



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

November 6, 2000

Cons. #2-22-00-F-284f

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 April 26, 2000, request for formal consultation with the U.S. Fish and Wildlife Service (Service) under section 7 of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). The request concerns plans to transfer ownership of 81 acres of Federal land within the Sacramento Ranger District of the Lincoln National Forest, Otero County, New Mexico, to the Village of Cloudcroft, New Mexico. In the April 2000, Biological Assessment concerning the Village land acquisition, (BA), you determined the proposed action is likely to adversely affect the Mexican spotted owl (*Strix occidentalis lucida*) (owl) and have no effect on the threatened bald eagle (*Haliaeetus leucocephalus*). Subsequently, you amended the BA on August 23, and October 16, 2000, and requested formal conferencing because you determined the land transfer is likely to adversely affect the owl's proposed critical habitat (65 FR 45336). Therefore, this document represents our biological opinion (BO) and conference opinion (CO) on the effects of the land transfer on both the owl and its proposed critical habitat in accordance with section 7 of the Act.

This BO and CO are based on information provided in the BA; the September 22, 2000, BA for the Scott Able wildfire and rehabilitation efforts; the August 23, and October 16, 2000, amendments to the BA; your June 22, 2000, letter providing further information and clarification to the BA; , the Final Report for the 1994 spotted owl survey prepared by the Kaufmann Group; the June 2000, advance draft copy of the environmental assessment (EA) concerning the townsite land acquisition prepared by you; the January 25, 1999, letter from the Village of Cloudcroft to you, concerning the proposed land acquisition; the May 22, 1997, letter from the Village of Cloudcroft to you, concerning the proposed land acquisition; the September 12, 1997, draft fish, wildlife, and rare plants report addressing the Townsite Act Application by the Village of Cloudcroft, Sacramento Ranger District, Lincoln National Forest; your May 31, 1996, scoping report concerning the proposed land acquisition by the Village of Cloudcroft; the September 10, 1996, letter and application from the Village of Cloudcroft to you, concerning the proposed land acquisition; the February 2, 1994 notice for

comments on your intent to prepare an EA or EIS concerning the proposed sale of National Forest land to the Village of Cloudcroft; the December 6, 1995, BO concerning the transference of 40 acres from Sacramento Ranger District, Lincoln National Forest to the Village of Cloudcroft; telephone conversations between our staffs; data presented in the final Recovery Plan (USDI 1995) for the owl; data in our files; Forest Service regional owl data; literature review; and other sources of information. References cited in this biological and conference opinion are not a complete bibliography of all literature available on the owl, the proposed action and its effects, or on other subjects considered in this opinion. A complete administrative record of this consultation is on file at this office.

Consultation History

Informal consultation began on February 2, 1994, when the Forest Service submitted a scoping letter with request for comments on the proposed project. We provided comments and a species list on March 4, 1994. We met with you on numerous occasions from 1994 through March 2000, to discuss the project and any concerns with potential adverse impacts of the proposal. We have not received a comment EA, but did receive the all the information necessary to begin formal consultation on June 7, 2000. Subsequently, you submitted an addendum to the BA on August 23, 2000, and an amended addendum on October 16, 2000. The request for formal consultation was acknowledged by this office in a letter dated July 11, 2000.

BIOLOGICAL AND CONFERENCE OPINION

It is our biological and conference opinion that the proposed transference of 81 acres, as addressed in this document, is not likely to jeopardize the continued existence of the Mexican spotted owl or adversely modify or destroy its proposed critical habitat.

DESCRIPTION OF THE PROPOSED ACTION

The Village of Cloudcroft applied to the Lincoln National Forest under the authority of the Townsite Act of July 31, 1958, for the transfer of 81 acres of federally-owned land to the Village of Cloudcroft. The application contains a development plan, which outlines the intended uses of the transferred land. The Village of Cloudcroft states in application that National Forest lands completely surround their current lands and there are no other lands suitable or available for the purposes described. The Village of Cloudcroft is requesting the ownership of five parcels be transferred. The intended uses are described in Table 1 as follows:

Table 1. Description of proposed uses of five parcels under consideration for transfer of ownership from the Lincoln National Forest to the Village of Cloudcroft, New Mexico.			
Area	Acres	Proposed Use	Development
1	22	Sports Fields	Parking areas, concession stands, rest rooms
2	9	Greenbelt	Picnic areas; recreational improvements
3	33	Greenbelt	Utilities; fire relief routes
4	8	Sewer Plant	Expansion of sewer plant; pave existing road
5	9	Greenbelt	Picnic areas; recreational improvements
1996 parcel	40	School	High school

