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AESO/SE
2-21-02-F-197

August 21, 2002

Mr. Jim Golden
Forest Supervisor
Coconino National Forest
Supervisor's Office
2323 Greenlaw Lane
Flagstaff, Arizona 86004-1810

Dear Mr. Golden:

This constitutes the U.S. Fish and Wildlife Service's biological opinion based on our review of the proposed Arizona Public Service (APS) Right-of-Way Clearing Project, Coconino National Forest, Coconino County, Arizona. This biological opinion analyzes the effects of the powerline maintenance project on the threatened Mexican spotted owl (*Strix occidentalis lucida*) (MSO), in accordance with section 7 of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). Critical habitat for this species has been designated; however, this action does not affect any areas of critical habitat. Therefore, the effects of the action on critical habitat are not addressed further in this biological opinion.

Thank you for your request for formal consultation and Biological Assessment and Evaluation (BAE) that we received on May 29, 2002. The biological opinion is based on the information provided in the BAE; telephone and electronic mail transmissions with your staff; and other sources of information. A complete administrative record of this consultation is on file at our office.

Consultation History

The consultation history is summarized in Table 1.

Table 1. Summary of Consultation History

<i>Date</i>	<i>Event</i>
May 29, 2002	The Forest Service initiated formal consultation on the effects of the APS Right-of-Way Clearing Project on the MSO.
June 11, 2002	We acknowledged your request for formal consultation.
August 14, 2002	The Forest Service provided answers to questions regarding project.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

Arizona Public Service needs to maintain a 21 kilovolt (KV) powerline right-of-way on the Mogollon Rim Ranger District, Coconino National Forest. Arizona Public Service has not maintained this corridor since the powerline was constructed and, as a result, tree density under and adjacent to the powerline poses a potential fire hazard.

The project area begins where the powerline crosses Forest Road 300, approximately twelve miles east of Highway 87 (T12N, R10E, Section 1) and runs along the existing right-of-way corridor for the 21 KV distribution line. The line runs primarily north and south along Forest Road 123. The line then crosses Blue Ridge Reservoir, following Forest Roads 138 and 138B, eventually reaching the Blue Ridge Ranger Station. At that point the line crosses State Highway 87 and continues on to several communities. The total project area encompasses approximately 895 acres.

The APS work crew will consist of approximately five people. The crew will cut trees with chainsaws, chip the slash, and broadcast the material. Arizona Public Service proposes to remove all trees growing underneath the powerline. In addition, trees growing adjacent to the powerline (within 15 feet on either side) that do not have adequate clearance or are considered hazardous (e.g., trees with dead or forked tops) will also be removed. Only ponderosa pine (*Pinus ponderosa*) trees will be removed. Nineteen large ponderosa pines located outside of the 15 foot powerline corridor, ranging from 14 to 29 inches diameter at breast height (DBH), will also be removed. Sixteen of the trees are live and three are snags. Three of these large trees occur within MSO protected activity centers (PACs).

Proposed Conservation Measures

Tree removal will occur only during the non-breeding season (1 September through 28 February) to minimize disturbance to MSO. The Forest Service established one-hundred acre “no treatment” buffers around known nest locations as recommended in the Recovery Plan for the Mexican Spotted Owl (Recovery Plan) (USDI 1995). There will be no activity within these buffer zones. The Forest Service also delineated a “potential” nest buffer for the Aqueduct PAC (#040734) based on the location of two nighttime audio responses and the most suitable habitat within the PAC. If monitoring during the 2002 breeding season locates a nest or roost site, a new 100-acre buffer zone will be established.

STATUS OF THE SPECIES

The MSO was listed as a threatened species in 1993 (USDI 1993). The primary threats to the species were cited as even-aged timber harvest and the threat of catastrophic wildfire, although grazing, recreation, and other land uses were also mentioned as possible factors influencing the MSO population. The Fish and Wildlife Service appointed the Mexican Spotted Owl Recovery Team in 1993, which produced the Recovery Plan for the Mexican Spotted Owl in 1995.

