

BIOLOGICAL AND CONFERENCE OPINION SUMMARY**Blue Ridge Urban Interface Project**

- Date of opinion:** January 25, 2001
- Action agency:** U.S. Forest Service, Coconino National Forest, Blue Ridge and Long Valley Ranger Districts
- Project:** Blue Ridge Urban Interface.
- Location:** Coconino County
- Listed species affected:** Mexican spotted owl (*Strix occidentalis lucida*) and its proposed critical habitat, and bald eagle (*Haliaeetus leucocephalus*).
- Biological Opinion:** Non-jeopardy for the Mexican spotted owl. Concurrence with “may effect, not likely to adversely affect” for the bald eagle.

Incidental take statement:

Level of take anticipated: The Service does not anticipate incidental take as a result of the proposed action. Exceeding this level may require reinitiation of formal consultation.

Reasonable and prudent measures: No reasonable and prudent measures are provided.

Terms and conditions: No terms and conditions are provided.

Conservation recommendations: Four conservation recommendations are provided. Implementation of conservation recommendations is discretionary.

United States Department of the Interior

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AESO/ES
2-21-00-F-373

January 25, 2001

Mr. Larry G. Sears
District Ranger
Blue Ridge and Long Valley Ranger Districts
HC 31 Box 300
Happy Jack, Arizona 86024-9714

Dear Mr. Sears:

This document transmits the U.S. Fish and Wildlife Service's (Service) biological and conference opinion, based on our review of the proposed Blue Ridge Urban Interface Project located on the Blue Ridge Ranger District and its effect on the Mexican spotted owl (*Strix occidentalis lucida*) (MSO) and its proposed critical habitat in accordance with section 7 of the Endangered Species Act (Act) of 1973, as amended. Your July 13, 2000, request for formal consultation was received on July 17, 2000. Your October 20, 2000, request for formal conferencing on proposed critical habitat for the MSO was received on October 20, 2000. Critical habitat for the MSO is expected to be published soon; however, it will not become effective until 30 days after publication.

These biological and conference opinions are based on information provided in the October 1999 Biological Assessment and Evaluation (BAE), the May 1999 Environmental Assessment for the Blue Ridge Urban Interface Project, information indicating a change in the proposed action provided in the July 13, 2000, letter, from the Forest Service, the July 10, 2000, Burning Parameters for PACs and Target Threshold, the October 17, 2000, Addendum Number 2 for the BAE, telephone conversations and electronic mail messages between Michele James of the Service and Mary Ann Benoit of the Forest Service, and Bruce Palmer of the Service and Larry Sears of the Forest Service, field investigations, and other sources of information.

The Forest Service determined that the proposed project "may affect, is not likely to adversely affect" the bald eagle (*Haliaeetus leucocephalus*) (Forest Service, in litt., October 12, 1999). If bald eagle winter roosts are present in and adjacent to the project area, project activities such as tree removal and prescribed fire may be detrimental to eagles using those sites. Prescribed fire

has the potential to kill large, individual isolated trees. These treatments in combination with the timing of the treatments, have the potential to affect wintering bald eagles.

The Forest Service indicates that the following conservation measure will be implemented that will reduce potential risks to bald eagles if found to be roosting in or adjacent to the project area (Forest Service, in litt., April 5, 2000):

1. In the event that a wintering bald eagle roost is located within 1/4 mile of proposed burning and/or thinning, these activities will not occur between October 15 and March 15, or until eagles are no longer using the roost, based on monitoring.

The Service concurs with the determination that the Blue Ridge Urban Interface Project “may affect, but is not likely to adversely affect” the bald eagle given the implementation of the above conservation measure. The Service understands that application of the above conservation measure means human activity will be restricted in the area of a roost site between October 15 and March 15. If any thinning or burning is scheduled to occur in this buffer area, we recommend contacting the Service and discussing re-initiation.

The Forest Service also determined the project would have "no effect" on the southwestern willow flycatcher (*Empidonax traillii extimus*), black-footed ferret (*Mustela nigripes*), and the Little Colorado spinedace (*Lepidomeda vittata*) (Forest Service, in litt., October 12, 1999). These species will not be addressed further in this consultation.

CONSULTATION HISTORY

Informal consultation on this project began in October 1997, when the Service and Forest Service conducted a field visit to the Blue Ridge MSO protected activity center (PAC) and the area south of the Blue Ridge Ranger District to discuss the proposed Blue Ridge Urban Interface Project. The discussion during this site visit involved proposed burning within the PAC and ways to minimize effects to the species with a focus on implementing the MSO Recovery Plan.

On October 12, 1999, the Forest Service requested concurrence with determinations of “may affect, not likely to adversely effect” for the Mexican spotted owl and the bald eagle.

The Service received a copy of the BAE and the Environmental Assessment for the Blue Ridge Urban Interface Project with the October 12, 1999 letter. Service biologist Michele James corresponded informally with Forest Service biologist Mary Ann Benoit regarding the project, and provided an electronic mail list of questions to Ms. Benoit on March 22, 2000, regarding clarifications and additional information needed for the BAE. Specifically, this list of questions involved effects of the proposed prescribed burning on the MSO and its habitat, the lack of an adequate description of the proposed burning within MSO habitat (i.e. a prescription or burn parameters), and the need to apply the recommendations of the Recovery Plan in order for the Service to determine effects and concur with a “may affect, not likely to adversely affect”

determination for the MSO. This informal communication from the Service on March 22, 2000, suggested that the Forest Service consider entering into formal consultation because the project, as proposed at that time, could not avoid adverse impacts to the MSO.