According to Forest Service, the transfer will occur sometime during Fiscal Year 2001. Construction by the Village of Cloudcroft could occur anytime thereafter and may take years to complete the entire project. The vegetation in the transfer parcels includes mixed conifer, oak and other hardwoods, and ponderosa pine (*Pinus ponderosa*), white fir (*Abies concolor*), and douglas fir (*Pseudotsuga menziesii*). According to the definitions in the Forest Plan amendment (Forest Service 1996) and the owl recovery plan (USDI 1995), all of the parcels are classified as mixed conifer. There are approximately 63 acres of old growth mixed conifer within parcels 1, 2, and 3, but none within parcels 4 and 5. The proposed action will impact approximately 30 acres of mixed conifer that are protected owl habitat and about 50 acres that are restricted owl habitat. The transference of ownership will preclude these parcels from being managed under the Forest Service standards and guidelines for the owl. The proposal, as identified in the BA and draft EA, will impact the old growth mixed conifer by removing trees and herbaceous vegetation (i.e., five parcels plus the 1996 parcel) to construct the school, sports facilities, parking lots, concession stands, and utilities. The construction of buildings, parking lots, concession stands, utilities, roads, and trails will result in a permanent change in the vegetation, such that target conditions will never be met (i.e., the intended uses will not maintain habitat components of owl threshold conditions). Parcels 1, 2, and 3 are adjacent to a 40-acre parcel that was transferred from the Forest Service to the Cloudcroft School district in 1996. The Forest Service conducted surveys for owls within and adjacent to the proposed project area in 1991, 1992, 1995, 1996, 1997, 1998, and 1999, and no owls have been detected in the project area. According to the Forest Service, the area is in proximity to busy roads and housing developments and, thus, may not support nesting or roosting owls. The nearest Protected Activity Center (PAC) is about 3/4 mile from the proposed project area. From past surveys, research, and observations, all PACs have been established in the general area (D. Salas, pers. comm.).

STATUS OF THE SPECIES (range-wide)

The Mexican spotted owl was listed as threatened on March 16, 1993 (58 FR 14248). Critical habitat for the owl was designated on June 6, 1995 (60 FR 29914), but was subsequently withdrawn on March 25, 1998 (63 FR 14378). Critical habitat was proposed again on July 21, 2000 (65 FR 45336). Background and status information on the owl is found in the Final Rule listing the owl as a federally-threatened species (58 FR 14248), previous biological opinions provided by us to the Forest Service, and the final Recovery Plan. The information on species description, life history, population dynamics, status, distribution, and range-wide trends provided in those documents is included herein by reference and is summarized below.

The American Ornithologist's Union currently recognizes three spotted owl subspecies, including the California spotted owl (*Strix occidentalis 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 chiefly by geographic distribution and plumage. The Mexican spotted owl is mottled in appearance with irregular white and brown spots on its abdomen, back and head. The spots of the Mexican spotted owl are larger and more numerous than in the other two subspecies giving it a lighter appearance. Several thin white bands mark an otherwise brown tail. Unlike most owls, spotted owls have dark eyes.

The *lucida* subspecies is a distinguishable taxon based on allozyme electrophoresis (Barrowclough and Gutiérrez 1990). Analysis of mitochondrial DNA shows further evidence that the three designated subspecies are valid. Despite the demonstrated phylogenetic relatedness, there is evidence of reduced gene flow between the subspecies, indicating the three subspecies should be treated as separate conservation units (Barrowclough *et al.* 1999).

The Mexican spotted owl has the largest geographic range of the three subspecies. The range extends north from Aguascalientes, Mexico, through the mountains of Arizona, New Mexico, and western Texas, to the canyons of southern Utah, and southwestern Colorado, and the Front Range of central Colorado. Because this is a broad area of the southwestern United States and Mexico, much remains unknown about the species' distribution within this range. This is especially true in Mexico where much of the owl's range has not been surveyed. The owl occupies a fragmented distribution throughout its United States range corresponding to the availability of forested mountains and canyons, and in some cases, rocky canyon lands. Although there are no estimates of the owl's historic population size, its historic range and present distribution are thought to be similar.

According to the Recovery Plan, 91 percent of owls known to exist in the United States between 1990 and 1993 occurred on land administered by the Forest Service; therefore the primary administrator of lands supporting owls in the United States is the Forest Service. Most owls have been found within Region 3, which includes 11 National Forests in New

Mexico and Arizona. Forest Service Regions 2 and 4, including 2 National Forests in Colorado and 3 in Utah, support fewer owls. The range of the owl is divided into 11 Recovery Units (RU), 5 in Mexico and 6 in the United States, as identified in the Recovery Plan (USDI 1995). The Recovery Plan also identifies recovery criteria and provides distribution, abundance, and density estimates by RU. The Upper Gila Mountain Recovery Unit has the greatest known concentration of owl sites (55.9 percent), followed by the Basin and Range-East (16.0 percent), Basin and Range-West, (13.6 percent), Colorado Plateau (8.2 percent), Southern Rocky Mountain-New Mexico (4.5 percent), and Southern Rocky Mountain-Colorado (1.8 percent) RUs.

