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In Reply Refer To:
AESO/SE
02-21-05-F-0343

April 11, 2006

Ms. Nora B. Rasure
Forest Supervisor
Coconino National Forest
1824 South Thompson Street
Flagstaff, Arizona 86001-2529

RE: Mountaineer Healthy Forests Restoration Act Project Biological Opinion

Dear Ms. Rasure:

Thank you for 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 November 21, 2005, and received by us on November 23, 2005. This consultation concerns the possible effects of the Mountaineer Healthy Forests Restoration Act (HFRA) Project, Coconino County, Arizona, on the threatened bald eagle (*Haliaeetus leucocephalus*). Critical habitat is not designated for the bald eagle and will not be discussed further in this document. In addition, the Forest Service has determined that the proposed action may affect, but is not likely adversely affect the threatened Mexican spotted owl (*Strix occidentalis lucida*) (MSO) and its critical habitat. We concur with your determination. The basis for our concurrence is found in Appendix A.

This biological opinion is based on information provided in the original November 21, 2005, Biological Assessment and Evaluation (BAE), the February 21, 2006, letter we received regarding project modifications, conversations and electronic correspondence with your staff, and other sources of information. Literature cited in this biological opinion is not a complete bibliography of all literature available on the bald eagle or on other subjects considered in this opinion. A complete administrative record of this consultation is on file at this office.

Consultation History

Details of the consultation history are summarized in Table 1.

Table 1. Summary of Consultation History

<i>Date</i>	<i>Event</i>
March 2004 – November 2005	We worked with you through the Greater Flagstaff Forest Partnership (GFFP) on the design of the Mountaineire HFRA Project.
February 2005	The Mormon Lake Ranger District decided the Mountaineire Project environmental analysis would be conducted under HFRA.
March 24, 2005	The Mormon Lake Ranger District issued the proposed action for the Mountaineire HFRA Project to the public for comment.
June – October 2005	We worked with your staff to develop the BAE. Specifically, we discussed issues surrounding proposed haul routes and effects to listed species and worked on the analysis/justification for thinning trees up to 12-inch diameter at breast height in the Lake No.1 (#040526) MSO protected activity center (PAC).
November 23, 2005	We received your request for formal consultation.
December 1, 2005	We received the Environmental Assessment (EA) for the Mountaineire HFRA Project.
December 6, 2005	We acknowledged your request for formal consultation with a 30-day letter.
January 2, 2006	The Mountaineire HFRA project was objected to by the Center For Biological Diversity.
January 2006	We discussed the objection letter with your staff and provided information regarding specific issues in the objection letter.
February 2, 2006	The Coconino National Forest responded to the Center for Biological Diversity's objection letter. The response resulted in changes to the proposed action and analysis for the Mountaineire HFRA Project. Changes to the project included removing previously proposed thinning and burning activities in the Lake No.1 MSO PAC. The proposed action had met the intent of the Recovery Plan for the Mexican Spotted Owl, but were removed from the action because they did not meet Forest Plan direction.
February 23, 2006	We received your letter documenting changes to the Mountaineire HFRA Project.
On-going 2006	We continue to work with your staff to find the resources necessary to analyze using an alternate haul route past the Lower Lake Mary bald eagle nest and winter roost site.

BIOLOGICAL OPINION

DESCRIPTION OF THE ACTION

The Coconino National Forest is proposing to conduct the Mountaineire HFRA Project, which is designed to reduce the risk of severe wildland fire, protect private in-holdings, and improve forest conditions. The project area encompasses 16,569 acres, and includes 15,237 acres of Coconino National Forest land and 1,332 acres of private land in Coconino County, Arizona. The Mountaineire HFRA Project area is located southeast of Flagstaff between Lake Mary Road (Forest Highway (FH) 3) and Interstate 17 on the Mormon Lake Ranger District. The project will be implemented over approximately the next 12 to 15 years.