Ms. Benoit of the Forest Service responded to the Service's March 22, 2000, questions and comments on April 19, 2000. All questions were addressed, except a burning prescription was not provided. The Service communicated to the Forest Service via numerous telephone conversations that we would not be able to concur with a determination of "may affect, not likely to adversely affect" the MSO without some of the details provided in a burning prescription. The four elements considered necessary to conduct an adequate analysis of effects were provided in the March 22, 2000, electronic mail message from the Service to the Forest Service. On June 1, 2000, the District Ranger spoke with Bruce Palmer of the Service regarding the need for a prescription, the Forest Service's desire to complete consultation as soon as possible, and options for consultation. On June 15, 2000, the Service received a copy of a draft burn prescription for this project which addressed the four necessary elements. On June 29, 2000, the Service spoke to the Forest Service biologist regarding the draft prescription. During this conversation, the Service indicated that we would not be able to concur with the Forest Service determination because of the effects of fire on MSO habitat that would result with implementation of the draft prescription.

A meeting was held between Service and Forest Service biologists on July 7, 2000, to resolve outstanding issues involving the burning prescription and the Service's concerns regarding effects to MSO habitat, and to determine the appropriate level of consultation. The Forest Service requested formal consultation on the MSO in a letter dated July 13, 2000, and received by this office on July 17, 2000. In the July 13, 2000, letter the Forest Service states that the District Ranger made the decision to split the original project into two separate decisions. The project for which formal consultation was requested consisted of that portion of the original Blue Ridge Urban Interface project that treats only protected and restricted MSO habitat. The other project would cover 4,083 acres of thinning, treatment of slash, and prescribed burning within areas of unrestricted MSO habitat. The Forest Service determined that this latter portion of the project located in unrestricted MSO habitat would have "no effect" on the MSO or its habitat, the bald eagle or its habitat, the black-footed ferret, the southwestern willow flycatcher, or the Little Colorado spinedace. As the Forest Service has determined that proposed work on these 4,083 acres would result in "no effect" to Federally listed species, the Service will not comment on this portion of the project.

The Service acknowledged receipt of the request for formal consultation in a letter dated October 17, 2000. In this letter, the Service indicated that critical habitat was proposed for the MSO on July 21, 2000 (FR 65:45336), and that consultation may be necessary. In October, the Service discussed the option of providing a conference opinion with the Forest Service and discussed information requirements regarding effects to proposed critical habitat. A draft BAE addendum addressing proposed critical habitat was sent to the Service in early October for review. The Service provided verbal comments to the Forest Service on October 13, 2000. The Forest

Service requested formal conferencing on proposed MSO critical habitat in a letter dated October 20, 2000, which was received by the Service on October 20, 2000. The Forest Service determined that the proposed Blue Ridge Urban Interface project "may affect, is likely to adversely affect" proposed MSO critical habitat. This need for conferencing contributed to the delay in issuing this biological opinion and conference.

BIOLOGICAL AND CONFERENCE OPINION

DESCRIPTION OF THE PROPOSED ACTION

The Blue Ridge Urban Interface analysis area is located approximately 65 miles southeast of Flagstaff, Arizona, and 40 miles south of Winslow, Arizona. The area occupies the center of the Blue Ridge Ranger District (Townships 14-15, Ranges 11-12, Gila and Salt River Meridian), Coconino County, Arizona. The analysis area includes 31,475 acres of land, of which 5,062 acres is privately owned, and 26,413 acres is managed by the Coconino National Forest. Jack's Canyon is the boundary on the northwest corner, East Clear Creek the boundary on the southwest corner. Highway 87 and Forest Road 751 and 751B form the southeast boundary.

The Forest Service indicates that the purpose of the proposed Blue Ridge Urban Interface project is to reduce dead fuel loadings to a level that is manageable under high fire indices and during an average year for wildfires. The project was developed to protect capital improvements in the vicinity of the Blue Ridge Ranger Station and to meet national direction to protect urban interface areas.

On July 10, 2000, District Ranger Larry Sears split the project into two decisions. The portion of the Blue Ridge Urban Interface Project considered by the Service in this biological opinion consists of 4,110 acres of protected habitat and 12,447 acres of restricted habitat for the MSO, as described in Table 1 (Mary Ann Benoit, Blue Ridge Ranger District, pers. comm.). Treatments consisting of thinning and burning are proposed on 64 percent of this acreage, or 10,652 acres (1,285 acres of protected habitat and 9,367 acres of restricted habitat). A total of 162 acres of the Blue Ridge PAC (number 040705) will be pre-commercially thinned and 481 acres will be treated with prescribed fire in blocks that do not exceed 200 acres in size (Mary Ann Benoit, Long Valley Ranger District, pers. comm.).

Pre-treatment and post-treatment microhabitat monitoring will be conducted in all protected and restricted habitat within this project area. The Forest Service also indicates they will include the following additional conservation measure in the proposed action (Mary Ann Benoit, Long Valley Ranger District, pers. comm.). If any of the protected and restricted habitat in the analysis area (last surveyed for MSO in 1999) is not treated by March 2001, an additional year of follow-up MSO surveys consisting of four visits will be conducted to protocol prior to proposed activities.

Table 1. Treatment Acres in MSO Habitat (PCT= pre-commercial thinning) (U.S. Forest Service, in litt. January 4, 2001).

Treatment Types	Protected Habitat	Restricted Habitat	*Target/Threshold Habitat
PCT, lop, prune, burn	32	1242	0
Prescribed Burn	983	1572	143
PCT, lop, burn	270	6553	966
Total Treatment Acres	1285	9367	1109
Total Acres in Analysis Area	4110	12447	1311

* Target/Threshold acres are included in Restricted Habitat acres as well

The Forest Service describes the proposed treatments as falling into two distinct categories: Treatments located proximate to private property (within 1/8 to 1/4 mile of private property), and; treatments located away from private property (more than 1/8 to 1/4 mile from private property).

Pre-commercial Thinning and Slash Treatment in Areas Adjacent to Private Property

Treatments proximate to private property include 800 acres of pre-commercial thinning, lopping and burning within MSO restricted habitat. The proposed action includes 100 acres of the same treatments within target/threshold habitat. No protected habitat is located proximate to private lands (Mary Ann Benoit, Long Valley Ranger District, pers. comm.). Specifics of the proposed treatments follow.