A reliable estimate of the number of owls throughout its entire range is not currently available due to limited information. Fletcher (1990) calculated that 2,074 owls existed in Arizona and New Mexico in 1990 using information gathered by Region 3 of the Forest Service. Fletcher's calculations were subsequently modified by us (USDI 1991), who estimated a total of 2,160 owls throughout the United States. However, these numbers are not considered reliable estimates of current population size for a variety of statistical reasons. While the number of owls throughout the range is currently not available, the Recovery Plan reports an estimate of owl sites based on 1990-1993 data. An owl "site" is defined as a visual sighting of at least one adult owl or a minimum of two auditory detections in the same vicinity in the same year. Surveys from 1990 through 1993 indicate one or more owls have been observed at a minimum of 758 sites in the United States and 19 sites in Mexico. In addition, these surveys indicate that the species persists in most locations reported prior to 1989, with the exception of riparian habitats in the lowlands of Arizona and New Mexico, and all previously occupied areas in the southern States of Mexico.

In a summary of all territory and monitoring data for the 1995 field season, a total of 869 management territories (MT) were reported to us (U.S. Forest Service, *in litt.* January 22, 1996). Based on this number of owl sites, total numbers in the United States may range from 869 individuals, assuming each known site was occupied by a single owl, to 1,738 individuals, assuming each known site was occupied by a pair of owls. The 1996 data are the most current compiled information available to us; however, more recent surveys efforts have likely resulted in additional sites being located in all Recovery Units.

Mexican spotted owls breed sporadically and do not nest every year. This owl's reproductive chronology varies somewhat across its range. In Arizona, courtship apparently 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 typically early April. Incubation begins shortly after the first egg is laid, and is performed entirely by the female (Ganey 1988). The incubation period for the owl is assumed to be 30 days (Ganey 1988). During incubation and the first half of the brooding period, the female leaves the nest only to defecate, regurgitate pellets, or receive prey from the male, who does all or most of the foraging (Forsman *et al.* 1984, Ganey 1988). Eggs usually hatch in early May, with nestling owls fledging four to five weeks later, and then dispersing in mid-September to early October (Ganey 1988).

Little is known about the reproductive output for the spotted owl. It varies both spatially and temporally (White *et al.* 1995), but the subspecies demonstrates an average annual rate of 1.001 young per pair. Current demographic research in Arizona and New Mexico has documented populations that are declining at "greater than" 10 percent a year (Seamans *et al.* 1999). Possible reasons for the population declines are declines in habitat quality and regional trends in climate (Seamans *et al.* 1999). Based on short-term population and radio-tracking studies, and longer-term monitoring studies, the probability of an adult owl surviving from one year to the next is 0.8 to 0.9. Juvenile survival is considerably lower, at 0.06 to 0.29, although it is believed these estimates may be artificially low due to the high likelihood of permanent dispersal from the study area, and the lag of several years before marked juveniles reappear as territory holders and are detected as survivors through recapture efforts (White *et al.* 1995). Little research has been conducted on the causes of mortality, but predation by great horned owls, northern goshawks, red-tailed hawks, and golden eagles, as well as starvation, and accidents or collisions, may all be contributing factors.

Mexican spotted owls nest, roost, forage, and disperse in a diverse array of biotic communities. Nesting habitat is typically in areas with complex forest structure or rocky canyons, and contain mature or old-growth stands that are uneven-aged, multi-storied, and have high canopy closure (Ganey and Balda 1989a, USDI 1991). In the northern portion of the range (southern Utah and Colorado), most nests are in caves or on cliff ledges in steep-walled canyons. Elsewhere, the majority of nests appear to be in Douglas fir trees (Fletcher and Hollis 1994, Seamans and Gutierrez 1995). A wider variety of tree species is used for roosting; however, Douglas fir is the most commonly used species (Ganey 1988, Fletcher and Hollis 1994, Young *et al.* 1998). Spotted owls generally use a wider variety of forest conditions (mixed conifer, pine-oak, ponderosa pine, piñon-juniper) for foraging than they use for nesting/roosting.

Seasonal movement patterns of Mexican spotted owls are variable. Some individuals are year-round residents within an area, some remain in the same general area but show shifts in habitat use patterns, and some migrate considerable distances 12-31 miles during the winter, generally migrating to more open habitat at lower elevations (Ganey and Balda 1989b, Willey 1993, Ganey *et al.* 1998). Home-range size of Mexican spotted owls appears to vary considerably among habitats and/or geographic areas (USDI 1995), ranging in size from 647 - 3,688 acres for individuals birds, and 945 - 3,846 acres for pairs (Ganey and Balda 1989b, Ganey *et al.* 1999). Little is known about habitat use of juveniles during natal dispersal. Ganey *et al.* (1998) found dispersing juveniles in a variety of habitats ranging from high-elevation forests to piñon-juniper woodlands and riparian areas surrounded by desert grasslands.

