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U.S. Fish and Wildlife Service
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In Reply Refer To:
AESO/SE
22410-2008-F-0229

May 13, 2008

Mr. Alan Quan
Forest Supervisor
Prescott National Forest
344 South Cortez
Prescott, Arizona 86303

Dear Mr. Quan:

Thank you for your request to initiate formal consultation with the U.S. Fish and Wildlife Service (FWS) pursuant to section 7 of the Endangered Species Act of 1973 (16 U.S.C. 1531-1544), as amended (Act), for the August Fire Suppression Rehabilitation Project on the Prescott National Forest south of Prescott, Arizona. Your request was dated March 11, 2008, and received by us on March 12, 2008. At issue are impacts that may result from the proposed rehabilitation of fire suppression actions associated with the November 2007 August Fire (file number 22410-2008-TA-0048). The proposed action may affect the threatened Mexican spotted owl (*Strix occidentalis lucida*) (MSO) and its critical habitat.

In your letter, you requested our concurrence that the proposed action is not likely to adversely affect critical habitat for the MSO. We concur with this determination and our rationale is detailed in Appendix A.

This biological opinion (BO) is based on information provided in your March 11, 2008, letter and biological assessment (BA); an April 17, 2008, site visit with Noel Fletcher of your staff; 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 or on other subjects considered in this opinion. A complete administrative record of this consultation is on file at this office.

CONSULTATION HISTORY

The following details the history of the consultation:

- November 1, 2007: We received a phone call initiating emergency consultation for suppression actions associated with the August Fire.
- January 16, 2008: We received your January 10, 2008, biological assessment for the emergency consultation associated with suppression of the August Fire (22410-2008-TA-0048).
- March 12, 2008: We received your March 11, 2008, request for initiation of consultation and biological assessment, which outlined the proposed actions for the August Fire Suppression Rehabilitation project and effects to listed species.
- April 17, 2001: We conducted a site visit of the project area with your staff.
- May 12, 2008: We sent you the draft biological opinion.
- May 13, 2008: You provided comments on our draft biological opinion.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

The Prescott National Forest proposes to rehabilitate fire suppression lines associated with the 2007 August Fire. Frequent rain and snow events immediately after containment of the August Fire and throughout the winter of 2007 and 2008 have prevented fire suppression rehabilitation work from being completed. Large bulldozer lines were created during fire suppression efforts and need to be rehabilitated to minimize soil erosion and prevent unauthorized off-highway vehicle (OHV) use in those areas.

The August Fire was contained at approximately 639 acres and ranges from 5,800 feet in elevation to 6,900 feet in elevation. Two main bulldozer lines were constructed, one along the north perimeter and one along the south perimeter. Smaller segments of bulldozer line were constructed near the Ward Cabin along the east perimeter to protect this private in-holding. Approximately 2.5 miles of bulldozer lines were constructed during suppression of the August Fire. The Senator Highway (Forest Road 52) was used as the main control line along the east perimeter. An old Forest Service (FS) road that had been closed due to fallen beetle-killed trees was opened along Ash Creek Ridge and used as part of the west control line. This road was also the access point for the bulldozer to create the south control line from Ash Creek Ridge down to the Senator Highway near Palace Station.

Bulldozer lines will be worked with heavy machinery (most likely excavators) to conduct pitting, which includes scooping out very shallow pits to facilitate rainwater capture and help prevent

gullying and erosion. The heavy equipment will also be used to move woody debris (slash piles) created by the bulldozers back across the bulldozer lines. Additionally, slash piles will be lopped, scattered, and spread over hand-lines and adjacent to the bulldozer lines to further protect soil resources and prevent unauthorized OHV access. A native seed mix will also be applied along many of the bulldozer lines to aid in the regeneration of native vegetation and stabilize soils. The seed mix will be applied by a combination of helicopter and hand-sowing. Where necessary, ponderosa pine trees less than nine inches in diameter at breast height (dbh) may be cut and used for covering the bulldozer lines to protect the soil and preclude access. These trees will be placed at angles across the bulldozer lines to maximize the area covered by the trees and minimize the number of trees that need to be cut. Larger trees of other species (including oak and juniper) may be cut down for this same purpose. Where trees are needed to be placed across the line, trees from inside the fire perimeter will be used instead of from outside the fire. Only individual trees will be placed across the bulldozer lines in order to avoid creating additional openings.