A detailed account of the taxonomy, biology, and reproductive characteristics of the MSO is found in the Final Rule listing the MSO as a threatened species (USDI 1993) and in the Recovery Plan (USDI 1995). The information provided in those documents is included herein by reference. Although the MSO’s entire range covers a broad area of the southwestern United States and Mexico, the MSO does not occur uniformly throughout its range. Instead, it occurs in disjunct localities that correspond to isolated forested mountain systems, canyons, and, in some cases, steep, rocky canyon lands. Surveys have revealed that the species has an affinity for older, well-structured forest, and the species is known to inhabit a physically diverse landscape in the southwestern United States and Mexico.

A reliable estimate of the numbers of owls throughout its entire range is not currently available (USDI 1995) and the quality and quantity of information regarding numbers of MSO vary by source. USDI (1991) reported a total of 2,160 owls throughout the United States. Fletcher (1990) calculated that 2,074 owls existed in Arizona and New Mexico. However, Ganey *et al.* (2000) estimates approximately $2,950 \pm 1,067$ (SE) MSOs in the Upper Gila Mountains RU alone.

The primary administrator of lands supporting the MSO in the United States is the Forest Service. Most owls have been found within Forest Service Region 3 (including 11 National Forests in Arizona and New Mexico). Forest Service Regions 2 and 4 (including 2 National Forests in Colorado and 3 in Utah) support fewer owls. According to the Recovery Plan, 91% of MSO known to exist in the United States between 1990 and 1993 occurred on lands administered by the Forest Service.

The U.S. range of the MSO has been divided into six recovery units (RU), as discussed in the Recovery Plan. The Recovery Plan reports an estimate of owl sites for 1990-1993. At that time, the greatest concentration of known owl sites in the United States occurred in the Upper Gila Mountains RU (55.9%), in which this project is located. Similarly, the Forest Service reported a total of approximately 935 protected activity centers (PACs) established on National Forest lands in the Southwestern Region, with 542 PACs (58%) in the Upper Gila Mountain RU (USDA Forest Service, Southwestern Region, February 28, 2001).

The Upper Gila Mountains 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 Mountain north and west 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). Most 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 also support MSOs.

The Upper Gila Mountains RU consists of pinyon/juniper woodland, ponderosa pine/mixed conifer forest, some spruce/fir forest, and deciduous riparian forest in mid- and lower-elevation canyon habitat. Climate is characterized by cold winters and over half the precipitation falls during the growing season. Much of the mature stand component on the gentle slopes surrounding the canyons had been partially or completely harvested prior to the species' listing as threatened in 1993; however, MSO nesting habitat remains in steeper areas. MSO 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, and canyons with varying degrees of forest cover (Ganey and Balda 1989, USDI 1995). Owls also nest and roost in ponderosa pine-Gambel oak forest, where they are typically found in stands containing well-developed understories of Gambel oak (USDI 1995).

In 1996, we issued a biological opinion on Forest Service Region 3's adoption of the Recovery Plan recommendations through an amendment of their Forest Plans. In this non-jeopardy biological opinion, we anticipated that approximately 151 PACs would be affected by activities that would result in incidental take of MSOs, with 92 of those PACs located in the Upper Gila Mountains RU. To date, consultation on individual actions under the amended Forest Plans have resulted in 111 PACs adversely affected, with 58 of those in the Upper Gila Mountains RU.

In addition to actions proposed by the Forest Service, Region 3, we have also reviewed the impacts of actions proposed by the Bureau of Indian Affairs, Department of Defense (including Air Force, Army, and Navy), Department of Energy, National Park Service, and Federal Highway Administration. These proposals have included timber sales, road construction, fire/ecosystem management projects (including prescribed natural and management ignited

fires), livestock grazing, recreation activities, utility corridors, military and sightseeing overflights, and other activities. Only one of these projects (release of site-specific owl location information) has resulted in a biological opinion that the proposed action would likely jeopardize the continued existence of the MSO. In total, we have anticipated that approximately 271 PACs would be adversely impacted by Federal actions, with 119 of those in the Upper Gila Mountain RU.

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 from which to assess the effects of the action now under consultation.

A. Status of the species within the action area

The proposed project area has been surveyed at least twice for MSO between 1990 and 2001, and includes protected and foraging habitat as defined in the Recovery Plan. The powerline transects three PACs within the project area: Aqueduct (#040734), Rock Crossing (#040712), and Blue Ridge (#040705). There is no additional protected or restricted habitat within the project area and the majority of the project encompasses even-aged, pure pine stands.