Mexican spotted owls consume a variety of prey throughout their range but commonly eat small and medium sized rodents such as woodrats (*Neotoma* spp.), peromyscid mice, and microtine voles. They may also consume bats, birds, reptiles, and arthropods (Ward and Block 1995). Habitat correlates of the owl's common prey emphasizes that each prey

species uses a unique habitat. Deer mice (*Peromyscus maniculatus*) are ubiquitous in distribution in comparison to brush mice (*Peromyscus boyleyi*), which are restricted to drier, rockier substrates, with sparse tree cover. Mexican woodrats (*N. mexicana*) are typically found in areas with considerable shrub or understory tree cover and high log volumes or rocky outcrops. Mexican voles (*Microtus mexicanus*) are associated with high herbaceous cover, primarily grasses; whereas, long-tailed voles (*M. longicaudus*) are found in dense herbaceous cover, primarily forbs, with many shrubs, and limited tree cover. A diverse prey base is dependant on the availability and quality of diverse habitats.

The Mexican Spotted Owl Recovery Plan provides for three levels of habitat management: protected areas, restricted areas, and other forest and woodland types. "Protected habitat" includes all known owl sites, and all areas in mixed conifer or pine-oak forests with slopes greater than 40 percent where timber harvest has not occurred in the past 20 years, and all reserved lands. Protected Activity Centers (PACs) too are delineated around known Mexican spotted owl sites. A PAC includes a minimum of 600 acres designed to include the best nesting and roosting habitat in the area. The recommended size for a PAC includes, on average from available data, 75 percent of the foraging area of an owl. The management guidelines recommended in the recovery plan for protected areas are to take precedence for activities within those areas. "Restricted habitat" includes mixed conifer forest, pine-oak forest, and riparian areas; the recovery plan provides less specific management guidelines for these areas. The recovery plan provides no owl-specific guidelines for "other habitat."

Past, current, and future timber harvest practices in Region 3 of the Forest Service, in addition to catastrophic wildfire, were cited as primary factors leading to the listing of the owl as a federally-threatened species. Other factors that have or may lead to the decline of this species include a lack of adequate regulatory mechanisms. In addition, the Recovery Plan notes that forest management has created ecotones favored by great horned owls, increasing the likelihood of predation on the owl. Increases in scientific research, birding, educational field trips, and agency trips are also likely to increase. Finally, there is a potential for increasing malicious and accidental anthropogenic harm, and the potential for the barred owl to expand its range, resulting in competition and/or hybridization with the spotted owl.

ENVIRONMENTAL BASELINE

Under section 7(a)(2) of the Act, when considering the effects of the action on federally listed species, we are required to take into consideration the 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, the anticipated impacts of all proposed Federal actions in the action area that have undergone section 7 consultation, and the impacts of State and private actions that are contemporaneous with the consultation in progress. 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.

Proposed critical habitat is a subset of the full range of the owl; therefore, the environmental baseline within proposed critical habitat is a subset of the larger environmental baseline. Effects to proposed critical habitat are incremental, representing only a portion of the effect on owl populations and, thus, should be analyzed within the framework of the environmental baseline that exists within the range of the species.

A total of 226 projects have undergone formal consultation for the owl. Of that aggregate, 86 projects resulted in a total anticipated incidental take of 199 owls plus an additional unknown number of owls. These consultations have primarily dealt with actions proposed by the Forest Service, Region 3, but have also addressed the impacts of actions proposed by the Bureau of Indian Affairs, Department of Defense (including Air Force, Army, and Navy), Department of Energy, National Park Service, and Federal Highway Administration. These proposals have included timber sales, road construction, fire/ecosystem management projects (including prescribed natural and management ignited fires), livestock grazing, recreation activities, utility corridors, military overflights, and other construction activities.

On the Lincoln National Forest, past and present Federal, State, private, and other human activities that may affect the owl and its habitat include Hay and Scott Able Timber Sales, Bridge Salvage Sale, other vegetation manipulations (various small sales, fuelwood gathering activities, salvage sales, and prescribed burns), livestock grazing, recreational activities, development of recreation sites (campgrounds) and scenic vistas, road construction and maintenance activities, land exchanges, issuance of rights-of way, off-road motorcycle events, and powerline construction. Forest management activities (timber sales, etc.) on adjacent Tribal and private lands, urban development in and around Cloudcroft, and fire suppression also affect the environmental baseline. In addition, the risk of catastrophic habitat loss due to fire is extremely high. Past fires such as the Burgett, Bridge, and Scott Able fires, have modified thousands of acres of habitat and impacted multiple owl territories.

The proposed land transfer is composed of areas currently managed by the Forest Service. Various facilities and land uses (e.g., the Village of Cloudcroft, water treatment plant, state highway 82 and 130, Deerhead campground) already exist in the area. The proposed transfer will likely culminate in the development of these parcels as described above, and may result in growth of commercial or private development. Therefore, the proposed action may significantly add to the environmental baseline by supporting further development of owl territories and/or its proposed critical habitat.

