Mr. Michael R. Williams  
Forest Supervisor  
Kaibab National Forest  
800 South Sixth Street  
Williams, Arizona 86046-2899  

RE: Frenchy Vegetation/Fuels Management Project

Dear Mr. Williams:

This biological opinion responds to your request for formal consultation with the U.S. Fish and Wildlife Service pursuant to section 7 of the Endangered Species Act of 1973 (16 U.S.C. 1531-1544), as amended (Act). Your request for formal consultation was dated March 7, 2002, and received by us on March 9, 2002. This biological opinion addresses impacts on the Mexican spotted owl (Strix occidentalis lucida) that may result from the proposed Frenchy Vegetation/Fuels Management Project located in Coconino County, Arizona.

This biological opinion is based on information provided in a biological assessment and evaluation, and an environmental assessment, of the Frenchy Vegetation/Fuels Management Project, and additional requested information, field trips, telephone calls, email messages, meetings, and other sources of information. Literature cited in this biological opinion is not a complete bibliography of all literature available on the species of concern, vegetation treatments...
and prescribed fire and their effects, or on other subjects considered in this opinion. A complete administrative record of this consultation is on file at the Arizona Ecological Services Field Office.

**Consultation History**

Details of the consultation history are summarized in Table 1.

Table 1. Summary of Consultation History

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 7, 1998</td>
<td>Informal consultation on the Frenchy Vegetation/Fuels Management Project began when we attended a meeting regarding monitoring for the Frenchy Ecosystem Management Area.</td>
</tr>
<tr>
<td>March 4, 1998</td>
<td>We attended another meeting regarding the project.</td>
</tr>
<tr>
<td>July 6, 1998</td>
<td>We received a July 1, 1998, scoping letter regarding analysis of the Frenchy Ecosystem Management Unit.</td>
</tr>
<tr>
<td>October 29, 1998</td>
<td>We responded to the July 1 scoping letter with a species list.</td>
</tr>
<tr>
<td>December 14, 1998</td>
<td>We received a December 11, 1998, letter which included a Frenchy Ecosystem Management Unit Proposed Action.</td>
</tr>
<tr>
<td>May 9, 2000</td>
<td>We attended a field trip to the project area and were provided a “rough draft” of an environmental assessment for review and comment.</td>
</tr>
<tr>
<td>June 12, 2000</td>
<td>We provided comments on the “rough draft” via email.</td>
</tr>
<tr>
<td>July 19, 2001</td>
<td>We received a July 18, 2001, letter transmitting an environmental assessment (which included a biological assessment and evaluation as an appendix) of the Frenchy Vegetation/Fuels Management Project.</td>
</tr>
<tr>
<td>August 29, 2001</td>
<td>We provided comments on the environmental assessment and the biological assessment and evaluation.</td>
</tr>
<tr>
<td>October 4, 2001</td>
<td>We received an October 3, 2001, letter which contained responses to our previous comments and a request for concurrence with a determination that the project was not likely to adversely affect the Mexican spotted owl.</td>
</tr>
<tr>
<td>October 30, 2001</td>
<td>We responded with a letter indicating why we could not concur with such a determination of effect.</td>
</tr>
</tbody>
</table>
November 11, 2001  We received a telephone call from Kaibab National Forest staff regarding the project and met with them that day.

January 26, 2002  We received a January 24, 2002, letter which contained additional information and analysis of the project and a request for concurrence with a determination that the project is not likely to adversely affect the Mexican spotted owl.

February 22, 2002  We conducted a meeting with Forest staff indicating why we could not concur with such a determination of effect.

February 25, 2002  We received another telephone call from Forest staff indicating that the Forest would request formal consultation on the project as described in the January 24, 2002, letter.

March 9, 2002  We received a March 7, 2002, request for formal consultation. The Forest requested formal consultation even though their determination of effect was not likely to adversely affect.

March 14, 2002  We received additional information in a meeting with Forest staff.

BIOLICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

The Williams Ranger District of the Kaibab National Forest proposes to implement a variety of treatments including vegetative thinning, regeneration treatments, prescribed burning, road closure and obliteration, and seeding of native grasses and forbs in the Frenchy Ecosystem Management Unit (EMU). Treatments will be implemented over the next two to ten years. The Frenchy EMU contains approximately 20,211 acres including 18,027 acres of National Forest, 343 acres of State, and 1,841 acres of private land. Treatments are proposed only for National Forest land.

Alternative 4 was identified in both the environmental assessment (Williams Ranger District 2001) and the biological assessment and evaluation (Nelson 2001) as the preferred alternative, and the complete project description can be found there. The following summary description of the project is derived from those two documents. This biological opinion is based on our analysis and evaluation of Alternative 4.

Vegetative Treatments

Alternative 4 proposes 8,227 acres of commercial and 1,092 acres of noncommercial vegetative treatments (Table 2). Those treatments involve reducing tree density by felling selected trees. Some portion of the trees felled in commercial treatments will be sold. A noncommercial thinning treatment may follow the commercial treatment. Trees which are removed in
noncommercial treatments will generally have low commercial value due to their small size or scattered distribution. Trees thinned from noncommercial treatment areas will generally not be sold.

Table 2. Summary of vegetative treatments proposed for the Frenchy Vegetative/Fuels Management Project (adapted from Williams Ranger District 2001).

<table>
<thead>
<tr>
<th>Vegetative Treatment</th>
<th>Commercial Acres</th>
<th>Noncommercial Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Irregular Thinning</td>
<td>2,847</td>
<td>56</td>
</tr>
<tr>
<td>Regular Thinning</td>
<td>31</td>
<td>200</td>
</tr>
<tr>
<td>Group Selection</td>
<td>1,901</td>
<td></td>
</tr>
<tr>
<td>Full Restoration to Meadow</td>
<td>416</td>
<td>406</td>
</tr>
<tr>
<td>Partial Restoration to Meadow</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Full Restoration to Savannah</td>
<td>2,336</td>
<td></td>
</tr>
<tr>
<td>Partial Restoration to Savannah</td>
<td>494</td>
<td>67</td>
</tr>
<tr>
<td>Oak/Juniper Release, Yellow Pine Tending</td>
<td></td>
<td>285</td>
</tr>
<tr>
<td>Sanitation</td>
<td>109</td>
<td>78</td>
</tr>
<tr>
<td>Individual Tree Selection</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>Irregular Shelterwood</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>Dwarf Mistletoe Buffer</td>
<td>16</td>
<td></td>
</tr>
</tbody>
</table>

In addition to the above treatments, the following treatments will be performed in conjunction with, or following, many of the above vegetative treatments:
- Yellow Pine Tending (2,408 acres)
- Oak/Juniper Release (1,949 acres)
- Noncommercial Thinning/Sanitation (7,474 acres)
- Oak Thinning (132 acres)

Tending and release treatments will occur in conjunction with most thinning treatments where large trees occur. In addition to the 132 acres of oak thinning, oak clumps in many restoration cuts will also be thinned to promote diameter growth and to restore oak stocking levels towards levels that were believed to be present in 1870.

**Vegetative Treatment in Mexican Spotted Owl Habitat**

A total of 3,703 acres of the Mexican spotted owl (MSO) habitat (pine-oak cover type) is within the project area. Currently, 38 acres are protected habitat (steep slopes), 952 acres of have been set aside to develop into threshold habitat, and the remaining 2,713 acres are other restricted
habitat as defined in the Recovery Plan for the Mexican Spotted Owl (Recovery Plan). Several treatments are proposed within the restricted pine-oak stands (Table 3).

Table 3. Summary of vegetative treatments proposed in Mexican spotted owl habitat (adapted from Nelson 2001).

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group Selection</td>
<td>214</td>
</tr>
<tr>
<td>Irregular Thin</td>
<td>330</td>
</tr>
<tr>
<td>Sanitation Cut</td>
<td>27</td>
</tr>
<tr>
<td>Noncommercial Sanitation</td>
<td>24</td>
</tr>
<tr>
<td>Sanitation/Thinning</td>
<td>82</td>
</tr>
<tr>
<td>Noncommercial Large Tree Release</td>
<td>181</td>
</tr>
<tr>
<td>Full Restoration to Savannah</td>
<td>118</td>
</tr>
<tr>
<td>Noncommercial Full Restoration to Meadow</td>
<td>10</td>
</tr>
<tr>
<td>Dwarf Mistletoe Buffer</td>
<td>8</td>
</tr>
<tr>
<td>Noncommercial Regular Thin</td>
<td>56</td>
</tr>
</tbody>
</table>

No vegetative treatments will be conducted in protected MSO habitat. A noncommercial Large Tree Release will be conducted in 62 acres of target/threshold habitat. The remainder of the vegetative treatments will be conducted in 1,171 acres of other restricted MSO habitat.