Suppression rehabilitation activities will occur when soil conditions are suitable for large equipment to effectively work, preferably before the summer 2008 rains. Work will be conducted during the MSO breeding season. All work is expected to take less than two weeks to complete. A complete description of the suppression rehabilitation plans, including segment by segment treatments, is included in Appendix B of the BA.

The action area includes the bulldozer and hand lines within the footprint of the August Fire and roads used to access these areas.

STATUS OF THE SPECIES

Mexican spotted owl

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

A detailed account of the taxonomy, biology, and reproductive characteristics of the MSO is found in the Final Rule listing the MSO as a threatened species (USFWS 1993) and in the Recovery Plan (USFWS 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, uneven-aged forest, and the species is known to inhabit a physically diverse landscape in the southwestern United States and Mexico.

The U.S. range of the MSO has been divided into six recovery units (RU), as discussed in the Recovery Plan. The primary administrator of lands supporting the MSO in the U.S. is the Forest Service (FS). 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 two National Forests in Colorado and three in Utah) support fewer owls. According to the Recovery Plan, 91 percent of MSO known to exist in the U.S. between 1990 and 1993 occurred on lands administered by the Forest Service.

Historical and current anthropogenic uses of MSO habitat include both domestic and wild ungulate grazing, recreation, fuels reduction treatments, resource extraction (e.g., timber, oil, gas), and development. These activities have the potential to reduce the quality of MSO nesting, roosting, and foraging habitat, and may cause disturbance during the breeding season. Livestock and wild ungulate grazing is prevalent throughout Region 3 National Forest System lands and is thought to have a negative effect on the availability of grass cover for prey species. Recreation impacts are increasing on all forests, especially in meadow and riparian areas. There is anecdotal information and research that indicates that owls in heavily used recreation areas are much more erratic in their movement patterns and behavior. Fuels reduction treatments, though critical to reducing the risk of severe wildfire, can have short-term adverse effects to MSO through habitat modification and disturbance. As the population grows, especially in Arizona, small communities within and adjacent to National Forest System lands are being developed. This trend may have detrimental effects to MSO by further fragmenting habitat and increasing disturbance during the breeding season. West Nile Virus also has the potential to adversely impact the MSO. The virus has been documented in Arizona, New Mexico, and Colorado, and preliminary information suggests that owls may be highly vulnerable to this disease (Courtney *et al.* 2004). Unfortunately, due to the secretive nature of owls and the lack of intensive monitoring of banded birds, we will most likely not know when owls contract the disease or the extent of its impact to MSO range-wide.

Currently, high-intensity, stand-replacing fires are influencing ponderosa pine and mixed conifer forest types in Arizona and New Mexico. Uncharacteristic, severe, stand-replacing wildfire is probably the greatest threat to MSO within the action area. As throughout the West, fire severity and size have been increasing within this geographic area.

A reliable estimate of the numbers of owls throughout its entire range is not currently available (USFWS 1995) and the quality and quantity of information regarding numbers of MSO vary by source. USFWS (1991) reported a total of 2,160 owls throughout the United States. Fletcher (1990) calculated that 2,074 owls existed in Arizona and New Mexico. However, Ganey *et al.* (2000) estimates approximately $2,950 \pm 1,067$ (SE) MSO in the Upper Gila Mountains RU alone. The FS Region 3 most recently reported a total of approximately 1,025 protected activity centers (PACs) established on FS lands in Arizona and New Mexico (B. Barrera, pers. comm. June 18, 2007). The FS Region 3 data are the most current compiled information available to us; however, survey efforts in areas other than NFS lands have resulted in additional sites being located in all RUs.