The proposed action was designed by the Forest Service and GFFP partners to best meet desired future conditions within the project area. Within the Mountaineire project boundary, approximately 15,173 acres will be thinned and/or burned. Primarily, the existing road system will be used to conduct this work, with only 1.3 miles (consisting of three segments) of temporary road to be constructed for hauling access. These segments will be obliterated after thinning activities are completed. The proposed project (Alternative 3) is described in detail (including best management practices, conservation measures, and mitigation) in Chapter 2 of the EA, with modifications noted in the Forest Service's February 2, 2006, objection response letter. In summary, as a part of the Mountaineire HFRA Project, the Forest Service proposes to:

- Mechanically thin approximately 13,780 acres to achieve an average canopy cover of 30 to 60%, depending upon site-specific resource objectives. Thinning is planned to reduce wildfire risk and restore forest structure and diversity. On approximately 1,310 acres, three distinct treatment prescriptions will be implemented to study the effects of different thinning densities on tassel-eared squirrel density and recruitment. The Arizona Game and Fish Department (AGFD) will conduct this research.
- Conduct initial prescribed burns on approximately 15,173 acres following thinning to reduce fuel loads and reintroduce low-to moderate-intensity surface fire.
- Conduct additional maintenance burns following the initial prescribed burns to maintain low fuel loads.
- Designate and maintain an open road system of 47.7 miles within the project area.
- Designate dispersed camping areas to reduce human-caused ignitions of wildfires.

Conservation Actions (relevant to the bald eagle)

- Prescribed burning will not occur within a two-mile radius of an occupied nest site during the bald eagle breeding season.
- No "Jake" (compression) brake use will be allowed and a 20 mile per hour speed limit will be maintained within 0.25 mile of the Lower Lake Mary Breeding Area (BA).

STATUS OF THE SPECIES

The bald eagle is a large bird of prey that historically ranged and nested throughout North America except extreme northern Alaska and Canada, and central and southern Mexico.

The bald eagle south of the 40th parallel was listed on March 11, 1967 as endangered under the Endangered Species Preservation Act of 1966 (U.S. Fish and Wildlife Service 1967), and was reclassified to threatened status on July 12, 1995 (U.S. Department of the Interior 1995). No critical habitat has been designated for this species. The bald eagle was proposed for delisting on July 6, 1999 (U.S. Department of the Interior 1999). On February 6, 2006, the proposed delisting rule was re-opened for public comment (U.S. Department of the Interior 2006).

Since listing, bald eagles have increased in number and expanded in range due to habitat protection, the banning of DDT and other persistent organochlorine compounds, and additional recovery efforts. Surveys in 1963 indicated 417 active nests in the lower 48 states with an average of 0.59 young produced per nest. Surveys in 1974 resulted in a population estimate of 791 occupied breeding areas in the lower 48 states (U.S. Department of the Interior 1999). In 1994, 4,450 occupied breeding areas were reported with an estimated average of 1.16 young produced per occupied nest (U.S. Department of the Interior 1995). We estimate that the breeding population exceeded 5,748 occupied breeding areas in 1998 (U.S. Department of the Interior 1999). In 2000, the last year a National census was conducted, there were an estimated 6,471 nesting pairs of bald eagles (U.S. Department of the Interior 2006). Approximately 60% of the lower 48 States have reported nesting pair numbers for 2003, totaling 4,044 nesting pairs. We estimate a current bald eagle nesting population in the lower 48 States to be a minimum of 7,066 nesting pairs, using the numbers last reported from the States. However, it is believed that this is a conservative estimate given that several States with large bald eagle populations have not continued annual monitoring. Last year in Arizona, 39 of 47 known bald eagle breeding areas were occupied, 36 pairs attempted to breed, and 25 pairs successfully produced 38 fledglings (Jacobson *et al.* 2005).

