



United States Department of the Interior

FISH AND WILDLIFE SERVICE
New Mexico Ecological Services Field Office
2105 Osuna NE
Albuquerque, New Mexico 87113
Phone: (505) 346-2525 Fax: (505) 346-2542

AUG 15 2005

Cons. # 2-22-04-F-0605

Jose M. Martinez, Forest Supervisor
Lincoln National Forest
Federal Building
1101 New York Avenue
Alamogordo, New Mexico 88310-6992

Dear Mr. Martinez:

This responds to your March 8, 2005, request for formal consultation with the U.S. Fish and Wildlife Service under section 7 of the Endangered Species Act of 1973 as amended (16 U.S.C. 1531 et seq.). The request concerns the proposed Capital Improvement Project, on the Sacramento Ranger District, Lincoln National Forest, Otero County, New Mexico.

The final biological opinion concerns effects of the Capital Improvement Project on the threatened Mexican spotted owl (*Strix occidentalis lucida*). These effects are considered to be in perpetuity because the removal of restricted habitat is permanent and the associated recreationist activities will be ongoing.

In future communication regarding this project, please refer to consultation #2-22-04-F-0605. If you have any questions or would like to discuss any part of the biological opinion, please contact Santiago Gonzales of my staff at (505) 761-4755.

Sincerely,

Susan MacMullin
Field Supervisor



United States Department of the Interior

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SUMMARY

FINAL BIOLOGICAL OPINION ON THE EFFECTS TO THE MEXICAN SPOTTED OWL TO IMPLEMENT FIVE CAMPGROUND CAPITAL IMPROVEMENTS, SACRAMENTO RANGER DISTRICT, OTERO COUNTY, NEW MEXICO

Cons. #2-22-05-F-0605

Date of the final biological opinion: August 8, 2005

Action agency: Sacramento Ranger District, Lincoln National Forest

Project: The proposed action is to construct campground improvements that will meet public safety, sanitation, and compliance with the American Disabilities Act. The five campgrounds under the Capital Improvement Project are Aspen, Black Bear, Sleepy Grass, Slide, and Deerhead. All campgrounds are located within Township 16S, Range 12E and are within two air-miles of Cloudcroft, New Mexico (see attached map). Approximately 25 acres of owl habitat will be permanently disturbed.

Species affected: Mexican spotted owl (*Strix occidentalis lucida*)

Biological Opinion: The proposed action is not likely to jeopardize the Mexican spotted owl.

Incidental take statement: No incidental take has been assigned to the proposed action.

Conservation Recommendations: Implementation of conservation recommendations is discretionary. Three conservation recommendations are provided.



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Jose M. Martinez, Forest Supervisor
Lincoln National Forest
Federal Building
1101 New York Avenue
Alamogordo, New Mexico 88310-6992

Dear Mr. Martinez:

This document transmits the U. S. Fish and Wildlife Service's (Service) biological opinion based on our review of the proposed U.S. Department of Agriculture Forest Service (Forest Service) Sacramento Ranger District Capital Improvement Project and its effects on the threatened Mexican spotted owl (owl) (*Strix occidentalis lucida*) and its critical habitat. You have determined that proposed action "may affect, is likely to adversely affect" the owl. We received your letter on March 14, 2005, requesting formal consultation in accordance with section 7 of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

The "Biological Assessment and Evaluation (BA&E) for the Sacramento Ranger District Capital Improvement Project" dated March 4, 2005, evaluates anticipated effects on federally listed endangered and threatened species and their habitats resulting from the proposed action. The proposed action is to construct campground improvements that will meet public safety, sanitation, and compliance with the American with Disabilities Act. The five campgrounds under the Capital Improvement Project are Aspen, Black Bear, Sleepy Grass, Slide, and Deerhead. Approximately 25 acres of owl habitat will be disturbed. These effects are considered to be in perpetuity because the removal of restricted habitat is permanent and the associated recreationist activities will be ongoing.

This biological opinion (BO) is based on information provided in the March 4, 2005, BA&E, other information available to the Service, and telephone conversations with your staff. A complete administrative record of this consultation is on file in the Service's New Mexico Ecological Services Field Office.

Consultation History

Informal consultation began on July 28, 2004, when the Forest Service submitted a scoping letter requesting comments on the proposed action. We provided comments on August 18, 2004. The Forest Service submitted their BA&E on March 14, 2005, requesting formal consultation with the Service. The request for formal consultation was acknowledged by the Service in a letter dated April 11, 2005.