STATUS OF THE SPECIES (within the Action Area)

The Lincoln National Forest is within the Basin and Range - East Recovery Unit (RU). This RU contains the second highest concentration of known owl sites (16.0 percent) in the United States. Because of the high concentration of owls, this RU has been referred to as an important owl distribution center in the Recovery Plan. Owls occur in isolated mountain ranges scattered across this RU, but the largest portion of the owl subpopulation occurs in the Sacramento Mountains. They are most common in mixed-conifer forest, but have been

located in ponderosa pine forest and piñon/juniper woodland on a few occasions (Skaggs and Raitt 1988). Owl sites have been reported on National Forest lands in the Sandia, Manzano, Sacramento, and Guadalupe Mountains, as well as the Guadalupe National Park and on Mescalero Apache Tribal lands.

Owls occurring in the Sacramento Mountains have been exposed to various disturbances for more than a century. Disturbances include forest fires and human disturbances, including timber and fuelwood harvest, grazing, land development, and recreation. Coniferous forests, especially the mixed-conifer, were extensively logged during an era of railroad logging from 1890 to 1945 (Glover 1984). After the railroad logging era, trees grew rapidly and attained merchantable sizes in about 40-50 years on favorable sites. Consequently, much of the habitat currently used by owls in the Sacramento Mountains is regrowth forest that has attained a high density of moderately sized trees, poles, and saplings, together forming multiple layers. According to the Recovery Plan, the greatest threats in this RU, in order of potential effects, are catastrophic fire, timber harvest, fuelwood harvest, grazing, human developments, and forest insects and disease. Other activities that are considered potential threats to the owl include certain military operations, other habitat alterations (such as powerlines and roads), mining, and recreation. Recovery in this unit will require maintenance of existing and future populations by conserving habitats in areas not only inhabited by owls, but also in areas between occupied sites.

Currently, there are a total of 132 owl PACs on the Lincoln National Forest. Of these, 107 PACs, including a newly-located breeding pair (Woods PAC), are on the Sacramento Ranger District, where the proposed project is located. Of these PACs, many have a variety of uses occurring in them including: grazing, powerlines, winter recreation (e.g., snowmobile use), and other recreational uses (e.g., hunting, camping, hiking, etc.). On the Lincoln National Forest, mixed conifer habitat is considered either protected or restricted habitat as defined in the owl Recovery Plan (USDI 1995). This project will also impact slopes that are greater than 40 percent. PACs and slopes greater than 40 percent are considered protected habitat.

The Scott Able fire burned 16,034 acres, of which 14,551 were administered by the Lincoln National Forest and 1,483 acres were private land (Forest Service 2000). Approximately 12,291 acres that burned were considered suitable owl habitat. The fire affected all or portions of six PACs and two additional PACs are adjacent to the burned area.

For the purpose of analyzing the potential impacts of the proposed action an analysis area (approximately ½ mile around the project area) was examined. This analysis area did not encompass any PACs on Forest Service land.

EFFECTS OF THE ACTION

Our primary task in developing a biological opinion is to determine whether the proposed action is likely to jeopardize the continued existence of any listed species (51 FR 19962). The jeopardy/non-jeopardy determination is based on an evaluation of: (1) a species' status

in the project area and range wide (see above sections); (2) the effects of the proposed action on the survival and recovery of a listed species (including effects of interdependent and interrelated actions); (3) the aggregate effects of other Federal actions on a listed species (e.g., amount of take occurring as a result of Federal actions subject to previous consultations); and (4) the cumulative effects on a listed species (i.e., future non-Federal actions that are reasonably certain to occur in the action area).

The Forest Service estimated that approximately 30 acres of protected habitat (i.e., mixed conifer on slopes 40 percent or greater) and 50 acres of restricted habitat (mixed conifer outside of protected habitat) will be directly impacted from the transfer and future construction activities.

Activities that disturb or remove the primary constituent elements within critical habitat units may adversely affect the owl's critical habitat. These activities include actions that affect the following primary constituent elements for mixed-conifer, pine-oak, and riparian forest types: (1) high basal area of large diameter trees; (2) moderate to high canopy closure; (3) wide range of tree sizes suggestive of uneven-age stands; (4) multi-layered canopy with large overstory trees of various species; (5) high snag basal area; (6) high volumes of fallen trees and other woody debris; (7) high plant species richness, including hardwoods; and (8) adequate levels of residual plant cover to maintain fruits, seeds, and regeneration to provide for the needs of Mexican spotted owl prey species.

Owls are not known to occupy the area; the nearest known PAC is 0.75 miles from the project area. Direct impacts to proposed critical habitat would include removal of vegetation due to clearing, excavating, filling, and construction activities. This would result in the loss of forest habitat, including mature, old-growth trees, throughout the parcels, and adversely affect the primary constituent elements of the proposed critical habitat. These effects are considered adverse, especially since these actions are not consistent with the recovery plan (USDI 1995). Adverse effects on primary constituent elements or segments of critical habitat generally do not result in an adverse modification determination unless that loss, when added to the environmental baseline, is likely to appreciably diminish the capability of the critical habitat to satisfy essential requirements of the species. In other words, activities that may destroy or adversely modify critical habitat include those that alter the primary constituent elements and appreciably reduce the value of critical habitat for both the survival and recovery of the Mexican spotted owl over a significant portion of the species' range.