The Aqueduct PAC was first designated in 1999 following two nighttime detections of a female owl. The Rock Crossing PAC was located in 1989 and the pair has successfully fledged young seven times (1990, 1991, 1992, 1993, 1997, 1998, 1999). The Blue Ridge PAC was first located in 1993 and has successfully fledged young at least twice (1993, 1999). One-hundred acre core (nest) areas have been designated for each PAC. Though a nest tree or roost has never been located in the Aqueduct PAC, the Forest Service designated an area of potential nesting habitat within the PAC based on the nighttime detections. We support your effort to protect the best nesting and roosting habitat within the PAC, but based on Ward and Salas (2000) the delineation of a nest/roost core can only be based on a nest location, location of young-of-the-year, or daytime roost locations in at least two different years of owls of any age. Therefore, based on survey information to date, there is no identified means to accurately determine the 100-acre nest buffer for the Aqueduct PAC. The Forest Service will informally monitor the Aqueduct PAC during the 2002 breeding season.

B. Factors affecting species' environment within the action area

Actions within the project area that affect MSO include both domestic and wild ungulate grazing, recreation, and fuel reduction treatments. These activities have the potential to reduce the quality of MSO nesting, roosting, and foraging habitat, and may cause disturbance during the breeding season. The Aqueduct and Rock Crossing PACs are located within the Buck Springs Range Allotment. Livestock grazing has occurred and is planned within these PACs and elk

populations are thought to have a large effect on the availability of grass cover for prey species. Under the proposed management plan for the Buck Springs Allotment, livestock will have access to approximately 100% of the Aqueduct PAC and 20% of the Rock Crossing PAC every other year during the breeding season.

In addition, recreation impacts are increasing on the Mogollon Rim Ranger District (District) and at Blue Ridge Reservoir, especially in meadow and riparian areas. The District owl survey crews report that owls in heavily used recreation areas are much more erratic in their movement patterns and behavior. This referenced information is based on observations of the Rock Crossing PAC, which is located near a heavily used boat ramp on Blue Ridge Reservoir. The Aqueduct PAC and Blue Ridge PACs are also impacted by recreation. The Aqueduct PAC contains a portion of the popular Fred Haught Trail and the Blue Ridge PAC encompasses the Blue Ridge Campground. Fuels reduction treatments, though critical to reducing the risk of catastrophic wildfire, and watershed health projects planned within the area may also have short-term adverse effects to MSO through habitat modification and disturbance.

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.

The proposed action will result in the clearing of trees for a width of approximately 30-feet under and around the powerline. This will result in the disturbance of approximately 127 acres of habitat within three MSO PACs, no restricted habitat, and 768 acres of other forest and woodland habitat. In order to minimize disturbance to nesting owls, tree removal will occur outside the MSO breeding season (March 1 to August 31).

The following table is a summary of the estimated acres and number and size of ponderosa pine trees to be removed within each PAC.

Table 2. The estimated number and size of trees to be removed within PACs.

PAC Name	Acres in PAC	Tree Size (measured in inches at DBH)			
		< 9	9 to 18	18 to 24	>24
Aqueduct (#040734)	70	2,600	20	2	1
Rock Crossing (#040712)	7	250	15	0	0
Blue Ridge (#040705)	50	50	5	0	0

The project will remove approximately 43 trees greater than nine inches DBH from three PACs. Cutting trees and snags within MSO PACs greater than nine inches DBH is inconsistent with the desired management and direction provided in the Recovery Plan. The proposed action also states that all of these trees will be chipped; therefore, MSO prey habitat will not be enhanced through the addition of large downed logs. However, there is potential for the created openings along the powerline to increase grass, forb, and shrub production, which may improve habitat conditions for some MSO prey species. The action is also consistent with discussion in the Recovery Plan emphasizing the need to reduce the risks of catastrophic fire within and adjacent to PACs. By removing the trees immediately adjacent to and below the powerline, APS will reduce the chance of the powerline igniting a tree and a fire burning habitat within and adjacent to the Aqueduct, Rock Crossing, and Blue Ridge PACs.