Although not considered a separate subspecies, bald eagles in the southwestern United States have been considered as a significant population for the purposes of consultation and recovery efforts under the Act. A recovery plan was developed in 1982 for bald eagles in the Southwest recovery region. However, new information has indicated that the bald eagles in Arizona and the Southwest recovery region are not a distinct, reproductively isolated population as was previously believed. In 1994, a male bald eagle which originated from eastern Texas was discovered nesting at Luna Lake in east-central Arizona. The origin of the unbanded female was not determinable. We have determined that bald eagles in the Southwest recovery region are part of the same bald eagle population found in the remaining lower 48 states (U.S. Department of the Interior 1995). We proposed delisting of the bald eagle in the lower 48 states including Arizona, stating that the number of breeding pairs in the Southwestern Recovery Unit has more than doubled in the last 15 years (U.S. Department of the Interior 1999).

However, the AGFD (*in prep.*) concluded that “Evidence from the banding and identification of breeding adults defends the theory that Arizona’s breeding population is not supported or maintained by immigration from other states or regions. Because adults return to the vicinity of their natal origin to breed, the large distance between small populations in the Southwest decreases the chance for movement between neighboring populations. Probably most convincing are the results from banding

256 nestlings over 20 years and identifying 372 breeding adults over eight years. Only one individual from out-of-state entered the breeding population and one left. Additionally, the proportion of breeding adults with color bands (placed on nestlings in Arizona) has steadily increased, while the presence of unmarked eagles has decreased. Thus, continued attention to the survivorship of all Arizona bald eagles is vital to the maintenance of our breeding population. We can not depend on immigration to Arizona from nearby states to make up for poor management in Arizona.”

The bald eagle occurs in association with aquatic ecosystems, frequenting estuaries, lakes, reservoirs, major river systems, and some seacoast habitats. Generally, suitable habitat for bald eagles includes those areas that provide an adequate food base of fish, waterfowl, and/or carrion, with large trees for perches and nest sites. Bald eagles in Arizona consume a diversity of food items, including some invertebrates. However, their primary food is fish, which are generally consumed twice as often as birds, and four times as often as mammals. Bald eagles are known to catch live prey, steal prey from other predators (especially osprey), and use carrion. Carrion constitutes a higher proportion of the diet for juveniles and subadults than it does for adult eagles. Diet varies depending on what species are available locally.

In addition to breeding bald eagles, Arizona provides habitat for wintering bald eagles, which migrate through the state between October and April each year. In winter, bald eagles often congregate at specific wintering sites that are generally close to open water and offer good perch trees and night roosts (U.S. Department of the Interior 1995). In 2005, the standardized statewide Arizona winter count totaled 224 bald eagles, including 153 adults, 56 subadults, and 16 of unknown age. The highest number of bald eagles occurred on Lake Mead, Temple Bar (n=25). An additional 21 bald eagles were counted on non-standardized routes (Jacobson *et al.* 2005). Of the 115 standardized routes, Arizona completed 97. This matches the 1997 and 1998 surveys for the least routes completed. The 97 standardized routes completed and the total of 224 bald eagles counted were below average (average 332 bald eagles since survey routes were standardized in 1995) and are directly correlated to the wet weather conditions experienced in the first two weeks of January (Jacobson *et al.* 2005).

Wintering bald eagles feed on fish, waterfowl, terrestrial vertebrates, and carrion. Eagles are often seen perched in trees or snags near roadways where they feed on road-killed animals. At night, small groups or individual eagles roost in clumps of large trees in protected locations such as drainages or hillsides. Key habitat components include nighttime roosts and prey availability. Roost trees are usually large ponderosa pine trees (live or dead) with open canopies on slopes that provide protection from inclement weather.