Researchers studied MSO population dynamics on one study site in Arizona (n = 63 territories) and one study site in New Mexico (n = 47 territories) from 1991 through 2002. The final report, titled "Temporal and Spatial Variation in the Demographic Rates of Two Mexican Spotted Owl Populations," (*in press*) found that reproduction varied greatly over time, while survival varied little. The estimates of the population rate of change (Λ =Lamda) indicated that the Arizona population was stable (mean Λ from 1993 to 2000 = 0.995; 95 percent confidence interval = 0.836, 1.155) while the New Mexico population declined at an annual rate of about 6 percent (mean Λ from 1993 to 2000 = 0.937; 95 percent confidence interval = 0.895, 0.979). The study concludes that MSO populations could experience great (>20 percent) fluctuations in numbers from year to year due to the high annual variation in recruitment. However, due to this high annual variation in recruitment, the MSO is likely very vulnerable to actions that impact adult survival (e.g., habitat alteration, drought, etc.) during years of low recruitment.

Since the owl was listed, we have completed or have in draft form a total of 189 formal consultations for the MSO. These formal consultations have identified incidences of anticipated incidental take of MSO in 385 PACs. The form of this incidental take is almost entirely harm or harassment rather than direct mortality. These consultations have primarily dealt with actions proposed by FS Region 3. However, in addition to actions proposed by FS Region 3, we have also reviewed the impacts of actions proposed by the Bureau of Indian Affairs, Department of Defense (including Air Force, Army, and Navy), Department of Energy, National Park Service, and Federal Highway Administration. These proposals have included timber sales, road construction, fire/ecosystem management projects (including prescribed natural and management ignited fires), livestock grazing, recreation activities, utility corridors, military and sightseeing overflights, and other activities. Only two of these projects (release of site-specific owl location information and existing Forest Plans) have resulted in our biological opinion that the proposed action would likely jeopardize the continued existence of the MSO. The jeopardy opinion issued for existing Forest Plans on November 25, 1997 was rendered moot as a non-jeopardy/no adverse modification BO was issued the same day.

In 1996, we issued a biological opinion on FS Region 3 adoption of the Recovery Plan recommendations through an amendment to their Land and Resource Management Plans (LRMPs). In this non-jeopardy BO, we anticipated that approximately 151 PACs would be affected by activities that would result in incidental take of MSO. In addition, on January 17, 2003, we completed a reinitiation of the 1996 Forest Plan Amendments BO, which anticipated the additional incidental take of five MSO PACs in Region 3 due to the rate of implementation of the grazing standards and guidelines, for a total of 156 PACs. Consultation on individual actions under these BOs resulted in the harm and harassment of approximately 243 PACs on Region 3 NFS lands. FS Region 3 reinitiated consultation on the LRMPs on April 8, 2004. On June 10, 2005, the FWS issued a revised BO on the amended LRMPs. We anticipated that while the Region 3 Forests continue to operate under the existing LRMPs, take is reasonably certain to occur to an additional 10 percent of the known PACs on NFS lands. We expect that continued operation under the plans will result in harm to 49 PACs and harassment to another 49 PACs. To date, consultation on individual actions under the amended Forest Plans, as accounted for under the June 10, 2005, biological opinion has resulted in the incidental take of owls associated with 19 PACs. Incidental take associated with Forest Service fire suppression actions, which was not included in the LRMP proposed action, has resulted in the incidental take of owls associated with 12 PACs.

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 that 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 Mexican Spotted Owl in the Action Area

Two MSO PACs occur within the perimeter of the August Fire, the Palace Station PAC (090307) and the Venezia PAC (090313). Approximately 487 acres (77 percent) of the August Fire burned in PAC habitat. Prior to the August Fire in 2007, the Palace Station PAC was subjected to high ponderosa pine mortality due to bark beetle kill during the late 1990s and early 2000. Most, if not all, of the ponderosa pine trees in this PAC suffered mortality due to this bark beetle epidemic. The remaining habitat in this PAC consisted of a Gambel oak stand with extensive ponderosa pine snags. Prior to the bark beetle epidemic, the Palace Station PAC had a consistent history of occupation and reproduction by MSO (see Table 2 of the BA). In the years between 2001 and 2005, no owls were located in the PAC; however, this PAC has not been monitored since 2005.