BIOLOGICAL AND CONFERENCE OPINION

I. Description of the proposed action

The proposed action is to construct campground improvements that will meet public safety, sanitation, and compliance with the American Disabilities Act. The five campgrounds under the Capital Improvement Project are Aspen, Black Bear, Sleepy Grass, Slide, and Deerhead. All campgrounds are located within Township 16S, Range 12E and are within two air-miles of Cloudcroft, New Mexico (see attached map). Approximately 25 acres of owl habitat will be permanently disturbed.

The list of activities include:

- Remove and replace vault toilets with accessible toilets
- Install group pavilions
- Construct 12 foot by 12 foot tent pads
- Install water pipelines
- Construct parking areas
- Widen and surface roads with asphalt
- Install fences of monuments
- Remove and replace existing I-beam barriers
- Replace signs
- Replace all tables, fire rings, and grills that do not meet guidelines
- Remove 30 campsites
- Sign biking and hiking trail number 105
- Replace a fee station
- Provide host site amenities for recreational vehicles (shelter, septic tank, leach field, and water)
- Install gate at Sleepy Grass Family Campground
- Rip loop roads outside the gated campground
- Provide fitness trail
- Install electric utility poles
- All trees on 2.2 acres at Sleepy Grass Family Campground would be removed

Bulldozers, bobcats, backhoes, graders, excavators, and pavers would be used to complete those aspects of the project requiring equipment. Equipment staging sites will use existing disturbed

areas. A Forest biologist will accompany the construction engineers to identify and mark the staging sites. It is anticipated that no more than one campground per year will be renovated. For the purposes of analysis, the Service will assume a 50-year project life.

Protected Activity Centers (PACs) and critical habitat are not within the proposed project area. The nearest designated PAC is more than 0.75 mile from any proposed activity. The proposed project can proceed any time of year including within the owl's breeding season. All five campgrounds are within Wildland Urban Interface (WUI) areas which are excluded from critical habitat designation for the owl. Thus, no analysis for critical habitat is needed or given in the BA&E or this BO.

II. Status of the species (range-wide)

a. Species description

The owl was listed as threatened on March 16, 1993 (U.S. Fish and Wildlife Service 1993). The Service was ordered to re-propose critical habitat by April 13, 2004, the final rule on owl critical habitat was published on August 30, 2004 (U.S. Fish and Wildlife Service 2004).

The American Ornithologist's Union recognizes three spotted owl subspecies: California spotted owl (*S. o. occidentalis*), Mexican spotted owl (*S. o. lucida*), and northern spotted owl (*S. o. caurina*). The Mexican spotted owl is distinguished from the California and northern subspecies by plumage, genetic makeup, and geographic distribution. This owl is mottled in appearance with irregular white and brown spots on its abdomen, back and head. Its white spots are larger and more numerous than in other subspecies giving it a lighter appearance. Several thin white bands mark its brown tail. Unlike most other owls, all spotted owls have dark eyes.

S. o. lucida has the largest geographic range of the three subspecies. Its range extends from Aguascalientes, Mexico, through the mountains of Arizona, New Mexico, and western Texas, the canyons of southern Utah, and the Front Range of central Colorado. The owl's distribution is fragmented throughout its range, corresponding to forested mountains and rocky canyon lands (U.S. Fish and Wildlife Service 1995, Tarango et al. 1997, Young et al. 1997, Sureda and Morrison 1998, Gutierrez et al. 1995, Peery et al. 1999, Sorrentino and Ward 2003).

There are approximately 8.6 million acres (3.5 million hectares) of critical habitat designated in Arizona, Colorado, New Mexico, and Utah on Federal lands. Critical habitat is limited to areas that meet the definition of protected and restricted habitat as described in the Recovery Plan (U.S. Fish and Wildlife Service 1995). Protected habitat is defined as occupied mixed-conifer or pine-oak forests with slopes greater than 40 percent where timber harvest has not occurred in the past 20 years. Restricted habitat includes mixed-conifer forest, pine-oak forest, and riparian areas outside of protected areas.