Even though the bald eagle has been reclassified to threatened, and the status of the birds in the Southwest is on an upward trend, the Arizona population remains small and under threat from a variety of factors. Human disturbance of bald eagles is a continuing threat that may increase as numbers of bald eagles increase and human development continues to expand into rural areas (U.S. Department of the Interior 1999). The bald eagle population in Arizona is exposed to increasing hazards from the regionally increasing human population. These include extensive loss and modification of riparian breeding and foraging habitat through clearing of vegetation, changes in groundwater levels, and changes in water quality. Threats persist in Arizona largely due to the proximity of bald eagle breeding areas to major human population centers and recreation areas. Additionally, because water is a scarce resource in the Southwest, recreation is concentrated along

available water courses. Some of the continuing threats and disturbances to bald eagles include entanglement in monofilament fish line and fish tackle; overgrazing and related degradation of riparian vegetation; malicious and accidental harassment, including shooting, off-road vehicles, recreational activities (especially watercraft), and low-level aircraft overflights; alteration of aquatic and riparian systems for water distribution systems and maintenance of existing water development features such as dams or diversion structures; collisions with transmission lines; poisoning; and electrocution (Stalmaster 1987, Beatty *et al.* 1999).

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 within 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.

For this consultation, we are defining the action area as the entire Mountaineer HFRA analysis area, extending from Interstate 17 east to FH 3, including all haul routes to and from the project area.

A. Status of the species within the action area

Lower Lake Mary has almost year-round use by bald eagles. Though the lake and current nest/roost habitat are located approximately 1.25 mile from the project thinning/burning boundary, this area will be impacted by trucks hauling logs along FR 296 and 296A that run adjacent to the nest and roost stand.

Breeding Bald Eagles

The Lower Lake Mary BA was discovered in 1970 and supported breeding activity until 1972. In 1982 the BA was designated historical after 10 years of non-use. In February and March 1996, adult and subadult bald eagles were observed building a nest near the historical nest location, but breeding activity never commenced. Another pair of bald eagles was seen constructing a nest in July 2004, but no breeding activity occurred. On May 23, 2005, the Forest Service reported an active bald eagle nest on Lower Lake Mary. A pair of un-banded adult bald eagles reoccupied the BA and rebuilt historical nest #1. In 2005, the bald eagles nested at the site and hatched one young. The nestling was banded in July. In early August, the young eagle was found on the ground below the nest and died the next day. A necropsy was completed and results indicated the eaglet died as a result of injuries incurred when it fell from the nest.

The bald eagle pair was seen copulating on March 25, 2006; however, it is unclear if they will use last year's nest again or relocate. Regardless, bald eagles typically have more than one nest per breeding area, and it is likely they may use the 2005 nest in the future.

Winter Resident Bald Eagles

Bald eagles are primarily winter visitors to northern Arizona, occupying all habitat types and elevations. Wintering eagles arrive in the fall, usually late October or early November, and leave in early to mid-April. The same stand that contains the Lower Lake Mary BA nest #1 is also a winter bald eagle roost.

Bald eagle surveys are conducted annually in January in Arizona. There are two standardized routes that include portions of the Mountaineer HFRA Project Area. The Interstate 17 Route runs along the western boundary of the project area and the FH 3 Lakes Route runs along the eastern boundary of the project area. The survey results for these routes are displayed in Table 2. These routes only survey the edges of the project area and only a few of the sightings from each route were most likely within the project area. In addition, the routes do not survey roost habitat, but only count eagles seen flying, perched or foraging for carrion on Interstate 17 or fish in the lakes along FH 3. Therefore, the bald eagle numbers don't reflect the total number of bald eagles using winter roost habitat or foraging in the area.

Table 2: Bald Eagle Midwinter Survey Results for the Interstate 17 and FH 3 Lakes Standardized Routes.

Route No.	Route Name	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
24	I-17	10	5	5	2	9	3	13	3	20	11	17	31	3	2	10
28	FH 3 Lakes	8	20	13	8	69	4	3	14	4	5	6	9	7	10	55

B. Factors affecting the species within the action area

The Lower Lake Mary area, though consisting mostly of Federal land, is a very active area. Almost all of the current threats listed to bald eagles in the Status of the Species, above, occur or have the potential to occur within the action area. Potential direct threats include low-level aircraft overflights due to the nest/roost stand proximity to the Flagstaff Airport, collisions with power lines, poisoning, and other human disturbances. We convicted a local sheep rancher in 2004 of poisoning eagles west of Flagstaff. Additional threats to bald eagles include habitat disturbances (e.g., degraded aquatic habitat conditions, fluctuating water levels due to drought and water users) which may indirectly affect the species' reproductive success.