The Venezia PAC also experienced bark beetle mortality to the ponderosa pine trees, but not to the extent of the Palace Station PAC. Most of the ponderosa pine overstory needed for nesting habitat has remained intact. The historical MSO sightings in the Venezia PAC are in the northwest corner of section 13 and in the northeast corner of section 14 (see Appendix A, Map 1 of the BA), which is outside of the fire perimeter. This PAC has not been occupied since 1998 (Table 2 of the BA), and the Forest Service believes all MSO detections in the area are from the owls associated with the Palace Station PAC foraging or roosting in the Venezia PAC (USFS 2008). Similar to the Palace Station PAC, the Venezia PAC has not been monitored since 2005.

B. Factors Affecting Mexican Spotted Owl Within the Action Area

Prior to the fire, most of the action area has supported significant recreational use by hikers, campers, birders, fuel wood collectors, and hunters. Additionally, summer home owners and sometimes their pets inhabit cabins and homes near the action area and use the forest lands surrounding their cabins for a variety of uses, including those mentioned above. However, the primary affect to MSO habitat within the action area has been loss of ponderosa pine trees and a dense forest canopy due to the bark beetle infestation that occurred prior to the fire.

EFFECTS OF THE PROPOSED ACTION

Effects to MSO from the proposed action will mainly be from noise disturbance associated with operating heavy equipment and running chainsaws in the Palace Station and Venezia PACs and low-level helicopter flights over these PACs during the breeding season. Mechanical noise and human presence may be disruptive to MSO, particularly during the breeding season. Owls have more sensitive hearing than other birds (Bowles 1995). If noise arouses an owl, this disturbance has the potential to affect the bird's metabolic rate by making it more active. Increased activity can, in turn, deplete energy reserves (Bowles 1995). Noisy human activity can cause raptors to expand their home ranges, but often birds return to normal use patterns when humans are not present (Bowles 1995). Such expansion in home ranges could affect the fitness of the birds, and thus their ability to successfully reproduce and raise young. Species that are sensitive to the presence of people may be displaced permanently, which may be more detrimental to wildlife than recreation-induced habitat changes (Hammit and Cole 1987, Gutzwiller 1995, Knight and Cole 1995). If animals are denied access to areas that are essential for reproduction and survival, that population will most likely decline. Likewise, if animals are disturbed while performing behaviors such as foraging or breeding, that population will also likely decline (Knight and Cole 1995).

Birds may respond to disturbance during the breeding season by abandoning their nests or young; by altering their behavior such that they are less attentive to the young, which increases the risk of young being preyed upon; by disrupting feeding patterns; or by exposing young to adverse environmental stress (Knight and Cole 1995). There is also evidence that disturbance during years of diminished prey base can result in increased foraging time, which in turn may cause some raptors to leave an area or to not breed at all (Knight and Cole 1995). At National Parks in Utah, Swarthout and Steidl (2003) examined behavioral responses of nesting MSO to individual hikers that passed within 36 to 210 feet of active nests every 15 minutes. Among various behavioral changes observed during treatments, female and male MSO increased the frequency of contact vocalizations by 58 and 534 percent, respectively. Female owls decreased the amount of time they handled prey by 57 percent and decreased the amount of time they performed daytime maintenance by 30 percent. Swarthout and Steidl (2003) examined flush response of MSOs in canyon situations to recreationists, and found that if hikers are excluded from a 79-foot radius around roost sites, 95 percent of owl flush responses would be eliminated.