Pre-commercial Thinning

Pre-commercial thinning areas selected are 1/4 mile from the south or west boundaries or within 1/8 mile of the eastern boundaries of developed private properties. Treatments include the following:

Ponderosa pine trees will be thinned up to 9 inches diameter at breast height (dbh) with a minimum of 15 foot spacing between tree boles and/or at least 3 feet between crown edges.

Ponderosa pine trees of all sizes will be included in determining spacing between the leave trees.

Gambel oak will be thinned up to 5 inches diameter at root crown (drc). Spacing will be 5 feet between Gambel oak trees with all Gambel oaks considered when determining spacing.

Stump heights will be 4 inches or less for all cut trees within 2 chains (132 feet) of private property boundaries. Stump height will be 6 inches or less beyond the distance of 2 chains.

There will be no pre-commercial thinning, slash treatment or pruning on slopes that are 20% or greater.

Pruning

All trees will be pruned within 2 chains (132 feet) of private property in areas that are being pre-commercially thinned.

Ponderosa pine, pinyon pine, alligator, and shaggy bark juniper trees up to 9 inches dbh will be pruned of all live and dead limbs as high as 4 feet off the ground.

Trees will not be pruned higher than 1/2 of the total tree height.

Slash Treatment

All pre-commercial thinning and pruning slash within 2 chains (132 feet) of private property will be removed or chipped where practical. If it is not practical to remove or chip the slash, it will be lopped to within one foot of the ground, and bucked into lengths of 6 feet or less.

Pruning slash will be pulled at least 5 feet away from the donor tree before lopping.

Pre-commercial thinning slash located farther than two chains from private property will be lopped to within two feet of the ground and bucked into lengths of 6 feet or less.

Pre-commercial Thinning and Slash Treatment in Areas Away from Private Property

Treatments away from private property include the majority of the proposed treatment acres, including pre-commercial thinning on 162 acres of the Blue Ridge PAC and 481 acres of prescribed fire, as described in Table 2.

Table 2. Treatment Acres Not Adjacent to Private Property (PCT= pre-commercial thinning) (U.S. Forest Service, in litt., January 4, 2001).

Treatment Types	Protected Habitat	Restricted Habitat	*Target/Threshold Habitat
PCT, lop, prune, burn	32	1242	0
Prescribed Burn	983	1572	143
PCT, lop, burn	270	5753	866
Total Treatment Acres	1285	8567	1009

Pre-commercial Thinning.

There are two prescriptions for pre-commercial thinning in areas away from private property. There is a general prescription, and a prescription for areas being managed with a wildlife emphasis (existing and developing old growth, which includes target/threshold stands, PACs for Mexican spotted owls, and wildlife travel corridors).

General Prescription:

Ponderosa pine trees will be the only species thinned.

Trees up to 9 inches dbh will be thinned to a minimum spacing of 15 feet between tree boles and/or at least 3 feet between crown edges.

All ponderosa pine trees regardless of size will be included in determining spacing between leave trees.

Stump heights will be 6 inches or less.

All slash will be lopped to 2 feet or less and bucked into lengths of 6 feet or less.

Areas With a Wildlife Emphasis:

One untreated clump of trees will be left per acre (if they exist). The maximum size of the untreated clumps will be 66 feet in diameter.

Areas identified by the Wildlife Biologist as wildlife travel corridors will be deferred from treatment. The width of these areas will be approximately 150 feet and follow logical boundaries such as terrain breaks or roads.

Prescribed Burning.

To compensate for the additional fuels created by pre-commercial thinning, areas of concern may be burned prior to pre-commercial thinning and again after pre-commercial thinning is completed. After prescribed burning is completed, the analysis area will become part of a maintenance program with re-entry for prescribed burning occurring every 5-7 years.

A cool, low intensity ground fire will be used to reduce fuel loadings to within an average of 5 to 7 tons per acre overall. Burning will be done predominately in the fall, but some winter and spring burning might take place.

Smoke will be monitored on a daily basis and air quality will be at levels that are within concurrence limits of the Arizona Department of Environmental Quality. Smoke conditions around developed parcels of private property will be monitored to ensure that intense levels of smoke do not persist for more than 48 hours. If unacceptable levels of smoke do persist, broadcast burning will be curtailed until favorable atmospheric conditions develop.

Conservation Measures

Prescriptions and Burn Plans will be modified for areas identified as existing and developing old growth, and within Mexican spotted owl PACs. Modifications will include the following:

Prescribed burning will be conducted during the period of September 1 to December 31. This will avoid disturbance to Mexican spotted owls and other raptors during their breeding and nesting seasons.

Prescriptions and burn plans will emphasize a low intensity fire that does not significantly reduce the canopy closure or stand structure. Some night time or early morning burns might be necessary to accomplish this objective.

Special emphasis will be placed on maintaining the majority of important wildlife habitat components as described in the Mexican Spotted Owl Recovery Plan. These include snags, large down logs, large ponderosa pines, and large Gambel oaks.

The Forest Service provided "Burning Parameters for PACs and Target Threshold" for the Blue Ridge Urban Interface (July 10, 2000). These parameters are:

Objectives

- a. Retain 90% snags >12 inches dbh
- b. Retain 90% of large dead down logs (>12 inches diameter)/acre
- c. 95% mature ponderosa pines >18 inches dbh and large Gambel oaks >12 inches drc will be retained
- d. Meet the conditions as stated in this definition of low intensity fire:
Low Intensity Fire: Low soil heating, light ground char, litter is scorched, charred or completely consumed yet duff is left mostly intact. Mineral soil is not affected. Slight thinning of the understory. Overall stand structure does not change substantially. A 10% loss of canopy; openings are usually less than 1/4-acre in size; up to 5% loss of trees 18 inches diameter and larger, while snags in a range of sizes may be created on up to 10%

of the area. Meet the retention of logs and snags as described in A and B; unburned areas exist, and

- e. Retain 75% of small oaks (5 inches drc or greater, up to 12" drc).