b. Life history

The owl occupies a broad geographical area, but does not occur uniformly throughout its range (U.S. Fish and Wildlife Service 1995). Instead, the owl occurs in disjunct localities that correspond to isolated mountain systems and canyons. The owl is frequently associated with mature mixed-conifer, pine-oak, and riparian forests (Ganey et al. 1988, Skaggs and Raitt 1988, Ganey and Balda 1989, Gutierrez and Rinkevich 1991, Willey 1993, Fletcher and Hollis 1994, Ganey and Dick 1995, Gutierrez et al. 1995, Seamans and Gutierrez, 1995, Ward et al. 1995). Mature mixed-conifer forests are mostly composed of Douglas-fir (*Psuedotsuga menziesii*), white fir (*Abies concolor*), limber pine (*Pinus flexilis*) or blue spruce (*Picea pungens*). Pine-oak forests are mostly composed of ponderosa pine (*Pinus ponderosa*) and Gambel oak (*Quercus gambellii*). Riparian forests are dominated by various species of broadleaved deciduous trees and shrubs (U.S. Fish and Wildlife Service 1995). Riparian forests function as important components of ecosystems supporting owls. These communities, particularly mature, multilayered forests, can be important linkages between otherwise isolated subpopulations of owls (U.S. Fish and Wildlife Service 1995). They may serve as direct avenues of movement between mountain ranges or as stopover sites and connect large expanses of landscape that otherwise would be inhospitable to dispersing owls. Historical evidence shows that owls once nested in riparian habitats (U.S. Fish and Wildlife Service 1995).

Owls breed sporadically and do not nest every year (Gutierrez et al. 1995). Calling activity increases from March through May (although nesting females are largely silent during April and early May), and then declines from June through November (Gutierrez et al. 1995). Owls are usually silent from December through February (Gutierrez et al. 1995). Courtship begins in March with pairs roosting together during the day and calling to each other at dusk (Ganey 1988). Eggs are laid in late March or early April (Delaney et al. 1999). The incubation is approximately 30 days and performed entirely by the female (Ganey 1988, Forsman et al. 1984). Foraging is entirely by males during incubation and the first half of the brooding period, females leave the nest only to defecate, regurgitate pellets, or receive prey from their mate (Forsman et al. 1984, Ganey 1988).

Owls are highly selective for roosting and nesting habitat, but forage in a wider array of habitats (U.S. Fish and Wildlife Service 1995, Ganey and Balda 1994, Seamans and Gutierrez 1995). Roosting and nesting habitat exhibit certain identifiable features, including large trees with trunk diameters greater than 12 inches (in) (30.5 centimeters [cm]), high tree basal area, uneven-aged tree stands, multi-storied canopy, moderate to high canopy closure, and decadence in the form of downed logs and snags (Ganey and Balda 1989, Ganey and Dick 1995, Grubb et al. 1997, Tarango et al. 1997, Peery et al. 1999, Ganey et al. 2000, Geo-Marine 2004). Canopy closure is typically greater than 40 percent (Ganey and Balda 1989, Fletcher 1990, Zwank et al. 1994, Grubb et al. 1997, Tanrango et al. 1997, Ganey et al. 1998, Young et al. 1998, Ganey et al. 2000, Geo-Marine 2004).

All nests reported by Zwank et al. (1994), Seamans and Gutierrez (1995), and Geo-Marine (2004) were in mixed-conifer or Douglas-fir habitat. Roost and nest trees were the oldest and

largest within tree stands (Ganey and Balda 1989, 1994, Seamans and Gutierrez 1995). Owls use areas that contain a number of large trees of different types including mixed-conifer and pine-oak with smaller trees under the canopy of the larger trees. These types of areas provide vertical structure and high plant species richness that are important to owls (Ganey and Dick 1995, Seamans and Gutierrez 1995, Ganey et al. 2003). Tarango et al. (1994) and Ganey et al. (2000) recorded seven or more tree species at roost sites. Therefore, mixed-conifer dominated by Douglas-fir, pine-oak, and riparian forests with high tree diversity are important to the owl. Juvenile owls disperse from their natal territories in September and October into a variety of habitats ranging from high-elevation forests to pinon-juniper woodlands and riparian areas surrounded by desert grasslands (Gutierrez et al. 1995, Arsenault et al. 1997, Willey and c. Van Riper 2000). Observations of long-distance juvenile dispersal provide evidence that they use widely spaced islands of suitable habitat which are connected at lower elevations by pinon-juniper and riparian forests. Owls have been observed moving across open low desert landscapes between islands of suitable breeding habitat (Arsenault et al. 1997, Ganey et al. 1998, Willey 1998). Owl movements were also observed between sky island mountain ranges in New Mexico (Gutierrez et al. 1996). As a result of these movement patterns, isolated populations may have genetic significance to the owl's conservation (Keitt et al. 1995, Gutierrez and Harrison 1996, Seamans et al. 1999, Willey and c. Van Riper 2000). Therefore, contiguous stands or islands of suitable mixed-conifer, pine-oak, and riparian forests are important to the owl.