We must consider indirect effects and the effects of interdependent and interrelated actions of this project to the owl and its proposed critical habitat. Indirect effects are those that are caused by, or result from, the proposed action, and are later in time, but are reasonably certain to occur. Interrelated actions are actions that are part of a larger action, and are dependent on the larger action for their justification. Interdependent actions are actions that have no independent utility apart from the action under consideration. The construction that occurs on the 40-acre school parcel (e.g., tree removal, access roads, etc.) is considered interrelated and interdependent with the transference of these lands. This 40-acre parcel is

directly south of and adjacent to parcels 2 and 3 and construction on this parcel could not occur unless the adjacent parcels are transferred because there would be no land available for the construction of related infrastructure (parking lots, utility access, etc.) (M. Crites, U.S. Forest Service, Lincoln National Forest, pers. comm. 2000).

The most significant indirect effects are expected to result from increased disturbances from development, vehicular traffic, and recreation in and around these parcels. When these parcels become developed, the area that is subjected to high levels of disturbance (e.g., noise, lighting, etc.) will extend beyond the parcels into adjacent lands. The direct impacts of the project on owl habitat, in and of themselves, are not significant; however, the construction will increase the amount of traffic throughout the area and may facilitate even more development in the general area, which could result in additional habitat degradation. Increased commercial or private development also brings with it the increased potential and risk of damage from wildfire, one of the primary threats to the owl throughout its range.

The owl recovery plan considers the reduction of large trees outside of Protected Areas a threat to the owls in the Basin and Range East RU (USDI 1995). Sound, visual, and habitat disturbance from recreation may impact owl habitat at a local scale. Concentrated human development may affect dispersing and wintering owls by reducing the spatial extent of habitat (USDI 1995). Owls (particularly juveniles) that have been displaced or forage and/or disperse through disturbed areas may be more vulnerable to predation; therefore, there may be a greater loss of owls over time.

The potential for effects from interdependent and interrelated actions from proposed project (noise, disturbance, etc.) are expected to be limited and not likely to cause avoidance/abandonment or lead to future unoccupancy of known PACs. Owl PACs and adjacent unoccupied areas of proposed critical habitat, are not expected to be altered to the extent that survival and recovery of the owl will be precluded.

CUMULATIVE EFFECTS

Cumulative effects include the effects of future State, tribal, local, or private actions that are reasonably certain to occur in the foreseeable future 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. In past Biological Opinions, it has been stated that, "Because of the predominant occurrence of the owls on Federal lands, and because of the role of the respective Federal agencies in administering the habitat of the owl, actions to be implemented in the future by non-Federal entities on non-Federal lands are considered of minor impact." However, there has been a recent increase of harvest activities on non-Federal lands (e.g., timber harvest on neighboring Mescalero Apache Reservation, private land timber sales on inholdings in and around the Lincoln National Forest). In addition, future actions within or adjacent to the Forest Service lands that are reasonably expected to occur include urban development, road construction, land clearing, logging, fuelwood gathering, and other associated actions.

The project area is located on the eastern and north-eastern edge of the Village of Cloudcroft, New Mexico. It is surrounded by National Forest and non-Federal lands including Lost Lodge Road, Highways 82 and 130, Forest Service trails, existing infrastructure (e.g., powerlines), dispersed and developed camping areas, water treatment plant, and Cloudcroft and surrounding areas, where activities occur either seasonally or year-round. Other past, present and foreseeable future Forest Service projects that may contribute to cumulative effects are: the proposed Sacramento, Scott Able, and North Bluewater Allotment grazing permits (2000), the Scott Able wildfire and rehabilitation (2000), the Sacramento Allotment Management Plan (1995), the Bridge fire fuelwood salvage (1995), and the Fresnal Canyon water pipeline (1993), and programmatic biological opinions for the Forest Service's Land and Resource Management Plans (1997) and existing forest plans and the spotted owl (1996). 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.

CONCLUSION

The implementation of the proposed project, as described in this biological and conference opinion, has the potential to adversely affect the owl and its proposed critical habitat; however, the extent and magnitude of the impacts are not expected to result in "take" of owls in the project area. This conclusion was reached by considering the following: 1) the proposed parcels are currently subjected to high levels of disturbance because they are adjacent to heavily-traveled roads (i.e., Highways 82 and 130 and Lost Lodge road) and developed areas (e.g., Village of Cloudcroft); 2) the area is considered saturated with owls (i.e., there is no unoccupied habitat that is either currently, or in the future, capable of supporting owls on or immediately adjacent to these parcels; and 3) the nearest PAC is approximately 0.75 miles from any of the proposed parcels. Direct impacts of habitat loss are expected to occur in proposed critical habitat within the project area and the primary constituent elements will be adversely affected. Although we believe that implementation of the proposed action will adversely affect the proposed critical habitat and will render the project area unsuitable for nesting and roosting of owls, these impacts will not preclude survival and recovery for the owl because of the currently, highly disturbed nature of the project area. Therefore, the implementation of the proposed action is not be expected to impede the owl's ability to nest, roost, forage, or disperse within the Basin and Range-East RU.