Activity Fuels Treatment

Vegetative treatments will create additional forest floor fuels in the form of discarded limbs of cut trees. To reduce the fire risk these fuels will be treated in the following ways:
- In the Intensive Urban Interface Buffer Zone which extends 0.125 mile out from private property and other agency boundaries where fuel loadings are moderate to high, the majority of fuels larger than three inches in diameter will be piled and burned prior to broadcast burning. Where fuel loading is low, activity fuels will be lopped to less than two feet in height prior to broadcast burning.
- In the Extensive Urban Interface Buffer Zone which extends 0.50 mile to the north and east of non-forest land, and one mile to the south and west of non-forest land (not inclusive of the intensive zone), fire laddering potential will be reduced by lopping the slash height to two feet or by rough piling fuels prior to broadcast burning. Rough piling entails piling and burning fuels where concentrations are high, and crushing fuels where
they are moderate. Efforts will be made to protect desired species such as yellow pine and large diameter juniper and oaks by moving heavy fuels away from them when feasible.  
- Activity fuels within 150 feet of high use roads will be removed or machine piled. The roads include Forest Roads 141, 109, 139, 56, 13, 25, and 102.  
- In all other areas where activity fuels are created they will be lopped into a height of two feet or less prior to broadcast burning.

**Broadcast Burning**

The entire area will be divided into burn units, and over the course of several years, each unit will be broadcast burned. The burn units will be burned again at regular intervals in the future. In some areas, such as the Intensive Zone, grasslands and antelope corridors, or areas designated for full restoration, this burn interval may be as short as every 5 to 12 years. In other areas where higher pine regeneration is desired, the interval between burns will be on the order of every 20 to 40 years. Prescribed fire will be conducted on all 3,703 acres of Mexican spotted owl habitat in the project area.

Some protective measures for snags and large trees are included in the proposed project (Williams Ranger District 2001):
- Snags (both hard and soft) 30 feet in height or taller and 10 inches or greater in diameter will be protected from fire using various fire management techniques such as applying water or foam, hand lining, burning under cooler prescriptions, changing burn patterns, and so on. Down logs 12 inches or greater in diameter at mid-point and 8 feet in length will be protected using the same methods.
- Yellow pine, 16 inches in diameter or larger, and Gambel oak 10 inches in diameter at root collar (drc) or larger will be protected from fire through the removal of heavy fuels from around the base of those trees, or by the methods outlined above for snags and down logs.

Burned areas will be rested from grazing for one season to allow both cool and warm season plants to complete a reproductive cycle prior to continuance of grazing (Williams Ranger District 2001).

Additional measures were added to the project (U.S. Forest Service, *in litt*, January 24, 2002):
- The maximum acceptable loss of downed logs (greater than 12 inches in diameter and greater than 8 feet in length) in MSO restricted and target/threshold habitat will be 25% or less. Additional lining of these downed logs along with other preburn and burn strategies will be utilized to remain below 25% loss of logs in these areas.
- In MSO restricted habitat, any tree that is to be removed by prescription that is greater than 18 inches dbh will be killed and left standing rather than felled.
- No non-mistletoe infected pine greater than 18 inches dbh will be removed in MSO restricted habitat that is scheduled for restoration vegetative treatments.
- No oak greater than 5 inches drc will be cut in MSO restricted or target/threshold habitat.

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 Recovery Plan for the Mexican Spotted Owl (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 ± 1,067 (SE) MSOs in the Upper Gila Mountains Recovery Unit (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 range of the MSO has been divided into six RUs, as discussed in the Recovery Plan. 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. 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 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).