The burning parameters that follow are designed to meet these objectives. These are guidelines, with the understanding that some patches under certain conditions may not meet these guidelines one hundred percent. A detailed burn plan will be created based on existing site conditions at the time burning will take place. Techniques to accomplish the objectives such as constructing hand line, application of foam water, or gel, or avoidance will be used in PAC's, and burning will not occur unless 1000 hour fuel moistures are at or above 15 percent. Test burn plots and visual monitoring will be conducted in areas with similar fuels and conditions before burning in PACs to test if objectives can be met. The plan is expected to be within the following ranges.

Burn when the burning window is met, outside of the breeding season;

Relative humidity between 15-45 percent;

Flame lengths range from to 4 - 24 inches;

Scorch heights average 6-8 feet;

Fuel Moistures:

1 hour fuels > 3%

1000 hour fuels >15%

If at any time it is determined that the treatment objectives cannot be met, the prescribed burn will be postponed or cancelled.

Conservation Measures:

Protect large trees (≥ 18 inches dbh), large logs (≥ 12 inches diameter), and small oaks (5-12" drc) through lining, foaming, wetting, gelling, pulling away fuels, avoidance, or other techniques.

Burning will not take place in PACs and threshold habitat, until monitoring indicates that the above objectives can be met.

Monitoring is key to the success of this plan. Test burn plots are ignited immediately prior to beginning a burn project and are generally about 1-2 acres in size. They demonstrate to the burn boss what the flame lengths and rate of spread of the fire are likely to be. An experienced burn boss may get an indication of how large logs are burning and the amount of consumption of logs and snags, but will not be able to conclusively predict their loss. Because of this, visual monitoring is continued throughout the burning of a plot, and will be conducted extensively after a block is completed. This monitoring will review the burn for compliance with all objectives, and will occur before the ignition of additional blocks. These reviews will be documented for the project record.

If objectives are met, burning may continue, and can be implemented in PACs and threshold habitat.

If objectives are not met, prescriptions will be reviewed and adjusted, and mitigation measures may be added before further burning is initiated. Broadcast burning can occur in restricted and unrestricted habitat if the burn boss predicts that new mitigation measures or adjusted prescriptions will be successful in meeting the objectives.

Broadcast burning will only occur in Mexican spotted owl PACs or existing threshold habitat, when test burning and visual monitoring of an additional burn block indicate that objectives are met.

Burn blocks within the Blue Ridge MSO PAC will not be in excess of 200 acres. A total of 481 acres of this PAC are proposed for prescribed burning. Treatment in this PAC will occur only once. Treatments may occur over a 10-year time span. The PAC may be treated all at one time or in portions depending on weather conditions and whether objectives can be met (Mary Ann Benoit, Long Valley Ranger District, pers. comm.).

STATUS OF THE SPECIES

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 Final

MSO 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, much remains unknown about the species' distribution and ecology. This is especially true in Mexico where much of the MSO's range has not been surveyed. The MSO currently occupies a broad geographic area but does not occur uniformly throughout its range. Instead, it occurs in disjunct localities that correspond to forested isolated mountain systems, canyons, and in some cases, steep, rocky canyon lands. The primary administrator of lands supporting MSO in the United States is the U.S. 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.

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. The range of the MSO has been divided into six Recovery Units (RUs), as discussed in the MSO Recovery Plan (USDI 1995). The Recovery Plan reports an estimate of owl sites. 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. This information was reported for 1990-1993. The greatest known concentration of known owl sites in the United States occurs in the Upper Gila Mountains RU (55.9%), followed by the Basin and Range-East RU (16.0%), Basin and Range-West RU (13.6%), Colorado Plateau RU (8.2%), Southern Rocky Mountain-New Mexico RU (4.5%), and Southern Rocky Mountain-Colorado RU (1.8%). Owl surveys conducted from 1990 through 1993 indicate that the species persists in most locations reported prior to 1989.

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.

At the end of the 1995 field season, the Forest Service reported a total of 866 management territories (MTs) established in locations where at least a single MSO had been identified (U.S. Forest Service, *in litt.* November 9, 1995). The information provided at that time also included a summary of territories and acres of suitable habitat in each RU. Subsequently, a summary of all territory and monitoring data for the 1995 field season on Forest Service lands was provided to the Service on January 22, 1996. There were minor discrepancies in the number of MTs reported in the November and January data. For the purposes of this analysis we are using the more recent information.

From 1991 through 1997, Gutierrez *et al.* (1997, 1998) studied the demographic characteristics of two Mexican spotted owl populations in the Upper Gila Mountains Recovery Unit. The owl populations studied were located on the Coconino and Gila National Forests. Results of this several-year study have shown a decline in the population trend of MSOs within these areas. The

reason for the reported decline is unknown. According to Gutierrez *et al.* (1997), such a trend could be a result of: 1) density dependent responses to an increase over carrying capacities; 2) a response to some environmental factor; or 3) senescence. The latter (i.e. senescence) seems unlikely because there was also a negative linear trend in survival estimates for owls less than three years of age. Regarding carrying capacities, responses to density dependence are difficult to prove in the absence of removal or addition experiments. Environmental factors undoubtedly play a role in owl survival, either through weather events causing direct mortality or indirectly through availability of habitat or prey (Gutierrez *et al.* 1997). This study found that the ability of adult birds to survive successive years of poor environmental conditions may be low (Gutierrez *et al.* 1998).

The Forest Service has converted some MTs into PACs following the recommendations of the Draft MSO Recovery Plan released in March 1995. The completion of these conversions has typically been driven by project-level consultations with the Service and varies by National Forest.