After reviewing the current status of the owl, the environmental baseline for the action area, the effects of the proposed action, and the cumulative effects and based on the best commercial and scientific data available, it is our biological and conference opinion that the transfer ownership of 81 acres of Federal land within the Sacramento Ranger District of the Lincoln National Forest, Otero County, New Mexico, to the Village of Cloudcroft, New Mexico, as proposed, is not likely to jeopardize the continued existence of the owl or destroy or adversely modify proposed critical habitat.

INCIDENTAL TAKE

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, or collecting, or attempting to engage in any such conduct. Harass is further defined by us as intentional or negligent actions that creates 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, and sheltering. Harm is further defined by us to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as 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 a prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this incidental take statement.

The Act and its implementing regulations set forth a series of general prohibitions and exceptions that apply to all endangered or threatened plants. All prohibitions of section 9(a)(2) of the Act implemented by 50 CFR 17.71 for threatened plants apply. Sections 7(b)(4) and 7(o)(2) of the Act generally do not apply to listed plants. However, protection of listed plants is afforded to the extent that the Act requires a Federal permit for the removal or reduction to possession of endangered plants from areas under Federal jurisdiction, or for any act that would remove, cut, dig up, or damage or destroy any such species on any other area in knowing violation of any regulation of any State or in the course of any violation of a State criminal trespass law.

For the purposes of consideration of incidental take of owls by the proposed project now under consideration, incidental take can be broadly defined as either the direct mortality of individual birds, or the alteration of habitat that affects the behavior (i.e., breeding or foraging) of the birds to such a degree that the birds are considered lost as viable members of the population and are thus "taken." They may fail to breed, fail to successfully rear young due to inadequate food supplies available in altered habitat, raise fewer young, raise less fit young, or desert the area because of disturbance when habitat no longer meets the owl's needs.

It is our opinion that the proposed action will not lead to incidental take of owls. This determination was based on the knowledge that no owls have been detected in the proposed area after multiple years of surveys. Therefore, no reasonable and prudent measures are provided. However, if during the course of the action, incidental take occurs, such incidental take would represent new information requiring review of the project's effects. The Forest Service must immediately provide an explanation of the causes of the taking and review with us the need for possible addition of reasonable and prudent measures.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize 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 necessarily represent complete fulfillment of the agency's section 7(a)(1) responsibility for these species. In order for us to be kept informed of actions that either minimize or avoid adverse effects or that benefit listed species and their habitats, we request notification of the implementation of the conservation recommendations. We recommend the following conservation recommendations be implemented for the land transfer to the Village of Cloudcroft:

1. The Forest Service should work with private landowners and communities adjacent to and within the Lincoln National Forest to emphasize the benefits of ecological diversity and the contribution that the Mexican spotted owl provides to that diversity and forest health.
2. The Forest Service should provide information (e.g., our HCP handbook and *Federal Register* notices) regarding Habitat Conservation Plans (HCP) and Safe Harbor Agreements to private landowners, communities, local and County governments (e.g., Village of Cloudcroft, Otero County), or businesses for potential direct and indirect impacts to the owl and possibly other sensitive species. This program would benefit these non-Federal entities by allowing incidental take of federally-listed species, thus reducing their risk of violating any enforcement provisions of the Act.
3. The Forest Service should work with local officials (e.g., Village of Cloudcroft) to ensure that the potential for catastrophic wildfire is reduced on the lands currently proposed for transference and other lands under the Village's jurisdiction.

DISPOSITION OF DEAD OR INJURED LISTED ANIMALS

Upon finding a dead, injured, or sick individual of an 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 State Office (505/346-2525). Written notification must be made within five calendar days and include the date, time, and location of the animal, a 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, the remains of intact specimens of listed animals 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.

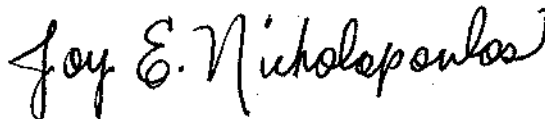
Arrangements regarding proper disposition of potential museum specimens shall be made with the institution before implementation of the action. A qualified biologist should transport injured animals to a qualified veterinarian. Should any treated listed animal survive, we should be contacted regarding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

REINITIATION - CLOSING STATEMENT

This concludes formal consultation on the transfer ownership of 81 acres of Federal land within the Sacramento Ranger District of the Lincoln National Forest, Otero County, New Mexico, to the Village of Cloudcroft, New Mexico. As required by 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 impact 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 future communications regarding this project, please refer to consultation #2-22-00-F-284. If you have any questions or would like to discuss any part of this biological and conference opinion, please contact Eric Hein of my staff at (505) 346-2525, extension 135.