Human disturbance to bald eagles may increase as the number of eagles increase and human development continues to expand into rural areas. Currently, the Lower Lake Mary BA is within 1.0 mile of private property and the shoreline near the nest/roost stand is used by off-highway vehicles, fisherman, and other recreationists. The Forest Service implemented a closure order during the breeding season last year, but the area is popular with locals and tourists alike. Nest watchers recorded 347 human activities at the nest in 2005 (Jacobson *et al.* 2005). Ten activities elicited 24 significant responses from the breeding pair. The bald eagles were restless in response to gunshots, sirens, helicopters, off-highway vehicles, equestrians, construction, and dogs. The eagle pair flushed in response to canoes/kayaks, helicopters, and bicyclists (Jacobson *et al.* 2005).

In addition, concentrations of heavy metals in bald eagle eggs are a concern in Arizona. Thirteen Arizona bald eagle eggs collected from 1994 to 1997 contained from 1.01 to 8.02 parts per million

(ppm) dry weight mercury (Arizona Game and Fish Department *in prep*). Concentrations in the egg are highly correlated with risk to reproduction. Adverse effects of mercury on bald eagle reproduction might be expected when eggs contain about 2.2 ppm mercury or more. Five of 10 eggs approached or exceeded the 2.2 ppm threshold concentration. What is especially alarming is that mercury concentrations in addled eggs appear to be increasing over time. Addled bald eagle eggs collected in Arizona in 1995-97 contained more than two- to six-times higher concentrations of mercury than eggs collected in 1982-84 (approximately 0.39-1.26 ppm) (K. King, pers. comm.). Both Upper and Lower Lake Mary have been closed to fishing at different times in the last five years due to high mercury levels in fish. Since bald eagles using the area are most definitely foraging on fish in the reservoirs, it is possible that mercury may impact the bird's reproductive success.

Another potential future threat to bald eagles in the area is West Nile Virus (WNV). The Lower Lake Mary nestling that died tested positive for WNV, although this is not what killed the bird, and other birds in the area have tested positive for the virus.

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.

The direct and indirect effects of the proposed action to bald eagles include habitat disturbance (including fire and fuels management actions) and noise disturbance. Bald eagles have been observed nesting and roosting within the proposed action area.

Habitat Disturbance

Implementation of the proposed action will result in the thinning and/or burning of approximately 15,173 acres of ponderosa pine forested habitat. According to the BAE, there is no nesting or potential nesting habitat within the project boundary. In addition, though potential habitat does exist, there are no known winter roosts within the project boundary. However, as stated above, the action area contains a known winter roost and nesting area approximately 1.25 miles east of the project area. In addition, the Forest Service identified a potential roost site 0.5 mile southwest of the project and west of Interstate 17.

No thinning or burning activities are planned for any known or potential eagle habitat. In addition, there will be no burning or thinning within 1.25 miles of the known nest and roost location. However, burning will most likely occur from April through October, which encompasses the period of time when bald eagles may be incubating eggs or caring for nestlings or young. Heavy smoke during this time may cause adults to leave the area and may result in reproductive failure. To ensure that heavy smoke does not result in adverse impacts to nesting eagles, prescribed burning will not occur within a two mile radius of any occupied nest site.

Burning outside the breeding season should result in only minimal effects to roosting bald eagles. During the daytime, smoke will travel upward, but smoke tends to settle into the canyons and low-lying areas during nighttime. However, when burning occurs southwest of the nest/roost site, smoke may drift from the project area, through Priest and Howard draws funneling toward the nest/roost and

creep through the area down into the Lower Lake Mary basin. In the winter, smoke should settle into drainages and not impact the elevated nest/roost location.