No tree will be removed from the 100-acre nest buffers in the Rock Crossing and Blue Ridge PACs. As stated above, nest sites are known for the Rock Crossing and Blue Ridge PACs, but there are no known nest or roost sites for the Aqueduct PAC. The Aqueduct PAC contains the majority (>90%) of the trees APS will cut in MSO PACs. The powerline traverses this PAC along a ridge in the northern portion of the PAC. The ridge is dominated by ponderosa pine and is considered to be low quality MSO habitat. High-quality nesting and roosting habitat in this PAC is limited to the canyon located immediately southeast of the powerline.

In summary, we believe that MSO associated with the Aqueduct, Rock Crossing, and Blue Ridge PACs could be adversely affected through impacts to protected habitat from clearing work along the powerline corridor and the removal of large trees and snags. However, conservation measures proposed by the Forest Service should minimize the adverse affects.

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 to be 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. Future actions within the action area that are reasonably certain to occur include urban growth and development, recreation, road construction, fuels-reduction treatments, livestock grazing, and other associated actions. These actions have the potential to reduce the quality of MSO nesting, roosting, and foraging habitat, cause disturbance to breeding MSO, and would contribute as cumulative effects to the proposed action.

CONCLUSION

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. After reviewing the current status of the MSO, the environmental baseline for the action area, the effects of the proposed APS Right-of-Way Clearing Project, and the cumulative effects, it is our biological opinion that the APS Right-of-Way Clearing Project, as proposed, is not likely to jeopardize the continued existence of the MSO. We make this finding because the proposed action will not modify habitat within the Aqueduct, Rock Crossing, and Blue Ridge PACs or in restricted pine-oak habitat such that the habitat no longer supports MSO, and will reduce the risk of a fire starting in the powerline corridor and burning MSO habitat.

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 defined under regulations at 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 at 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 Fish and Wildlife Service does not anticipate that the proposed action will incidentally take any Mexican spotted owls. We believe this for the following reasons:

1. There will be no tree removal or maintenance activities during the MSO breeding season. This will minimize disturbance impacts to the MSO;
2. There will be no tree removal from the 100-acre nest buffers delineated for the Rock Crossing and Blue Ridge PACs. Though current survey information for the Aqueduct PAC is insufficient to delineate a nest buffer, the area of tree removal within the PAC is in on a ridge in pure pine and is not considered nesting or roosting habitat;
3. The removal of 23 trees greater than nine inches DBH from the Aqueduct PAC, 15 trees greater than nine inches DBH from the Rock Crossing PAC, and five trees greater than nine inches DBH from the Blue Ridge PAC, will not reduce the overall habitat quality within these PACs; and
4. Only ponderosa pine trees will be removed. No oak, Douglas-fir, or white fir will be harvested.

The Fish and Wildlife Service will not refer the incidental take of any migratory bird or bald eagle for prosecution under the Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. §§ 703-712), or the Bald and Golden Eagle Protection Act of 1940, as amended (16 U.S.C. §§ 668-668d).

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. We recommend that the Forest Service request a programmatic consultation to address all maintenance needs for existing powerlines on the Coconino National Forest. This would assist the Forest Service and the Fish and Wildlife Service in completing consultation in a timely manner and avoid the need for expedited consultations in the future.
2. We recommend that the Forest Service continue to monitor the Aqueduct PAC (#040734) in order to delineate a 100-acre nest buffer area.

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

REINITIATION NOTICE

This concludes formal consultation on the action 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.

We appreciate your efforts to identify and minimize effects to threatened and endangered species in development of the APS Right-of-Way Clearing Project. If you have any questions regarding this consultation, please contact Shaula Hedwall (928) 226-1811 or Steve Spangle (928) 226-0250 of our Flagstaff Suboffice. Please refer to the consultation number, 2-21-02-F-197, in future correspondence concerning this project.

Sincerely,

/s/ Brian Hanson
Acting Field Supervisor

cc: Regional Director, U.S. Fish and Wildlife Service, Albuquerque, NM (ARD-ES)
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Forest Biologist, Coconino National Forest, Flagstaff, AZ (Attn: Cecelia Overby)
District Ranger, Mogollon Rim Ranger District, Happy Jack, AZ (Attn: Larry Sears)
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John Kennedy, Habitat Branch, Arizona Game and Fish Department, Phoenix, AZ

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