The Blue Ridge Urban Interface Project is located within the Upper Gila Mountains RU as defined by the MSO 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 Mountain 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.

Proposed Critical Habitat

On July 21, 2000, the Service proposed designation of approximately 13.5 million acres of critical habitat for the MSO in Arizona, Colorado, New Mexico, and Utah, mostly on federal lands (FR 65:45336). In Arizona, over 4.6 million acres were proposed, with approximately 3.3 million acres managed by the U.S. Forest Service. The proposed areas are considered essential to the conservation of the species because they either currently support populations of the owl, or because they currently support the necessary habitat requirements for nesting, roosting, and foraging. Thus, the proposed critical habitat is limited to areas within the identified RUs that meet the definition of protected and restricted habitat, as described in the Recovery Plan (FR 65:45336). Final critical habitat is expected to be published soon, and it will become effective

30 days after publication.

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 to provide a platform to assess the effects of the action now under consultation.

Status of the Mexican Spotted Owl and its Proposed Critical Habitat in the Project Area

The Coconino National Forest had 174 known Protected Activity Centers in 1999. Thirty two of these occur on the Blue Ridge District. All or parts of ten Protected Activity Centers (5 percent of forest PACs) occur in the Blue Ridge Urban Interface project area. The project area is located entirely within a portion of proposed critical habitat unit (:CHU) UGM-10.

The Forest Service indicates that the entire analysis area has been surveyed at least twice for Mexican spotted owls. Inventory areas included Yellow Jacket, Hunter, Horse, Reservoir, and Jacks Canyon. Surveys occurred in 1992, 1993, 1994 and 1997. All restricted habitat was surveyed again in 1999. The Blue Ridge, Hunter, Little Springs, and Jack and Jill PACs were formally or informally monitored in 1999. The Blue PAC (number 040737; 623 acres) was established in 2000 based on the locations of a female sub-adult located between two established PACs.

The Upper Gila Mountains RU consists of deep forested drainages on the Mogollon Plateau. Vegetation generally 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 has been partially or completely harvested. Most of the forest habitat on steeper ground that may serve as MSO nesting habitat is in suitable condition. 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).

This RU contains the largest known concentration of MSO with approximately 55% of known MSO territories (USDI 1995). This RU is located near the center of the MSO'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 spotted owl population, the MSO

Recovery Team believes that the population in this RU could be uniquely important to the overall stability and persistence of the MSO 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, the Recovery Team believes 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 MSO's distribution within this RU, and the loss of habitat to support the local sub-populations, may compromise the recovery of the species.

The project area contains 4,110 acres of protected habitat and 12,447 acres of restricted habitat. Protected habitat occurs within existing PACs and on steep slopes, primarily of East Clear Creek, Blue Ridge, and Jacks Canyon. All mixed conifer in the analysis area is protected habitat. Restricted habitat is pine-oak. Unrestricted habitat occurs in ponderosa pine stands with limited oak, primarily in the north part of the analysis area and near Moqui Draw, meadows, and in pinyon-juniper stands of the eastern portion. Threshold conditions do not currently exist, and 1,311 acres (10 percent of restricted habitat) have been designated as target threshold habitat. The Forest Service indicates that grazing occurs on 100 percent of the Blue Ridge Urban Interface Project. The majority of the Blue Ridge PAC is fenced to exclude cattle because of the location of the campground. The only unfenced area includes 51 acres; this pasture (Moqui) is grazed every other year from June 1 - August 31 (Mary Ann Benoit, Blue Ridge Ranger District, pers. comm.).

Potential habitat may exist for two more PACs in Jack's Canyon, southwest of the Jack and Jill PAC. These unoccupied areas may provide the only suitable habitat for dispersing owls, as well as replacement habitat in case of catastrophic fire.

Past, present (ongoing), and future activities which have occurred or are occurring within the analysis area are listed in Table 3.

Table 3. Past and Present Federal Actions in the Analysis Area

Activity	When Occurred	Percent of Area	Comments
East Clear Creek Analysis	1996-1999	100%	No treatments identified yet.
East Blue Ridge 10K EA	1996	12%	Treatments - pre-commercial thin (205 Acres in 1995), prescribe burn (400 Acres in 1997) and (205 Acres in 1998)
Blue Ridge Urban Interface Demo Project	1997	1%	Treatments - pre-commercial thin (400 Acres in 1997-1998) prescribe burn (400 Acres in 1999)
Livestock Grazing	ongoing	100%	Affects mostly understory vegetation.

Fuelwood Gathering	ongoing	100%	Affects mostly snags (illegal harvest) and dead and down.
Dispersed Recreation	ongoing	100%	Affects localized soil conditions (compaction); visual quality (littering), wildlife.
Roads	ongoing	??%	Affects water quality, wildlife, and sediment transport.

A total of 227 projects have undergone formal consultation for the owl in Arizona and New Mexico. Of that aggregate, 86 projects resulted in a total anticipated incidental take of 199 owls plus an additional unknown number of owls. These consultations have primarily dealt with actions proposed by the Forest Service, Region 3, but have also addressed 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 overflights, and other construction activities.

The Service is committed to urban interface fire reduction and fully supports the proposed Blue Ridge Urban Interface Project. The MSO Recovery Plan (USDI 1995) recognizes catastrophic fire as the greatest threat to MSO habitat. Pre-commercial thinning and prescribed fire are extremely important management tools needed to enhance, and often to restore many of the ecosystem functions and processes. Reduction in habitat and various habitat-based threats have contributed to the listing of the MSO. The long-term benefits to the MSO of many land management actions may contribute, in the short-term, to certain adverse affects to the MSO. Projects with a prescribed fire component can fall into this category. Species such as the MSO, whose habitats have been reduced, degraded, or altered, may currently respond to fire differently than they did historically when fire occurred in a more natural setting. Therefore, it is important to address such concerns by minimizing, to the greatest extent practical, those short-term adverse affects, and move forward with proactive land management as fire is applied in efforts to restore ecosystem functions and community dynamics.