Sincerely,



Joy E. Nicholopoulos
Field Supervisor

cc:

District Ranger, U.S. 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

LITERATURE CITED

- Barrowclough, G.F., and R.J. Gutiérrez. 1990. Genetic variation and differentiation in the spotted owl (*Strix occidentalis*). *Auk* 107:737-744.
- Barrowclough, G.F., R.J. Gutiérrez, and J.G. Groth. 1999. Phylogeography of spotted owl (*Strix occidentalis*) populations based on mitochondrial DNA sequences: gene flow, genetic structure, and a novel biogeographic pattern. *Evolution* 53:919-931.
- Fletcher, K. 1990. Habitats used, abundance, and distribution of the Mexican spotted owl, *Strix occidentalis lucida*, on National Forest system lands. U.S. Forest Service, Southwestern Region, Albuquerque, New Mexico. 86pp.
- Fletcher, K., and H. Hollis. 1994. Habitats used, abundance, and distribution of the Mexican spotted owl (*Strix occidentalis lucida*) on National Forest System Lands in the Southwestern Region. USDA, Forest Service, Southwestern Region, Albuquerque, New Mexico. 86pp.
- Forsman, E.D., E.C. Meslow, and H.M. Wight. 1984. Distribution and biology of the spotted owl in Oregon. *Wildlife Monographs* 87:1-64.
- Ganey, J.L. 1988. Distribution and habitat ecology of Mexican spotted owls in Arizona. MS Thesis. Northern Arizona University, Flagstaff, Arizona.
- Ganey, J.L. and R.P. Balda. 1989a. Distribution and habitat use of Mexican spotted owls in Arizona. *Condor* 91:355-361.
- Ganey, J.L. and R.P. Balda. 1989b. Home-range characteristics of spotted owls in northern Arizona. *Journal of Wildlife Management* 53:1159-1165.
- Ganey, J.L., W.M. Block, J.K. Dwyer, B.E. Strohmeier, and J.S. Jenness. 1998. Dispersal, movements, and survival rates of juvenile Mexican spotted owls in Northern Arizona. *Wilson Bull.*, 110(2):206-217.
- Ganey, J.L., W.M. Block, J.S. Jenness, and R.A. Wilson. 1999. Mexican spotted owl home range and habitat use in pine-oak forest: implications for forest management. *Forest Science* 45:127-135.
- Glover, V.J. 1984. Logging railroads of the Lincoln National Forest, New Mexico. U.S. Forest Service, Southwestern Region, Albuquerque, New Mexico.
- Seamans, M.E. and R.J. Gutiérrez. 1995. Breeding habitat of the Mexican spotted owl in the Tularosa Mountains, New Mexico. *Condor* 97:944-952.
- Seamans, M.E., R.J. Gutiérrez, C.A. May, and M.Z. Peery. 1999. Demography of two Mexican spotted owl populations. *Conservation Biology* 13:744-754.

- Skaggs, R.W., and R.J. Raitt. 1988. A spotted owl inventory on the Lincoln National Forest Sacramento Division: 1988. New Mexico Depart. of Game and Fish, Contract #5-516.6-76-17. 12pp.
- USDI Fish and Wildlife Service. 1991. Mexican spotted owl status review. Endangered species report 20. Albuquerque, New Mexico.
- USDI Fish and Wildlife Service. 1993. Endangered and Threatened Wildlife and Plants; final rule to list the Mexican spotted owl as threatened. *Federal Register* 58:14248-14271.
- USDI Fish and Wildlife Service. 1995. Endangered and threatened wildlife and plants; determination of critical habitat for the Mexican spotted Owl; Final rule; 60:29914-29951.
- USDI Fish and Wildlife Service. 1995. Recovery plan for the Mexican spotted owl (*Strix occidentalis lucida*). Albuquerque, New Mexico. 85pp.
- USDI Fish and Wildlife Service. 1998. Endangered and Threatened Wildlife and Plants; revocation of critical habitat for the Mexican spotted owl, loach minnow, and spikedace. *Federal Register* 63:14378-14379.
- USDI Fish and Wildlife Service. 2000. Endangered and threatened wildlife and plants; proposed designation of critical habitat for the Mexican spotted Owl; Proposed rule; 65:45336-45353.
- Ward, J.P. Jr., and W.M. Block. 1995. Mexican spotted owl prey ecology. *In* Mexican Spotted Owl Recovery Plan. U.S. Department of the Interior, Fish and Wildlife Service, Albuquerque, New Mexico.
- White, G.C., A.B. Franklin, and J.P. Ward, Jr. 1995. Population biology. *In* Mexican Spotted Owl Recovery Plan. U.S. Department of the Interior, Fish and Wildlife Service, Albuquerque, New Mexico.
- Willey, D.W. 1993. Home range characteristics and juvenile dispersal ecology of Mexican spotted owls in southern Utah. Unpubl. Rep. Utah Div. Wildl. Resour., Salt Lake City.
- Young, K.E., R. Valdez, P.J. Zwank, and W.R. Gould. 1998. Density and roost site characteristics of spotted owls in Sierra Madre Occidental, Chihuahua, Mexico. *Condor* 100:732-736.