Noise Disturbance

The Lower Lake Mary bald eagle BA and winter roost site is located adjacent to the proposed haul route for thinning in Location 358, Sites 1-14. Although this nest/roost site would not be physically altered by the proposed action, the use of FR 296 and 296A as the entry and exit route for hauling logs will result in disturbance to both nesting and roosting eagles. The Forest Service estimated that approximately 776 truckloads of timber will be hauled using this route. The volume of timber and truckloads were estimated from approximate cubic feet of timber/acre removed on similar fuels reduction treatments within the urban interface. Using an estimate of 20 loads-per-day, it would take a contractor a minimum of eight weeks to remove all of the timber. There is a six-week window (September 1 – October 15) between the breeding season and winter roosting season where hauling activities would not likely adversely affect the bald eagle. However, due to the number of truckloads and potential weather and road conditions that may limit the ability to haul during the winter months (October – March), hauling activities are could take place during both the winter roosting season (October 15 – April 15) and the breeding season (January 1 to August 31). The Forest Service expects that trucking could occur over one to three breeding seasons and would last approximately 40 to 50 days (assuming 20 trucks per day). Based upon the last two years of monitoring data, bald eagles have used this area year-round (roosting, nesting, perching, foraging), so there is a chance whenever hauling occurs, that bald eagles may be disturbed.

Biological studies of eagle behavior indicate that eagles are particularly vulnerable to interference during territory establishment, courtship, egg-laying, incubation, and parenting of nestlings (U.S. Department of the Interior 2006). A wide variety of activities, including various types of development, resource extraction, and recreational activities near sensitive areas such as nesting, feeding, and roosting sites, can interrupt or interfere with the behavioral patterns of eagles. Further disruption may also result from human activity that occurs after the initial habitat alteration or disturbance. When a sound source arouses an animal, the disturbance may affect metabolic rates by increasing activity levels. This increased activity can deplete energy reserves (Bowles 1995). Noisy human activity can cause raptors to expand their home ranges, but birds often return to normal use patterns when human activity ceases (Bowles 1995). Logging trucks, as they brake and shift gears, create bursts or loud sound. Though, the Forest Service agreed to limit the use of “jake” brakes near the eagle nest; however, the diesel trucks will be very noisy as they travel directly past the nest and roost site. Disturbance during the nesting season may increase the potential for nest failure and/or lower nest success.

Management of wintering bald eagles involves protecting three habitat components: foraging areas, daytime perching areas, and night roosts, as well as the eagles that use them (Martell 1992). It is recommended that managers provide protection from human disturbance, physical alterations to habitat, environmental contaminants, and loss of food resources (Martell 1992). The use of the proposed haul route during the winter roost season will not provide protection from disturbance. Disturbances associated with the proposed action may limit the use of winter foraging areas, disrupt foraging behavior, and force eagles to use marginal resources, thereby reducing habitat quality (Stalmaster 1983, 1987). Stalmaster and Kaiser (1997) studied the flushing responses of wintering

bald eagles on the Fort Lewis Army Reservation, Washington during 1991-1994. They found that flushing by eagles decreased with increasing distance from firing events (16% of eagles flushed at 0.31 to 0.62 mile). Another study found that gunshots and sonic booms within 1.24 miles of nesting eagles caused 10% of birds to flush (Grubb and King 1991), but experimental shooting 0.31 mile from a roost caused most eagles to flush (Smith 1988). Habituation to frequently occurring events, especially by adults, and the need for food and habitat contained in the area, likely explain the apparent tolerance of many eagles to firing and activity (Stalmaster and Kaiser 1997). However, as noted above, habituation to disturbance, though it may occur to some extent, often is partial or negligible (Frid and Dill 2002).