Hand crews running chainsaws, and excavators rehabilitating bulldozer lines, safety zones, and vehicle turn-around spots within and adjacent to PACs can have the same disruptive effects on MSO as those described above. Chainsaw sound levels are from 106 to 117 decibels (dBA), which exceeds the sound level for flushing in response to disturbance (approximately 46 dBA for ground-based equipment) (Delaney *et al.* 1999). The use of chainsaws to remove trees can be disruptive to breeding owls; however, slash will be mainly used to cover the bulldozer lines. Therefore, very few trees will need to be cut down to help cover these lines, minimizing noise disturbance from chainsaws.

Noise from low-flying aircraft during aerial seeding operations can contribute to the disturbance of MSO as well. Low-level flights have the greatest potential to disturb owls because these aircraft move slowly and are relatively noisy (Delaney *et al.* 1997). Although the effects of overflights may vary with location, specific conditions, and aircraft type, Delaney *et al.* (1999) found that a 345-foot hemispherical management protective zone should minimize, and possibly

eliminate, spotted owl flush response and negative effects to prey delivery rates associated with helicopter over-flights. Aerial seed application will be done with a helicopter flying lower than the suggested 345-foot buffer. Therefore, this action may result in temporary disturbance to owls that may result in MSO flush responses or decreased prey delivery rates. If MSO are breeding, flushing or decreased prey delivery rates may have adverse effects not only to adults, but to eggs, nestlings, and/or fledgling owls as well. Because the bulldozer lines being rehabilitated are fairly close together along the fire perimeter, aerial seeding should not take longer than one day to complete. Effects from low-level flights associated with aerial seeding are anticipated to be short in duration.

In accordance with the MSO Recovery Plan, trees cut down to cover bulldozer lines will be less than nine inches dbh. Additionally, these trees will be laid at angles across the lines to help maximize the area covered by the trees and to minimize the number of trees needed to be cut. Trees selected for cutting will be chosen in such a way that new openings in the remaining canopy will not be created or expanded significantly. Because of the large number of snags, both from the fire and bark beetle mortality, cutting down the few trees that are anticipated to be needed will not significantly reduce MSO habitat in either of the two PACs. Additionally, scattering slash across the bulldozer lines, in conjunction with seeding efforts, will restore and will likely increase habitat for MSO prey species.

As previously mentioned, the Palace Station PAC has not been occupied since 2001 and is not currently considered to have suitable nesting habitat due to extensive bark beetle mortality. PAC monitoring has not been completed since 2005. Based on our site visit to the area on April 17, 2008, we agree with the Forest Service that the Palace Station PAC likely did not contain suitable MSO nesting habitat prior to the fire, although foraging habitat still occurs in the Gambel oak stands. Our assessment was based on observations of similar unburned habitat adjacent to the Palace Station PAC that had been similarly affected by bark beetles. Based on these observations, we do not expect noise disturbance from low-level flights, heavy machinery operation, and chain saw use to affect breeding MSO in the Palace Station PAC, nor do we anticipate these actions will have significant effects on MSO that may be foraging in that PAC.

Our site visit also confirmed that suitable nesting and foraging habitat occurred in the Venezia PAC prior to the fire and is still present post-fire. Although MSO have not been documented in the Venezia PAC since 1998, monitoring has not been conducted since 2005. MSO may still nest and forage in the Venezia PAC. Noise disturbance associated with low-level flights, heavy machinery operation, and chain saw use may disrupt MSO nesting and foraging activities in the Venezia PAC as described above, although these disturbances would occur over a relatively short duration. We do not anticipate that cutting down individual trees or snags along the bulldozer lines will significantly affect MSO in the Venezia PAC, as this activity will not appreciably reduce the number of these trees in the PAC.

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. Several private in-holdings occur adjacent to the August Fire perimeter. Home owners and sometimes their pets inhabit these private lands and use the forest lands surrounding their cabins for recreational activities such as hiking, birding, off-highway vehicle riding, and hunting.