The MSO Recovery Plan (USDI 1995) encourages fire management programs which take an active role in fuels management and understand the ecological role of fire. The Recovery Plan also recognizes that catastrophic wildfire is one of the primary threats to MSO in the Upper Gila Mountains RU, where the Blue Ridge Urban Interface Project is located. Therefore, fire plays the dual role of being both potentially beneficial and catastrophic to the owl and its habitat. The Service stresses the need to apply adaptive management when using fire. Prescriptions that maintain key structural features of owl and small prey habitats should be developed and tested. These features include large trees, snags, logs, overstory, and hardwoods. Treatments to produce or maintain such habitat components must be assessed by monitoring to evaluate if treatment objectives were met in both the short and long term.

Wholesale use of fire without understanding or monitoring its effects on habitat may render these areas unusable by owls, and may also miss opportunities to improve our knowledge of fire effects on these habitats (Moir *et al.* 1995).

EFFECTS OF THE ACTION

The effects of the proposed action are divided into the following sections: Effects to MSO Habitat, Effects to Prey Species and Habitat, Long-term Benefits of Prescribed Fire, and Effectiveness of Proposed Conservation Measures.

MSO Habitat

MSO protected and restricted habitat will be effected by proposed pre-commercial thinning. Thinning of ponderosa pine trees less than or equal to 9 inches dbh in these habitat types is not expected to substantially change the overall stand structure. Thinning will decrease the amount of ladder fuels and raise the canopy level in treated stands. Because only trees ≤ 9 inches dbh will be removed, overall tree spacing will be variable resulting in small clumps of trees interspersed with openings. Thinning of trees ≤ 9 inches dbh in protected habitat follows the recommendations of the MSO recovery plan, and no thinning will take place in the 100-acre PAC buffer. Thinning of Gambel oak up to 5 inches drc will only occur in restricted and target threshold habitat located adjacent to private property. Thinning of small oak on 100 acres of target/threshold habitat is not expected to move these stands away from target conditions (May Ann Benoit, Blue Ridge Ranger District, pers. comm.).

The Forest Service proposes to use prescribed fire on 9,362 acres of restricted habitat within the Blue Ridge Urban Interface Project. Although some prescribed burning will take place prior to pre-commercial thinning, these areas have not yet been identified, nor have acres figures (Mary Ann Benoit, Blue Ridge Ranger District, pers. comm.). Burning prior to thinning is expected to reduce the fire intensity by minimizing the amount of additional slash on the ground. This proposal may result in an increase in mortality of large trees and Gambel oak, particularly those located in target/threshold stands. As supported by Bradley *et al.* (1992), we may see that ponderosa pine trees that are heavily infected by the dwarf mistletoe (*Arceuthobium campylopodum*) are more susceptible to fire-related mortality and crown scorch than uninfected or moderately infected trees. On some sites, ponderosa pine often forms two-storied stands that may be quite susceptible to crown fire. The tendency for regeneration of ponderosa pine to form dense understories, or "dog-hair" thickets, on such sites creates fuel ladders that can carry surface fires to the crowns of overstory trees (Bradley *et al.* 1992). The thinning effect of fire is therefore much more pronounced in dense stands than it is in more open and mature stands. Heavy accumulations of litter at the base of pole and sawtimber-sized ponderosa pine as well as Gambel oak increases the severity and duration of fire. Heavy fuel accumulations at the base of large ponderosa pine increases the probability of fire injury. Heavy litter accumulations may allow injury to tree roots, causing delayed mortality and often resulting in sterilization of soils (Bradley *et al.* 1992).

The Forest Service estimates that losses due to prescribed fire could include up to 5 percent of trees > 18 inches dbh, 10 percent of the canopy, and the creation of openings of up to 1/4 acre in size. Maintenance burning (scheduled to occur every 5-7 years) will take place in addition to the initial burning in both restricted habitat, target/threshold habitat, and protected habitat. The Forest Service has identified target/threshold habitat in stands designated as old growth or developing old growth, therefore these areas likely have higher fuel loadings (Mary Ann Benoit, Long Valley Ranger District, pers. comm.). The overall effect of multiple burns in restricted and protected habitat is unknown, but additional losses of large trees, oaks, and canopy will occur with each entry. The Forest Service expects losses of these components to decrease with each subsequent entry from those predicted from the first entry.

Burning is proposed on 1,285 acres of protected habitat which includes 481 acres of prescribed burning within the Blue Ridge PAC. Burning within the Blue Ridge PAC is proposed in increments of 200-acres which will be treated one time only over a period of up to ten years dependent upon burning conditions. Burning in the remainder of the protected habitat may occur more than once through maintenance burns. The Forest Service indicates that similar losses of large trees can be expected in protected habitat (up to 5 percent). In addition, up to 10 percent of the canopy may be effected by prescribed burning.

As all burning in the Blue Ridge PAC will take place outside the MSO breeding season and outside the 100-acre activity center, prescribed fire is not expected to result in direct negative effects to owls such as those related to flame and smoke exposure.

Proposed Critical Habitat

Activities that disturb or remove primary constituent elements within proposed critical habitat units may adversely affect the owl's critical habitat. These activities may include actions that reduce the canopy closure of a forest stand, reduce the density or the average diameter of trees in a stand, modify the multi-layered structure of a stand, reduce the availability of nesting structures and sites, reduce regeneration or modify the structure of riparian habitat, and/or reduce the suitability of habitat for prey species (65 FR 45336). For an action to result in the destruction or adverse modification of critical habitat, the action's effects must appreciably reduce the value of critical habitat for survival and recovery over a significant portion of the species' range. Altering major portions of a RU may preclude recovery of the species.