The number of eagles that use the Lower Lake Mary winter roost in any given year is unknown. However, it is likely that the eagles associated with the Lower Lake Mary BA do use the roost in the winter, so we can assume that at least two eagles may be using the location in the winter.

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 the potential development and/or modification (e.g., road construction, land clearing, logging, fuelwood gathering) of private property in-holdings. These activities may reduce the quality and quantity of bald eagle nesting, roosting, and perching habitat; result in disturbance to breeding and/or wintering bald eagles; and contribute as cumulative effects to the proposed action.

CONCLUSION

After reviewing the current status of the bald eagle, the environmental baseline for the action area, the effects of the proposed action and the cumulative effects, it is our biological opinion that implementation of the Mountaineer HFRA Project is not likely to jeopardize the continued existence of the bald eagle. Our reasons for this conclusion are that the population status of the bald eagle both within its entire range and within the action area has substantially improved; the species is proposed for delisting; and, the proposed action includes conservation measures that will lessen the impact of the proposed Mountaineer HFRA Project on nesting and wintering eagles within the project area. No critical habitat has been designated for the species; therefore, none will be affected.

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 (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 the part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

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

Amount or Extent of Take Anticipated

We anticipate that the (2) adult bald eagles and any young associated with the Lower Lake Mary BA may be taken each year that the FR 296/296A haul route is used as a result of disturbance. The proposed action will disturb eagles to the degree that it interferes with or interrupts normal breeding, feeding, or sheltering habits, resulting in potential injury, death, or nest abandonment. In addition to immediate impacts, our definition of disturb encompasses the noise impacts that may begin when eagles are not yet present, but impedes their ability to use the site when they return (e.g., hauling begins in August and continues through November which potentially impedes use of the site by wintering eagles for feeding and sheltering). We anticipate that the adult bald eagles will be taken due to the harassment due to noise disturbance at the nest and/or roost site and that any eggs/young associated with the site may be harmed if adults are forced to flush from the nest. In addition, even if the adult birds associated with the Lower Lake Mary BA do not use the nest, it is likely that the proposed action may limit their feeding and roosting/perching opportunities at this location for an extended period of time. The Forest Service has stated that the haul route may be used for a minimum of one and as many as three years. For the purposes of this consultation, we will assume that the project may take three years and eagles associated with the BA will be effectively “taken” via harassment each year the haul route is used.

We 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 determine that this level of anticipated take is not likely to result in jeopardy to the bald eagle.

REASONABLE AND PRUDENT MEASURES AND TERMS AND CONDITIONS

In order to be exempt from the prohibitions of section 9 of the Act, the Coconino National Forest must comply with the following terms and conditions, which implement the reasonable and prudent measures, described below and outline required reporting/monitoring requirements. These terms and conditions are non-discretionary.

The following reasonable and prudent measures and terms and conditions are necessary and appropriate to minimize take of bald eagles:

1. The Coconino National Forest shall work with the AGFD to monitor the status of the eagles associated with the Lower Lake Mary BA.
 - a. Occupancy and reproduction monitoring will occur each year to determine the status of the Lower Lake Mary BA.
 - b. The Coconino National Forest shall submit annual monitoring reports to our office by November 1 of each year. The report shall include results of surveys as well as any observations of bald eagles or notes about the effects of the action.
 - c. Monitoring will be conducted in cooperation with AGFD and will occur until either the Mountaineer HFRA project is complete or the Lower Lake Mary BA is designated a historical site.
2. The Coconino National Forest will not use the proposed haul route on FR 296 and 296A from January 1 to June 30 if eagles are determined to be nesting in the Lower Lake Mary BA. This should minimize take by protecting eagles when they are particularly vulnerable to interference during territory establishment, courtship, egg-laying, incubation, and parenting of nestlings, but still provide ample time for hauling logs.
3. The Coconino National Forest will report to our office when hauling is expected to occur. During hauling, the Forest will track the number of logging trucks used and on what dates hauling occurs. This information should be included in the annual monitoring report.