CONCLUSION

After reviewing the anticipated effects of the proposed action for the August Fire Suppression Rehabilitation project, the environmental baseline for the action area, the current status of the MSO, and the cumulative effects, it is our biological opinion that the proposed action is not likely to jeopardize the continued existence of the MSO. We base this conclusion on the following:

1. Fire-suppression rehabilitation activities will minimize the effects of suppression activities from causing more long-term habitat damage.
2. Effects to MSO habitat will be limited because fire-suppression rehabilitation activities will be conducted following the guidelines of the Recovery Plan.
3. Noise disturbance from the fire-suppression rehabilitation activities will be relatively short in duration, and adverse effects to MSO will be limited to one PAC.

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 further defined (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 (50 CFR 17.3) as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering. "Incidental take" is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

AMOUNT OR EXTENT OF TAKE ANTICIPATED

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

In past BOs, we used the management territory to quantify incidental take thresholds for the MSO (see BOs provided to the Forest Service from August 23, 1993 through 1995). The current section 7 consultation policy provides for incidental take if an activity compromises the integrity of a PAC through disturbance during the breeding season or habitat alteration. Actions outside PACs will generally not be considered incidental take, except in cases when areas that may support owls have not been adequately surveyed.

Using available information as summarized within this document, we have identified conditions of possible incidental take for the MSO associated with the proposed action within the Venezia PAC (090313). Based on the best available information concerning the MSO, habitat needs of the species, the project description, and information furnished by the FS, take is anticipated for the MSO as a result of the low-level flights along bulldozer lines during the breeding season and noise disturbance associated with operating heavy machinery and chain saws within and adjacent to the Venezia PAC. Low-level helicopter flights and ground-based activities may result in temporary disturbance to owls, which could result in flush responses or decreased prey delivery/feeding.

We anticipate that the take of MSO will be difficult to detect because finding a dead or impaired specimen is unlikely. However the level of incidental take can be anticipated by short-term disturbance that will affect the reproductive success and survival of MSO within the project area. We anticipate harm and harassment to MSO in the form of disturbance from the proposed action in the Venezia PAC. This may result in disrupted MSO reproduction and the ability of this PAC to contribute to recovery of the species in the short-term.

We anticipate the take of one pair of MSOs and/or associated eggs/juveniles in the form of harassment associated with the Venezia PAC (090313) in the Basin and Range West RU due to disturbance resulting from fire suppression rehabilitation actions within this PAC over the course of this proposed action. This anticipated take is in the form of short-term disturbance for one breeding season, a non-habitat altering action that disrupts or is likely to disrupt owl behavior within the PAC.

The FWS will not refer the incidental take of any migratory bird or bald eagle for prosecution under the Migratory Bird Treaty Act of 1918, as amended (16 U.S.C. §§ 703-712), or the Bald and Golden Eagle Protection Act of 1940, as amended (16 U.S.C. §§ 668-668d), if such take is in compliance with the terms and conditions (including amount and/or number) specified herein.

EFFECT OF THE TAKE

In this biological opinion, we have determined that this level of anticipated take is not likely to result in jeopardy to this species.

REASONABLE AND PRUDENT MEASURES WITH TERMS AND CONDITIONS

The following reasonable and prudent measure is necessary and appropriate to minimize take of MSO:

1. Prescott National Forest shall monitor the Venezia PAC for MSO occupancy.

TERMS AND CONDITIONS

In order to be exempt from the prohibitions of section 9 of the Act, Prescott National Forest must comply with the following term and condition, which implements the reasonable and prudent measure described above, and outlines reporting/monitoring requirements. This term and condition is non-discretionary.

- 1.1 All monitoring will be conducted according to current protocol.
 - a. Monitoring report containing a habitat assessment and management recommendations will be submitted to our office upon completion of monitoring the Venezia PAC.

Review requirement: The reasonable and prudent measure, with its implementing term and condition, is designed to minimize incidental take that might otherwise result from the proposed action. If, during the course of the action, the level of incidental take is exceeded, such incidental take would represent new information requiring review of the reasonable and prudent measure provided. The Prescott National Forest must immediately provide an explanation of the causes of the taking and review with the AESO the need for possible modification of the reasonable and prudent measure.