Approximately 10,652 acres of proposed critical habitat would be impacted in PCHU UGM-10 through thinning and burning treatments as proposed in the Blue Ridge Urban Interface Project. The proposed project would negatively effect primary constituent elements in a portion of the pine/oak and mixed conifer forest types. Primary constituent elements that would be adversely affected include high volumes of fallen trees and other woody debris, canopy closure, high snag basal area, and in the short-term, a reduction in the levels of residual plant cover to provide for the needs of MSO prey species. The Service does not have

current data indicating the existing condition of habitat in the remainder of this CHU, so we are unable to complete a detailed analysis. However, the Service believes that although there will be some adverse effects to proposed critical habitat at a local level within UGM-10, these impacts would not disrupt the function of the CHU. Sufficient owl habitat would remain for owls to nest, roost, forage, and disperse.

Prey Species and Habitat

The effects of fire include both negative and beneficial effects on MSO prey species and their habitat. Beneficial aspects would include increased response of herbaceous vegetation after a fire. Negative effects would include the loss of MSO prey habitat components such as herbaceous cover, down logs and snags. The Forest Service indicates that burning may result in losses of up to 40% of existing logs > 12 inches diameter in restricted habitat. Losses are expected to include up to 10 percent of these large logs in protected and target/threshold habitat. The Forest Service does not have data indicating existing amounts of large down logs in the project area (Mary Ann Benoit, Long Valley Ranger District, pers. comm.).

The effects of fire on the prey base of the MSO are complex and are dependent on the variations in fire characteristics and in prey habitat. Fire intensity, size, and behavior are influenced by numerous factors such as vegetation type, moisture, fuel loads, weather, season, and topography. Fire can effectively alter vegetation structure and composition thereby affecting small mammal habitat. The initial effects of fire are likely to be detrimental to rodent populations as cover and plant forage species would be reduced.

Population responses by small mammals to fire-induced changes in their habitat vary. For example, deer mouse populations might increase immediately following fire and then decrease through time (Ward and Block 1995). Campbell *et al.* (1977) noted that populations of peromyscid mice decreased immediately following fire in an Arizona ponderosa pine forest that removed one-fourth (moderately burned) to two-thirds (severely burned) of the basal area; populations then returned to pre-fire numbers two years following the burn. Further, no differences were found in rodent populations between moderately and severely burned areas. They concluded that the effects of the fire that they studied were short-term, and the short-term positive numerical responses of mice were attributed to an increase in forage, particularly grasses and forbs after the fire (Ward and Block 1995); and we expect similar results in this proposed project. Irvine (1991) documented post-fire declines in deer mice populations at study sites on the Coconino National Forest. Irvine attributed these declines to reduced food supplies. Lowe *et al.* (1978) noted an increase in deer mice populations the first year after a fire in ponderosa pine near Flagstaff, Arizona. Small mammal diversity and densities are typically depressed for one to three years after a fire (Wright and Bailey 1982). Biswell *et al.* (1973) suggested that rodent populations would be less affected during fall fires, because at that time of year rodents have accumulated seed caches that will mitigate loss of food sources. Predation of surviving rodents that are part of the diet of the MSO may increase immediately after the fire. In one study in northern California, radio-collared northern spotted owls spent

considerable time in burned-over areas. This activity was assumed to be due to easy capture of prey (Patton and Gordon 1995).

Because owl prey species evolved in ecosystems where fire was a natural process, we assume that historically, these species survived, and some even benefitted from the occurrence of fire. Fire has been excluded from most southwestern ecosystems during the 20th century, resulting in systems where fire behavior may deviate substantially from natural conditions. Effects of fire on small mammals under present environmental conditions are unclear (Ward and Block 1995).

Prescribed fire conducted within the proposed prescription are likely to have immediate short-term adverse effects to MSO prey habitat. Although fire may enhance vegetative density and abundance in the long-term, short-term effects of burning may limit available forage immediately after the fire event. Prescribed fire within the Blue Ridge PAC, which encompasses 75% of the foraging range of MSO on average, will be deferred during the MSO breeding season which overlaps with the rodent reproductive period. This mitigation measure will lessen the impacts on prey species within this PAC, therefore, will lessen the impacts to the MSO. However, while we do not expect MSO prey species associated with the Blue Ridge PAC to be adversely affected by proposed action taking place within the PAC itself, the Service does not believe the loss of up to 40 percent of the large down logs in restricted habitat follows the recommendations of the MSO Recovery Plan and, therefore, will adversely affect the MSO.

The effects of livestock grazing on MSO prey species and their habitat after prescribed burning is also a complex issue. The Forest Service states that it would be difficult to coordinate the burning of these 51 unfenced acres of the PAC, such that burning would be completed the fall before the pasture is rested for a full year.

The Forest Service provided no data indicating the grazing utilization rates for the 51 acres located within the Blue Ridge PAC. The Service is concerned whether grasses within the burned area(s) within the PAC will recover adequately prior to grazing such that the needs of MSO prey species are met. Livestock grazing that may occur in burned areas of PACs prior to one full year of rest has the potential to negatively affect MSO prey species. As only 51 acres of the 623-acre PAC may be grazed the year immediately following prescribed burning, the Service does not expect adverse effects from this activity.

Long-term Benefits of Prescribed Fire

Reintroducing fire into the forests of northern Arizona can have many benefits and may improve long-term "ecosystem management" objectives. Among these are the reduction of woody fuels which would decrease the possibility of intense, stand-replacing fires and resulting erosion, soil sterilization, and increased plant mortality. Ultimately, if fire continues to be excluded from the system, a major wildfire will occur with potentially devastating effects to

the MSO and its habitat. In the pre-settlement era, low-intensity fires that removed small trees and ground fuels, but rarely killed mature trees, probably occurred at frequent intervals. Implementing the proposed action would reduce fuels and hopefully begin to restore a more natural fire regime in which frequent, low-intensity fire would act to maintain a mosaic of fuel loads across the area. These frequent, low-intensity fires may reduce the possibility of intense fires such as those seen across the western U.S. in 2000.