ENVIRONMENTAL BASELINE

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

A. Status of the species within the action area

No mixed conifer stands occur within the project area. Stands totaling 3,703 acres of pine-oak are scattered over the project area. Thirty-eight of those acres are protected (steep slopes) Mexican spotted owl habitat. A total of 952 acres of restricted target/threshold Mexican spotted owl habitat are in the project area. A total of 2,713 acres of other restricted Mexican spotted owl habitat occurs in the project area.

Surveys for Mexican spotted owls were conducted over the entire ecosystem management area in 1994 and 1995. The surveys were according to an established survey protocol and covered the entire area, including pine and pine-oak cover types. The surveys did not detect Mexican spotted owls within the ecosystem management area. However, a pair of Mexican spotted owls was detected in Sycamore Canyon south of the project area. The Big Springs Protected Activity Center (PAC) was subsequently designated. The PAC is located south of and immediately adjacent to the Frenchy Ecosystem Management Unit. A nesting location is known for the PAC.
Proposed vegetative treatments are more than 0.5 mile from the known nest site. An additional year of survey for Mexican spotted owls will be conducted in all owl habitat within the project area in 2002 before the project is implemented.

B. Factors affecting species environment within the action area

In 1996, the Fish and Wildlife Service 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 90 PACs adversely affected, with 50 of those in the Upper Gila Mountains RU.

In addition to actions proposed by the Forest Service, Southwest Region, 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.

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.

Vegetative treatments and prescribed fire, depending on the actual treatments and locations, can adversely affect Mexican spotted owl habitat. In particular, certain key habitat components of Mexican spotted owl habitat have been identified to be of importance and should be retained within the habitat (U.S. Department of the Interior 1995). Mexican spotted owl key habitat components include very large trees (greater than 24 inches in diameter a breast height [dbh]), other large trees (18 to 24 inches dbh), large snags, large down logs, and hardwoods.

Based upon monitoring results of the recent Twin and Marteen Burn Projects, it is estimated that implementation of a prescribed burn as in the description of the proposed action may cause a reduction of from 1-10 percent of the larger diameter pine, 1-6 percent of the Gambel oak, and 1-20 percent of the snags. In the wildland/urban intensive zone, the reduction of dead and down
fuels is expected to be 100 percent. In the extensive zone, the reduction dead and down material is likely to be 60-90 percent of material 0-3 inches in diameter, 20-40 percent of material 3-9 inches in diameter, and 0-50 percent of material greater than 9 inches in diameter.

Effects to Mexican Spotted Owl Habitat

The proposed treatments will result in loss of key habitat components in MSO habitat (Table 4). In particular, prescribed fire treatments will result in a loss of 6.5% of already rare trees greater than 24 inches in diameter at breast height in target and other restricted habitat.
Table 4. Expected loss of key habitat components in Mexican spotted owl habitat due to vegetative and prescribed burn treatments (adapted from U.S. Forest Service, *in litt.*, January 24, 2002).

<table>
<thead>
<tr>
<th></th>
<th>Snags &gt; 12&quot; /acre</th>
<th>Logs &gt; 12&quot; /acre</th>
<th>Trees &gt; 24&quot; /acre</th>
<th>Trees 18-24&quot; /acre</th>
<th>Hardwood trees &gt; 5&quot; /acre</th>
<th>Total BA (square feet) &gt; 5&quot; /acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected loss of MSO key habitat components in 2,713 acres of restricted habitat due to vegetative treatments</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0.3 (3.6%)</td>
<td>0</td>
<td>25.3 (from 117.5 to 92.2)</td>
</tr>
<tr>
<td>Expected loss of MSO key habitat components in 2,713 acres of restricted habitat due to prescribed burn treatments</td>
<td>0.14 (10.5%)</td>
<td>0.21 (12.5%)</td>
<td>0.2 (6.5%)</td>
<td>0.4 (5%)</td>
<td>4.5 (10.6%)</td>
<td>5.0 (from 92.2 to 87.2)</td>
</tr>
</tbody>
</table>
Target/threshold Mexican spotted owl habitat will be treated with prescribed fire. Four of those treated stands will subsequently exhibit characteristics that are further below the standards of target/threshold habitat than they were prior to treatment (Table 5).