Disposition of Dead or Injured Listed Species

Upon locating a dead, injured, or sick listed species initial notification must be made to the FWS's Law Enforcement Office, 2450 West Broadway Road #113, Mesa, Arizona [telephone: (480) 967-7900] within three working days of its finding. Written notification must be made within five calendar days and include the date, time, and location of the animal, a photograph 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 injured animals to ensure effective treatment and care, and in handling dead specimens to preserve biological material in the best possible condition. If feasible, the remains of intact specimens of listed animal species shall be submitted to educational or research institutions holding appropriate State and Federal permits. If such institutions are not available, the information noted above shall be obtained and the carcass left in place.

Arrangements regarding proper disposition of potential museum specimens shall be made with the institution prior to implementation of the action. Injured animals should be transported to a qualified veterinarian by a qualified biologist. Should any treated listed animal survive, the Service should be contacted regarding the final disposition of the animal.

CONSERVATION RECOMMENDATIONS

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

1. We recommend that you monitor MSO habitat throughout the project area so that correlations can be made between MSO occupancy and habitat quality.
2. We recommend that you pursue opportunities to research actual effects to and recovery of MSO and nest/roost sites in regard to fire-suppression actions, especially direct drops from aircraft and particularly in relation to future site occupancy by MSO.
3. We recommend that you continue to assist us in the implementation of the Recovery Plan.
4. We recommend that you pursue the completion of a forest-wide consultation on wildland fire use and wildfire suppression activities.

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

REINITIATION NOTICE

This concludes initiation of formal consultation on your proposal to rehabilitate the suppression action areas associated with the August Fire south of Prescott, Arizona. As provided in 50 CFR §402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been 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 a listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation. If conservation measures or other aspects of the proposed action are not implemented as anticipated herein, including schedules for implementation, reinitiation may be warranted pursuant to 50 CFR 402.16(b).

The FWS appreciates the Prescott National Forest's efforts and consultation to identify and minimize effects to listed species from the project. We encourage you to coordinate the review of this project with the Arizona Game and Fish Department.

Any questions or comments should be directed to Brian Wooldridge (928) 226-0614 (x105) or Brenda Smith (x101) of our Flagstaff Sub-office.

Sincerely,

/s/Brenda Smith for

Steven L. Spangle
Field Supervisor

cc: Assistant Field Supervisor, Fish and Wildlife Service, Flagstaff, AZ (Attn: Shaula Hedwall)
District Ranger, Bradshaw Ranger District, Prescott, AZ

Chief, Habitat Branch, Arizona Game and Fish Department, Phoenix, AZ
Regional Supervisor, Arizona Game and Fish Department, Kingman, AZ

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APPENDIX A

Concurrence

After reviewing the effects of the proposed action, we concur with your determination that the proposed action may affect, but is not likely to adversely affect, MSO critical habitat. Our concurrence is based on the following:

- Ponderosa pine trees greater than nine inches dbh will not be removed as a result of this project. Therefore, this primary constituent element (PCE) of critical habitat related to forest structure will be maintained. Furthermore this follows the guidelines of the MSO Recovery Plan.
- Removing a limited number of snags for personnel safety or to place across bulldozer lines will not significantly reduce the number of snags currently present. Because of the beetle kill in the area, there are a sufficient number of large snags in the project area that will be maintained as another PCE of MSO critical habitat related to forest structure.
- Down woody material will increase as is it is scattered across bulldozer lines, thereby improving the habitat for MSO prey species. In addition to slash piles being pulled back across bulldozer lines, reseeded of these areas with native vegetation will further promote residual plant cover to maintain fruits and seeds, as well as allowing plant regeneration as it relates to this PCE of MSO critical habitat.
- The suppression rehabilitation will decrease the likelihood of soil erosion and additional resource damage to remaining critical habitat that resulted from the August Fire suppression actions.