Owl foraging habitat includes a wide variety of forest conditions, canyon bottoms, cliff faces, tops of canyon rims, and riparian areas (Gutierrez and Rinkevich 1991, Willey 1993). Ganey and Balda (1994) reported that owls foraged more frequently in unlogged forests containing uneven-aged stands of Douglas-fir and white fir, with a strong component of ponderosa pine, than in managed forests.

The primary owl prey species are woodrats (*Neotoma* spp.), peromyscid mice (*Peromyscus* spp.), and microtine voles (*Microtus* spp.) (U.S. Fish and Wildlife Service 1995, Young et al. 1997, Delaney et al. 1999, Seamans and Gutierrez 1999). Mexican woodrats (*N. mexicana*) are typically found in areas with considerable shrub or understory tree cover and high log volumes, or rocky outcrops associated with pinon-juniper woodlands (Sureda and Morrison 1998, Ward 2001). Sureda and Morrison (1998) and Ward (2001) found deer mice (*P. maniculatus*) to be more abundant and widespread in the 60 to 100 year old stands of mixed-conifer forests. Mexican voles (*M. mexicanus*) are associated with mountain meadows and high herbaceous cover, primarily grasses whereas, long-tailed voles (*M. longicaudus*) are found in dry forest habitats with dense herbaceous cover, primarily forbs, many shrubs, and limited tree cover (Ward 2001). High levels of owl reproductive success and production may be due to prey abundance (Delaney et al. 1999). Ward and Block (1995) documented an increase in owl production when moderate to high levels of woodrats, peromyscid mice, and voles, were consumed. A diverse prey base is dependant on availability and quality of diverse habitats. Owl prey species need adequate levels of residual plant cover, understory cover, and high log volume. Therefore, a wide variety of forest and vegetative conditions are important to the owl and its prey.

c. Population dynamics

Historic population size estimates and range of the owl are not known, however, present population size and distribution are thought to be similar (U.S. Fish and Wildlife Service 1995). Ninety-one percent of known owls existing in the United States between 1990 and 1993 occurred on land administered by the Forest Service (U.S. Fish and Wildlife Service 1995). Most owls have been found within the 11 National Forests of Arizona and New Mexico. It is unknown why Colorado and Utah support fewer owls. In 2002, Forest Service reported 987 PACs in Arizona and New Mexico (U.S. Department of Agriculture Forest Service, Southwestern Region 2002c). Additional surveys are likely to document more owls on Forest Service and other lands. For example, Geo-Marine (2004) reported an additional 26 activity centers not previously designated by the Gila National Forest. Current information suggests there are 15 PACs in Colorado, 105 PACs in Utah, and 43 PACs on National Park Service lands in Arizona, therefore, 1,176 PACs have been identified. Based on this number of owl sites, we believe that the total known owl numbers on Federal lands in southwestern United States range from 1,176 or 2,352, depending on whether one bird or a pair occupies the PAC. Seamans et al. (1999) reported evidence of 10 percent or greater population declines in central Arizona and west-central New Mexico. Both populations experienced lower survival rates in the late 1990's. Gutierrez et al. (2003) concluded that with four additional years of data on these same populations, the decline observed by Seamans et al. (1999) on the Arizona study area was temporary, whereas the decline in New Mexico appeared to be continuing. Wide population fluctuations may be common for populations of owls (Gutierrez et al. 2003).

The Upper Gila Mountain RU has the largest known percent of owl PACs (63 percent), followed by the Basin and Range-West, (16 percent), Basin and Range-East (14 percent), Southern Rocky Mountain-New Mexico (5 percent), and Colorado Plateau (2 percent) (U.S. Department of Agriculture Forest Service, Southwestern Region 2002). Reports of PAC occupancy range from 68 to 79 percent in the Lincoln and Gila National Forests, respectively (Geo-Marine, Inc. 2003, Sorrentino and Ward 2003, Ward et al. 2003).