Review Requirement: The reasonable and prudent measures, with their implementing terms and conditions, are designed to minimize incidental take that might otherwise result from the proposed action. 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 measures provided. The Forest Service must immediately provide an explanation of the causes of the taking and review with the Arizona Ecological Services Office the need for possible modification of the reasonable and prudent measures.

DISPOSITION OF DEAD, INJURED, OR SICK MSO

Upon locating a dead, injured, or sick bald eagle, initial notification must be made to the Service's Law Enforcement Office, 2450 West Broadway Suite #113, Mesa, Arizona 85202 (telephone: 480/967-7900) 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. If possible, the remains of intact eagle(s) shall be provided to this office. If the remains of the eagle(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 eagle(s) survive, the AESO 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 purpose of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information.

1. We recommend that the Forest Service continue to work with us, the AGFD, and other partners to be able to obtain the clearances and conduct the construction necessary to use Forest Road 132 as an alternate haul route for timber coming out of Location 358. Though we realize that this is not currently a reasonable alternative, we hope that through inter-agency cooperation, a solution that moves that haul route away from the Lower Lake Mary bald eagle BA and winter roost will be found. This is especially critical as planning begins for Elk Park, another fuels reduction project in the area, that proposes to use the same haul route past the current nest/roost site.
2. We recommend that the Forest Service continue to work with us to treat the 147 acres in the Lake No. 1 MSO Protected Activity Center (PAC). We believe that the thinning and burning prescriptions we developed with your staff would have benefited the habitat associated with that PAC and we believe both of our agencies should work towards obtaining the funding and completing the NEPA to conduct the project.
3. We recommend that the Forest Service work with us and AGFD to develop a management plan for the Lower Lake Mary BA.

In order to keep us informed of actions minimizing or avoiding adverse effects or benefiting listed species or their habitat, we request notification of the implementation of any conservation recommendations.

REINITIATION - CLOSING STATEMENT

This concludes formal consultation on the action outlined in this biological opinion. As provided in 50 CFR Section 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.

Thank you for your continued coordination. No further section 7 consultation is required for this project at this time. Should project plans change, or if information on the distribution or abundance of listed species or critical habitat becomes available, this determination may need to be reconsidered. We also encourage you to coordinate the review of this project with the Arizona Game and Fish Department. In all future correspondence on this project, please refer to consultation number 02-21-05-F-0343. Should you require further assistance or if you have any questions, please contact Shaula Hedwall (x103) or Brenda Smith (x101) of our Flagstaff Suboffice at (928) 226-0614.

Sincerely,

/s/ Steven L. Spangle
Field Supervisor

cc: Chief, Habitat Branch, Arizona Game and Fish, Phoenix, AZ
Regional Supervisor, Arizona Game and Fish Department, Flagstaff, AZ
District Ranger, Mormon Lake Ranger District, Flagstaff, AZ
District Wildlife Staff, Peaks Ranger District, Flagstaff, AZ (Attn: Cary Thompson)
Greg Beatty, Fish and Wildlife Service, Phoenix, AZ

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APPENDIX A – CONCURRENCE

This appendix contains our concurrence with your determination that the proposed action may affect, but is not likely to adversely affect, the MSO.

Mexican spotted owl (*Strix occidentalis lucida*) (MSO)

We concur with your determination that the proposed action may affect, but is not likely to adversely affect, the MSO or its critical habitat. We base this concurrence on the following:

- Proposed treatments in MSO restricted and critical habitat will follow the recommendations in the Recovery Plan.
- Proposed treatments in MSO restricted and critical habitat will retain and promote the development of key habitat components and primary constituent elements. Primary constituent elements (large diameter trees, wide range of tree sizes, multi-layered canopy, snags, coarse woody debris, hardwoods, and residual plant cover) will be protected and/or maintained in restricted and critical habitat through active management. Snags, large trees, and large Gambel oak will be protected during burning operations.