all reserved lands. Protected Activity Centers are delineated around known MSO sites. An MSO PAC includes a minimum of 243 ha (600 ac) designed to include the best nesting and roosting habitat in the area. The recommended size for a PAC is anticipated to include approximately 75 percent of the foraging area of a Mexican spotted owl. "Restricted habitat" includes mixed conifer forest, pine-oak forest, and riparian areas; the recovery plan provides less specific management guidelines for these areas. The recovery plan does not provide owl-specific management guidelines for "other" habitat (USFWS 1995b). Additional life history information can be found in the recovery plan (USFWS 1995b), and the references cited there.

ENVIRONMENTAL BASELINE

The proposed project is in the Basin and Range-West Recovery Unit (31 MSO PACs). The BA notes the Tonto National Forest supports about 70 known MSO PACs, with most associated with the Mogollon Rim and the Mazatzal, Sierra Ancha, and Pinal Mountain ranges.

The 21 KV powerline maintenance project area is located in the Central Highlands of Arizona below the Mogollon Rim, in the northeastern portion of the Basin and Range Geographic Province. The project is located within the transition life zone. The primary forest cover type at the project location is ponderosa pine. The pine/Gambel oak/Douglas fir association occurs on the north facing aspect of the south end of the line. Gray oak is more prevalent on drier and hotter aspects across the rest of the line. A chaparral understory predominates with the primary constituent being manzanita (*Arctostaphylos* spp.).

The Geronimo PAC is 730 acres. It was identified and delineated in 1994 based on a confirmed MSO pair with two fledglings. No nest tree could be confirmed. In 1996, a female was confirmed roosting in the same general location as in 1994. Although checked repeatedly, no owls were detected in 1997. One response near a great horned owl (*Bubo virginianus*) response was the only detection in 1998 and no responses were obtained in 1999. The roost grove documented in 1994 and 1996 is along a northeast facing slope approximately 400m (0.25 mi) west and up the drainage from the powerline access road.

EFFECTS OF THE ACTION

Direct effects of the action are the removal of 148 trees in the Geronimo PAC. The Forest Service identified 78 trees larger than 9" DBH that APS would remove (Table 1). The proposed maintenance area is already disturbed. Felling and limbing will occur in either fall or winter months, outside the MSO breeding season (March 1-August 31). The Forest Service and APS have identified trees to be cut only when absolutely necessary. Other trees will be limbed or topped. Once trees are felled, they will be lopped, the slash scattered, and all tree parts left on site. No felled trees will be removed from the site. Harvest debris left on site will provide short- and long-term hiding cover for insects and small rodents along the corridor. The public may collect some of the downed material.

Because the project proposes felling 78 trees greater than 9" DBH, it is inconsistent with desired management and direction provided by the Recovery Plan for the Mexican spotted owl for treatment within PACs and Service policy. It is consistent with dialogue in the Recovery Plan emphasizing the need to reduce the risks of catastrophic wildfire within and adjacent to PACs. To minimize potential direct and indirect effects to any MSO, annual monitoring of this PAC has been conducted since 1994. The powerline is at least 400m (0.25 mi) and mostly over 800m (0.5 mi) from the known nest and roost grove. Proposed actions within the existing powerline corridor will be limited in scope and area, and could provide locally improved prey habitats along the line. However, data to support this conclusion is lacking. Trees greater than nine inches

DBH may provide protective thermal and predatory cover for MSO. Removal of these trees will reduce potential protective cover.

The proposed project may negatively affect protective cover for MSO through removal of standing trees. This loss of standing trees may be offset by the remaining cut trees and limbs providing cover for MSO prey. The proposed action will reduce the probability of fires being started by the powerline, and should therefore reduce the chance of catastrophic fire. The cut trees place more fuels on the forest floor, which may increase the probability of fires occurring.

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 are subject to the consultation requirements established under section 7, and, therefore, are not considered cumulative in the proposed action. In past biological opinions, it has been stated that, because of the predominant occurrences of MSO on Federal lands, and because of the role of the respective Federal agencies in administering the habitat of the MSO, actions to be done by non-Federal entities on non-Federal lands are considered of minor impact. However, there has been a recent increase of harvest activities on non-Federal lands within the range of the MSO. In addition, future actions within or next to the project area that are reasonably certain to occur include urban development, road building and widening, land clearing, trail construction, and other associated actions. These activities have the potential to reduce the quality of MSO nesting, roosting, and foraging habitat, and cause disturbance to breeding MSO, and would contribute as cumulative effects to the proposed action.

CONCLUSION

After reviewing the status of the MSO, the environmental baseline for the action area, the effects of the proposed actions, and the cumulative effects, it is the Service's biological opinion that the action, as proposed, is not likely to jeopardize the continued existence of the MSO because: tree debris will be left on the ground and may benefit prey species; the action will reduce the probability of catastrophic fires; and the removal of trees should not reduce the capacity of the area to support MSO. No critical habitat is currently designated for this species; therefore, none will be affected.

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 further defined by the Service 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 by the Service 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.