The Lincoln National Forest is within the Basin and Range - East RU and contains the third largest number (138) of owl PACs in the United States (U.S. Department of Agriculture Forest Service, Southwestern Region 2003). Because of the high concentration of owls, this RU is an important source population for other areas (U.S. Fish and Wildlife Service 1995). Owls here occur in isolated mountain ranges scattered across the region, the largest portion occurring in the Sacramento Mountains. In this RU owls have been reported on Forest Service lands in the Sandia, Manzano, Sacramento, and Guadalupe Mountains, and in Guadalupe National Park, Carlsbad Caverns National Park, and the Mescalero Apache Reservation. There are 109 designated PACs within the Sacramento Ranger District. They are most common in mixed-conifer forest, but have been found in ponderosa pine forest and pinon/juniper woodland (Skaggs and Raitt 1988, U.S. Fish and Wildlife Service 1995).

d. Status and distribution

Two primary reasons were cited for listing the owl as threatened in 1993: (1) Historical alteration of its habitat as the result of timber management practices, specifically the use of even-aged silviculture, and the threat of these practices continuing; and (2) the danger of catastrophic wildfire. Another factor that contributed to declines included the lack of adequate existing regulatory mechanisms. The Recovery Plan also notes that forest management has created habitats favored by great horned owls, increasing the likelihood of predation. Other threats identified in the Recovery Plan include the potential for increasing malicious and accidental anthropogenic harm (e.g., shooting and vehicle collisions), and for the barred owl to expand its range, resulting in competition or hybridization with the owl. The Recovery Plan outlines management actions that guide land management agencies in efforts to remove recognized threats and recover the owl.

Bond et al. (2002) described short-term effects of wildfires on spotted owls throughout the species' range. The authors reported that relatively large wildfires that burned nest and roost areas appeared to have little short-term (1-year) effect on survival, site fidelity, mate fidelity, and reproductive success of spotted owls, as rates were similar to estimates independent of fire. However, Elliot (1995), MacCracken et al. (1996), and Gaines et al. (1997) reported in some cases, large stand-replacing wildfires appeared to have a negative effect on owls. Jenness (2000) reported low- to moderate-severity fires did not adversely affect owls. Bond et al. (2002) hypothesized that spotted owls may withstand the immediate, short-term effects of fire occurring at primarily low- to moderate-severities within their territory. The Forest Service reported similar results following the 2002 Lakes Fire in the Jemez Mountains of north-central New Mexico (U.S. Department of Agriculture, Forest Service, 2003). Danney Salas (U.S. Department of Agriculture, Forest Service, pers. comm., 2003) reported that of the 10 PACs that are monitored within the footprint of the Scott Able Fire, owls were detected in 9 of them. He also reported that the same number of owl pairs were detected and reproduced within the burn area before and after the Bridge Fire. He also indicated that there were two owl nest areas found in areas where fire retardant (slurry) was used during suppression activities. Given historical fire regimes within its range, the spotted owl may be adapted to survive wildfires of various size and severities (Bond et al. 2002). Therefore, prescribed burning and other forest management activities could be an effective tool to reduce fire risk and restore forests to natural conditions with short-term impacts to owls. For example, prescribed fire may prove useful in the creation or maintenance of habitat for owls or their prey (Gutierrez et al. 2003). Bond et al. (2002) cautioned that programmatic prescribed burning in owl territories could not be justified solely on their observations. Manipulative experiments are needed to evaluate effects of fire (or other forest management activities) on owls (Bond et al. 2002).

Information from Geo-Marine, Inc. (2003) suggests that owls avoid areas with aircraft noise and were found in areas with low aircraft noise. Johnson and Reynolds (2002) and Geo-Marine, Inc. (2003) reported that owls did not flush from their roost or nest as a response to aircraft noise. Delaney et al. (1999) found that owls did not flush when noise stimuli from helicopters and chainsaws were greater than 115 yards (yds) (105 meters [m]) away. Chainsaws were more

disturbing to owls than helicopter flights at comparable distances (Delaney et al. 1999). Delaney et al. (1999) recommended a 115-yd buffer for helicopter overflights to minimize owl flushing responses and any potential effects on nesting activity. Other recommendations were diurnal flights and separating overflights along the same path by seven days (Delaney et al. 1999).