The Forest Service indicates that the proposed thinning treatments will protect the stands by lessening the possibility of widespread, high-intensity wildfire. The Service believes that the positive aspects of the proposed treatments include the creation of less dense ponderosa pine stands in the immediate vicinity of ten PACs. Thinning of the adjacent pine forest to the degree proposed is likely to assist in protection of this MSO nest/roost habitat.

Effectiveness of Proposed Conservation Measures

While the Service believes the proposed project has long-term benefits for the MSO and its habitat, we believe some short-term adverse effects will result. The Service believes that the mitigation measures proposed by the Forest Service for prescribed fire will assist in the reduction of some of the negative effects to the MSO and its habitat. Specifically, measures such as the deferring of the Blue Ridge PAC's 100-acre nest buffer from burning, and burning outside the breeding season are consistent with the recommendations of the MSO Recovery Plan. In addition, we believe treating the PAC with two blocks not over 200 acres each will assist in minimizing potential negative effects to MSO prey species caused by fire.

The "Burning Parameters for PACs and Target/Threshold (July 10, 2000)" will assist in providing important protection of large logs, oaks, large trees, and canopy in these valuable MSO habitat types. The Service appreciates the development of these parameters by the Blue Ridge Ranger District staff. These parameters include specific 100-hour fuel moistures, relative humidities, flame lengths, and scorch heights. In addition, provisions to further protect habitat components include lining, foaming, wetting, pulling away fuels, avoidance, and other techniques. The Service strongly approves of the proposal to conduct test burn plots and visual monitoring prior to ignition in the Blue Ridge PAC or target/threshold habitat. The Forest Service indicates that if burning objectives are not met in the test burn plots, further burning will not occur under those conditions. The Service believes this will assist substantially in helping to ensure that loss of important MSO habitat components are minimized.

The Service's primary concerns regarding prescribed fire in the project area relate to the application of a fairly hot fire prescription in restricted habitat which may remove up to 40 percent of the large down woody material. This concern is amplified as fire will be repeated in these areas every 5-7 years as part of the maintenance burning program. Discussions with the Forest Service regarding this project indicate that burning with the proposed prescription is necessary to reduce the risk of catastrophic fire in the identified urban interface area. Because

burning with this prescription is an integral part of the goals of this urban interface project, we found that the development of conservation measures to remove adverse impacts to important MSO habitat components *and* meet the objectives of the project could not be found.

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 implemented in the future 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. Private land occurs on 5,062 acres of the analysis area. Development of isolated homes and subdivisions is ongoing. As the population of full and part time residents increases, the potential for fire to spread from these urban interface areas to wildlife habitat increases. State Highway 87 bisects the analysis area and hazard trees are occasionally removed. In addition, future actions within or adjacent 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 current status of the Mexican spotted owl, 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 Blue Ridge Urban Interface Project, as proposed, is not likely to jeopardize the continued existence of the MSO. After reviewing the current status of proposed critical habitat for the Mexican spotted owl, the environmental baseline for the action area, the effects of the proposed actions, and the cumulative effects, it is the Service's conference opinion that the Blue Ridge Urban Interface Project, as proposed, is not likely to destroy or adversely modify proposed critical habitat for the MSO.

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 FWS 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 FWS 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.

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 or foraging) 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 successfully rear young due to inadequate food supplies available in altered habitat, raise fewer young, raise less fit young, or desert the area because of disturbance or because habitat no longer meets the owl’s needs.

It is our opinion that the proposed action will not lead to incidental take of owls. This determination was based on the implementation of the recovery plan for all actions taking place in the Blue Ridge PAC, and in the implementation of conservation measures which include surveying unoccupied potential habitat prior to habitat altering activity if more than one breeding season elapses between the last survey and the action. As we do not anticipate incidental take related to the proposed action, no reasonable and prudent measures are provided. However, if during the course of the action, incidental take occurs, such incidental take would represent new information requiring review of the project’s effects. The Forest Service must immediately provide an explanation of the causes of the taking and review with us the need for possible addition of reasonable and prudent measures.

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: 480/835-8289) 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 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. Protect snags in the Blue Ridge PAC from prescribed fire through foaming, wetting, pulling away fuels, avoidance or other methods.
2. Develop and initiate studies to gain a comprehensive understanding of how prescribed fire affects the Mexican spotted owl and its prey.
3. Provide copies of prescribed fire monitoring data to the Service as it becomes available.
4. Prevent grazing in the Blue Ridge PAC for a minimum period of one full year after all or a portion of the PAC is burned; if no seed head production has occurred by the end of one full year, allow no grazing until seed head production has occurred.

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 and conference on the action outlined in the this biological opinion. 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 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.

You may ask the Service to confirm the conference opinion as a biological opinion issued through formal consultation if the MSO critical habitat is designated in the project area. The request must be in writing. If the Service reviews the proposed action and finds that there have been no significant changes in the action as planned or in the information used during the conference, the Service will confirm the conference opinion as the biological opinion on the project and no further section 7 consultation will be necessary.

The Service appreciates your consideration of threatened and endangered species. For further

Mr. Larry G. Sears

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information, please contact Michele James (520-527-3042) or Debra Bills (602-640-2720 x239). Please refer to the consultation number 2-21-00-F-373 in future correspondence concerning this project.

Sincerely,

/s/ David L. Harlow
Field Supervisor

cc: Regional Director, Fish and Wildlife Service, Albuquerque, NM (ARD-ES)
Field Supervisor, Fish and Wildlife Service, New Mexico Field Office, Albuquerque, NM
Forest Biologist, Coconino National Forest, Flagstaff, AZ (attn: Cecilia Overby)

John Kennedy, Habitat Branch, Arizona Game and Fish Department, Phoenix, AZ

Blue Ridge Urban Interface BO:MAJ:jh

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