Table 5. Target/threshold stands that will be treated with prescribed fire, will experience self-thinning, and which will subsequently exhibit reduced target habitat characteristics (adapted from U.S. Forest Service, in litt., January 24, 2002).

<table>
<thead>
<tr>
<th>Stand</th>
<th>Mexican Spotted Owl Recovery Plan Table III.B.1 Variable</th>
<th>Table III.B.1 Standard</th>
<th>Pre-treatment</th>
<th>Ten Years Post-treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2279-17</td>
<td>Percent stand density of trees 18-24 inches</td>
<td>15</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>2288-43</td>
<td>Tree basal area (square feet/acre)</td>
<td>150</td>
<td>136</td>
<td>116</td>
</tr>
<tr>
<td>2290-14</td>
<td>Tree basal area (square feet/acre)</td>
<td>150</td>
<td>128</td>
<td>110</td>
</tr>
<tr>
<td>2290-22</td>
<td>Tree basal area (square feet/acre)</td>
<td>150</td>
<td>134</td>
<td>125</td>
</tr>
</tbody>
</table>

Treatment of 47 acres of restricted MSO habitat in the Intensive/Extensive Urban Interface Zones will result in the loss of the majority of down woody material greater than 3 inches in diameter.

CUMULATIVE EFFECTS
Cumulative effects include the effects of future State, tribal, local, or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act.

Future actions within the project area that are reasonably certain to occur include human housing and other development, recreational development and activities, power line maintenance, and other associated actions. These activities have the potential to reduce the quality of MSO nesting, roosting, and foraging habitat, cause disturbance to breeding MSOs, and therefore contribute as cumulative effects to the proposed action. However, because of the predominant occurrence of MSOs on Federal lands in this area, 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 to be of minor impact.

CONCLUSION

After reviewing the current status of the Mexican spotted owl, the environmental baseline for the action area, the effects of the proposed Frenchy Vegetation/Fuels Management Project, and the cumulative effects, it is the our biological opinion that the Frenchy Vegetation/Fuels Management Project, as proposed, is not likely to jeopardize the continued existence of the Mexican spotted owl. Critical habitat has been designated for the Mexican spotted owl only on non-Forest Service lands; therefore, this action does not affect that critical habitat and no destruction or adverse modification of that critical habitat is anticipated. We present these conclusions for the following reasons:

- A relatively small portion of unoccupied Mexican spotted owl habitat will be treated.
- A relatively high proportion of most Mexican spotted owl key habitat components will remain after the treatments.

The conclusions of this biological opinion are based on full implementation of the project as described in the Description of the Proposed Action section of this document, including any Conservation Measures that were incorporated into the project design.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal 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 by regulation 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) of the Act, taking that is incidental to, and not intended as part of, the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

AMOUNT OR EXTENT OF TAKE

We do not anticipate the proposed action will incidentally take any Mexican spotted owls.

Disposition of Dead or Injured Listed Species

Upon locating a dead, injured, or sick listed species, initial notification must be made to our Law Enforcement Office, 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 best possible state.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of 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 Big Springs MSO PAC continue to be regularly monitored and that the results of the monitoring be provided to us.

2. We recommend that research be initiated and continued to gain a comprehensive understanding of how prescribed fire affects the Mexican spotted owl, its habitat, and its prey.

3. We recommend that the Forest Service provide us with prescribed fire monitoring data, especially that regarding MSO key habitat components, as it becomes available.
4. We recommend that the Kaibab National Forest pursue the completion of a forest-wide consultation on prescribed fire activities.

In order that we may be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats, we request notification of the implementation of any conservation recommendations.

**REINITIATION - CLOSING STATEMENT**

This concludes formal consultation on the action outlined in the Frenchy Vegetation/Fuels Management Project. 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.

We appreciate the Forest Service’s efforts to identify and minimize effects to listed species from this project. For further information please contact Bill Austin (928) 226-0714 or Steve Spangle (928) 226-0250 of our Flagstaff Suboffice. Please refer to the consultation number, 2-21-99-F-009, 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, Albuquerque NM
   District Ranger, Williams Ranger District, Williams AZ

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