III. Environmental baseline

Regulations implementing the Act (50 CFR 402.02) define the environmental baseline as the past and present impacts of all Federal, State, or private actions and other human activities in the action area. Also included in the environmental baseline are anticipated impacts of all proposed Federal projects that have undergone section 7 consultation, and impacts of State and private actions that are contemporaneous with the consultation in progress. These proposals include timber sales, road construction, fire/ecosystem management projects (including prescribed natural and management ignited fires), livestock grazing, recreation activities, utility corridors, military activities, other construction activities, and wildlife research.

a. Status of species within the action area

The Forest Service is proposing to construct campground improvements that will meet public safety, sanitation, and compliance with the American with Disabilities Act on five campgrounds. The five campgrounds under the Capital Improvement Project are Aspen, Black Bear, Sleepy Grass, Slide, and Deerhead. Approximately 25 acres of owl habitat will be permanently disturbed. The Sacramento Ranger District is within the Basin and Range - East RU. The RU lies mostly in New Mexico and adjoins four United States and one Mexican RUs. The RU contains 35 percent private lands, 48 percent Federal lands, 12 percent State lands, and 5 percent Tribal lands.

In Forest Service Region 3, 149 formal consultations have been completed or are in final. These formal consultations identify anticipated take of owls in 340 PACs. This number includes 26 PACs within the Basin and Range East RU (U.S. Fish and Wildlife Service 2004). Consultations have dealt with actions proposed by the Forest Service, Bureau of Indian Affairs, Department of Energy, Department of Defense (including the Air Force, Army, and Navy) and Federal Highway Administration. These proposals include timber sales, road construction, fire/ecosystem management projects (including prescribed natural and management ignited fires), livestock grazing, recreation activities, utility corridors, military over-flights, construction activities, and wildlife research.

Major threats, in order of potential effects, include: (1) catastrophic, stand-replacement fires, (2) some forms of timber harvest, (3) fuelwood harvest, (4) grazing, (5) agriculture or development for human habitation, and (6) forest insects and disease (U.S. Fish and Wildlife Service 1995). Minor threats include: (1) certain military operations, (2) other habitat alterations (e.g. power line and road construction, noxious weed control), (3) mining, and (4) recreation. Minor threats are activities not currently extensive in time or space but are potential threats to the owl.

The action area contains suitable foraging habitat. No owl sites have been identified or confirmed and no PACs have been designated within the proposed project area. The action area is within a WUI area therefore does not have designated critical habitat. Approximately 25 acres of restricted habitat that contain potential nesting and roosting habitat are within the proposed project area. The underlying objective of restricted habitat is to manage the landscape to maintain and create replacement owl habitat where appropriate, while providing a diversity of stand sizes and conditions across the landscape. However, these 25 acres will not be managed as replacement habitat nor will they be managed to enhance owl recovery because campground locations and maintenance are expected to be permanent.

J. P. Ward and J. Ganey (unpublished 2005), reported 26 owls (13 radio marked, 13 color banded) dead or missing from the Rio Penasco II Study area. The cause of these deaths is undetermined. The deaths occurred from the spring 2004 through winter 2005. Severe weather, reduced prey availability, and the additional energy expenditure associated with birds carrying radios packs during the fall and winter of 2004 and 2005 may have contributed to the higher than normal adult mortality. These reported mortalities are not within the action area.

b. Factors affecting species environment within the action area

The proposed action is located in an area currently managed by the Forest Service within the Basin and Range-East-RU. Various facilities and land uses already exist in the area. Past and present Federal, State, private, and other human activities that may affect the owl include: exploratory well drilling on Village of Cloudcroft land, commercial and private development; year-round recreational activities (especially OHV use); development and maintenance of recreation sites (campgrounds); issuance of rights-of-way; livestock grazing; vegetation manipulations (such as prescribed burns and WUI projects); and road construction and maintenance activities. In addition, forest management activities on other adjacent lands, several residential development projects throughout the area, fire suppression, road construction, land exchanges, special events (mountain bike and motorcycle races, power line maintenance and construction, and wildfires) also affect the environmental baseline.

Fourteen projects have undergone formal consultation or conferencing for the owl and its proposed or designated critical habitat in the RU. One consultation that includes the project area and incidental take for all projects was the analysis of the Existing Forest Plans and Amendments (Consultation #000031RO/32RO with an incidental take of 26 owls).

A number of past and present Federal, State, private, and other human activities have undergone informal consultation and conferencing but were determined to not adversely affect the owl and its habitat. These include some, but not all: WUI Projects, ongoing grazing activities and 10 year permit renewals, recreational activities, scenic vista developments, road construction, maintenance activities, land exchanges, right-of-way issuances, off-road motorcycle events, power line construction, wildlife research projects, urban development, and catastrophic wildfires, their suppression and rehabilitation activities.