The measures described below are non-discretionary, and must be undertaken by the Forest so that they become binding conditions of any grant or permit issued to the applicant, as appropriate, for the exemption in section 7(o)(2) to apply. The Forest has a continuing duty to regulate the activity covered by this incidental take statement. If the Forest (1) fails to assume and implement the terms and conditions or (2) 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, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, the Forest must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement [50 CFR §402.14(i)(3)].

For the purposes of consideration of incidental take of MSO from the proposed action under consultation, incidental take can be broadly defined as either the direct mortality of individual birds, or the alteration of habitat that affects the behavior (i.e., breeding, foraging, or sheltering) of birds to such a degree that the birds are considered lost as viable members of the population and thus “taken.” They may fail to breed, fail to rear young successfully, raise less fit young, or desert the area because of disturbance or because habitat no longer meets the owl’s needs.

The Service believes incidental take is likely to occur if an activity compromises the integrity of a PAC. Actions outside PACs will generally not cause incidental take, except in cases when areas that may support owls have not been adequately surveyed.

AMOUNT OR EXTENT OF TAKE

The Service anticipates that take of MSO will be difficult to detect because finding a dead or impaired specimen is unlikely. The Service anticipates that one pair of Mexican spotted owls could be taken as a result of the proposed action due to habitat degradation caused by removal of up to 148 trees in the Geronimo PAC. 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. The BAE indicated that habitat in the PAC will be altered by removal of 148 trees.

This biological opinion does not authorize any form of take not incidental to implementation of the 21 KV Line Maintenance. If, during project activities, this amount or extent of take is exceeded, the Forest Service must reinitiate 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 or adverse impact on the species, as required by 50 CFR 402.14(i). An explanation of the causes of the taking will 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.

REASONABLE AND PRUDENT MEASURES

The Forest Service has demonstrated that the project is necessary to reduce the possibility of fires starting. The Forest Service has committed to completing the action outside the Mexican spotted owl's breeding season, and the Service has incorporated this commitment into a reasonable and prudent measure. Because the project involves existing powerlines, there is no opportunity to relocate the powerline outside the existing MSO PAC. Similarly, the number of trees identified for removal cannot be modified or minimized.

The Service believes the following reasonable and prudent measures are necessary and appropriate to minimize the take of MSO:

1. Minimize adverse effects by using seasonal restrictions for all proposed actions.
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 the ESA, the Forest Service must comply with the following terms and conditions, which implement the reasonable and prudent measures described above and outline required reporting and monitoring requirements. These terms and conditions are non-discretionary.

1. The following terms and conditions implement reasonable and prudent measure number 1:
 - a. Conduct maintenance activities from September 1 through February 28 so that the action does not disturb MSO during the breeding season.
2. The following terms and conditions implement reasonable and prudent measure number 2:
 - a. Provide the Service with a report within six months of completion of maintenance activities detailing the number of trees greater than nine inches DBH removed from the PAC, the

number of oaks greater than five inches diameter root crown removed from the PAC, and the corridor that results from the removal of up to 148 trees in the PAC.

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 MSO will be incidentally taken during the life of the project. If, during the action, this level of incidental take is exceeded, such incidental take would represent new information requiring review of the reasonable and prudent measures provided. The Forest Service 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.

To the extent that this statement concludes that take of any threatened or endangered species of migratory bird will result from the agency action for which consultation is being conducted, the Service will not refer the incidental take of any such migratory bird for prosecution under the Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. §§ 703-712), if such take is in compliance with the terms and conditions (including amount and/or number) specified herein.

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 the recovery plan (USFWS 1995b), or to develop information.

1. Develop a programmatic Biological Assessment and Evaluation to address all maintenance needs for existing powerlines on the Tonto National Forest. 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 (Recovery Plan task 211).

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

DISPOSITION OF DEAD OR INJURED LISTED ANIMALS

Upon finding a dead or injured threatened or endangered animal, initial notification must be made to the Service's Division of Law Enforcement, Federal Building, Room 8, 26 North McDonald, Mesa, Arizona (602/261-6443) 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 to educational or research institutions holding appropriate State and Federal permits. If such institutions are not available, the information noted above shall be obtained and the carcass left in place.

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 Service should be contacted regarding the final disposition of the animal.

REINITIATION NOTICE

This concludes formal consultation on the Tonto National Forest's 21 KV Line Maintenance, Gila County, Arizona. 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 way 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. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

Any questions or comments should be directed to Doug Duncan (520/670-4860) or Sherry Barrett (520/670-4617) of my staff. Please refer to the consultation number, 2-21-00-F-136, in future correspondence regarding this project.

Sincerely,

/s/ David L. Harlow
Field Supervisor

cc: Regional Director, Fish and Wildlife Service, Albuquerque, NM (PARD:ES, GARD-AZ/NM)
Field Supervisor, New Mexico Ecological Services Field Office, Albuquerque, NM (Attn:
Carol Torrez)
Zone Wildlife Biologist, Payson Ranger District, Tonto National Forest, Payson, AZ

Director, Arizona Game and Fish Department, Phoenix, AZ

REFERENCES CITED

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