IV. 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. Indirect effects are those that are caused by the proposed action and are later in time, but are still reasonably certain to occur.

a. Factors to be considered

The nearest PAC is at least 0.75 mile from the action area, therefore chainsaw use for tree removal on 2.2 acres during construction, recreational activities, and noise associated with construction will not affect owls within designated PACs and will not be considered for further analysis in this BO. The impact from construction and recreational activities within a 0.25 mile buffer from the edge of the campgrounds will be considered further. Noise associated with construction will be attenuated before it reaches the nearest PAC 0.75 mile away.

In areas that receive use by 50 or more hikers per day, owls are likely threatened by disturbance from hiking (Swarthout and Steidl 2003). High levels of human activity associated with campgrounds is not expected because recreational use will decline or remain at current levels.

The 25 acres of disturbed restricted habitat will not be managed as replacement habitat or managed to enhance owl recovery. These 25 acres will be permanently lost because campground locations and maintenance are expected to be perpetuity.

b. Analyses of effects of the action

The Forest Service has proposed to remove some trees larger than 24 inches diameter at breast height within a 2.2 acre area. No PACs are within the proposed project area so direct effects are not anticipated. The nearest PAC is more than 0.75 mile from the proposed project area.

The Forest Service proposed that approximately 25 acres would be permanently removed from restricted habitat. The 25 acres of restricted habitat would not be managed for owls nor replacement habitat. These effects are considered adverse, as described in the Recovery Plan. The loss of 25 acres of restricted habitat would reduce foraging, nesting and roosting habitat. Therefore, the quality and quantity of prey delivered to the nest for consumption by the female and owlets could decline.

c. Species' response to a proposed action

The number of individual owls in the action area affected by the proposed action is undetermined and no PACs are designated within the project area.

The removal of approximately 25 acres of restricted habitat and associated tree removal on 2.2 acres will result in fewer potential nest sites, roost and hunting perches. The permanent loss of

habitat will reduce prey deliveries and could result in lower reproductive success of owls near the renovated campgrounds.

V. 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 BO. 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.

Commercial or private development projects on non-Federal land is expected to increase with time (U.S. Fish and Wildlife Service 2004c). In addition, future actions on non-Federal lands adjacent to the Forest Service lands that are reasonably expected to occur include grazing, road construction, vegetation management (e.g., mowing or herbicide treatments), fuels management, fire suppression activities, and other associated actions. The major concern in assessing cumulative impacts is the further loss of currently occupied and unoccupied habitat that contributes to a functioning owl population, including those areas necessary to provide connectivity between populations. We believe that the continuing rate of habitat loss has the potential, to disrupt the population dynamics of this species.

The action area is found within the Sacramento Ranger District, State Highways 82 and 244, Forest Service trails, fire suppression and rehabilitation, forest thinning, existing infrastructures (e.g., power lines), high school football field, campgrounds, and the towns, villages, and subdivisions where activities occur year-round. These activities reduce the quality and quantity of owl nesting, roosting and foraging habitat, and cause disturbance to breeding owls and contribute as cumulative effects to the proposed action. Expected future actions within or next to Forest Service lands include exploratory well drilling on Village of Cloudcroft land, Penasco I and II WUI thinning projects, capital developments on six additional campgrounds, urban development, road construction and maintenance, land clearing, logging, fuelwood gathering, and other associated actions. In addition, timber harvest activities have increased on the Mescalero Apache Reservation and private land.

VI. Conclusion

After reviewing the current status of the owls, the environmental baseline for the action area, the effects of the proposed capital improvement activities and the cumulative effects, it is the Service's biological opinion that the capital improvements and associated activities, as proposed is not likely to jeopardize the continued existence of the owl. We reached this conclusion for the following reasons: 1) owl PACs are not within the action area; 2) the local owl population dynamics should remain intact; 3) the majority of potential project impacts will likely occur outside designated PACs, which will further minimize impacts or avoid take; 4) all activities will take place on less than 30 acres of restricted habitat; 5) disturbance to vegetation at campgrounds would be minimal; 6) no critical habitat is designated within the action area; and 7) human disturbance during capital improvement activities would be minimal.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit take of endangered and threatened species without special exemption. Take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm means an act that actually kills or injures listed species. Such acts may include significant habitat modification or degradation that result in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass means an intentional or negligent act or omission that creates the likelihood of injury to a listed species by annoying it to such an extent as to significantly disrupt normal behavior that includes, but is not limited to, breeding, feeding or sheltering. Incidental take is incidental to, and not the purpose of, carrying out an otherwise lawful activity. In section 7(b)(4)(iv) and section 7(o)(2) of the Act, incidental take not intended as part of agency action is not considered prohibited taking if such taking meets the terms and conditions of an Incidental Take Statement.

The implementation of the proposed action, as described in this BO, has the potential to adversely affect restricted owl habitat and render the action area permanently unsuitable for nesting, roosting, and foraging. However, because the activities that occur will be .75 mile from the nearest PAC, the impacts are not expected to result in "take" of owls. The proposed action area is currently subject to high disturbance levels from adjacent heavily traveled roads and developed areas. Direct impacts of habitat loss are expected to occur in restricted owl habitat within the action area.

It is our opinion that the proposed action will not lead to an incidental take of owls. This determination was based on the knowledge that no owls have been detected in the action area after multiple years of surveys. This determination is consistent with our final policy for conducting section 7 consultations on owls and critical habitat dated July 1, 1996. The policy states that incidental take can be supported when habitat-altering actions compromise the integrity of a PAC or in cases where areas that may support owls have not been adequately surveyed. Our conclusion is also based on knowledge that owl surveys were conducted during 2005 and will continue within the action area. Because we do not anticipate incidental take related to the proposed action, no reasonable and prudent measures are provided. However, if during the action, incidental take occurs, such incidental take would represent new information requiring review of the project's effects. The Forest Service must immediately provide an explanation of the taking and review with us the need for reasonable and prudent measures.

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. The recommendations provided here relate only to the proposed action and do not represent complete fulfillment of the agency's section 7(a)(1)

responsibility for this species. We recommend the following conservation recommendations be implemented for the Capital Improvement Project:

1. The Forest Service should work with private landowners and the Village of Cloudcroft to emphasize the benefits of ecological diversity and the contribution that the owl provides to biological diversity and forest health.
2. The Forest Service should work with local officials to ensure that the potential for recreational activities within PACs is reduced on the lands surrounding the Capital Improvement Project campgrounds.
3. The Forest Service should increase survey efforts for the owl in previously unsurveyed areas on their lands.

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

Disposition of dead or injured listed animals

Upon finding dead, injured, or sick individual endangered or threatened species, initial notification must be made to the nearest Service Law Enforcement Office. In New Mexico, contact (505-346-7828) or the New Mexico Ecological Services Field Office (505-346-2525). Written notification must be made within 5 calendar days and include date, time, and location, photograph, and any other pertinent information. Care must be taken in handling sick or injured animals to ensure effective treatment and care, and in handling dead specimens to preserve biological material in the best possible condition. If feasible, remains of intact specimens of listed species will be submitted to educational or research institutions holding appropriate State and Federal permits. If such institutions are not available, information noted above will be obtained and the carcass left in place.

Arrangements regarding proper disposition of potential museum specimens will be made with the institution before carrying out of the action. A qualified biologist should transport injured animals to a qualified veterinarian. Should any listed species survive treatment, we should be contacted regarding final disposition of the animal.

REINITIATION - CLOSING STATEMENT

This concludes formal consultation on the proposal to conduct the capital improvement projects within the Sacramento Ranger District, Lincoln National Forest, New Mexico. As provided in 50 CFR § 402.16, formal consultation reinitiation 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 agency action that may affect listed species or critical habitat in a manner or to an extent not considered

in this BO; (3) agency action is subsequently modified in a manner that causes an effect to listed species or critical habitat not considered in this biological opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

In future communication regarding this project, please refer to consultation #2-22-04-F-0605. Please contact Santiago R. Gonzales at the letterhead address or at (505) 761-4755 if you have any questions.

Sincerely,

A handwritten signature in black ink that reads "Susan MacMullin". The signature is written in a cursive, slightly slanted style.

Susan MacMullin
Field Supervisor

cc:

District Ranger, U.S. Department of Agriculture Forest Service, Lincoln National Forest,
Sacramento Ranger District, Cloudcroft, New Mexico
Field Supervisor, U.S. Fish and Wildlife Service, Arizona Ecological Services Field Office,
Phoenix, Arizona

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