



United States Department of the Interior

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In reply refer to:

AESO/SE
02EAAZ00-2020-F-0531

March 24, 2020

Ms. Heather Provencio, Forest Supervisor
Kaibab National Forest
800 South 6th Street
Williams, Arizona 86046

RE: Biological Opinion for Elk Ridge Ski Area Operation Permit

Dear Ms. Provencio:

Thank you for your request for formal consultation with the U.S. Fish and Wildlife Service (FWS) pursuant to section 7 of the Endangered Species Act of 1973 (16 U.S.C. *et seq.*), as amended (Act). We received your October 29, 2019, request for consultation, via electronic mail. At issue are effects that may result from the proposed issuance of a special use permit (SUP) for operation of the Elk Ridge Ski Area on the Williams Ranger District, Kaibab National Forest (NF), in Coconino County, Arizona to the threatened Mexican spotted owl (*Strix occidentalis lucida*, owl).

In your letter, you requested our concurrence that the proposed action “may affect, but is not likely to adversely affect” designated Mexican spotted owl critical habitat. We concur with your determinations and include our rationale in Appendix A.

You also determined that there would be “no effect” to the threatened yellow-billed cuckoo (*Coccyzus americanus*) and northern Mexican gartersnake (*Thamnophis eques megalops*). No effect” determinations do not require review from the FWS; therefore, we will not address these species and/or critical habitats further in this document.

This biological opinion replaces the December 1, 2008, Elk Ridge Ski Area SUP (#22410-2009-F-0053) biological opinion for the Mexican spotted owl. We based this biological opinion on information provided in the October 29, 2019, biological assessment (BA), telephone conversations, and other sources of information. Literature cited in this biological opinion is not a complete bibliography of all literature available on the species of concern or on other subjects considered in this opinion. A complete record of this consultation is on file at this office.

Consultation History

- April – September 2019: The Forest Service and FWS discussed the project, addressed Mexican spotted owl locations near the project area, and developed minimization measures.
- October 29, 2019: The Forest Service submitted their BA to the FWS.
- March 13, 2020: The FWS submitted a draft biological opinion to the Forest Service for review.
- March 16, 2020: The FWS received comments from the Forest Service on the biological opinion.

BIOLOGICAL OPINION

DESCRIPTION OF THE PROPOSED ACTION

Regulations implementing the Act (50 CFR 402.02) define “action” as all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by federal agencies of the United States or upon the high seas.

The following is a summary of the proposed action. A complete description of the proposed action and effects analysis are in your October 29, 2019 BA, amendments to the BA, and other supporting information in the administrative record. We include these documents herein by reference.

Elk Ridge Recreation I, LLC (ERRI or permittee) is negotiating with the Forest Service to obtain a term (up to 40 years) SUP to operate the facility on approximately 67 acres of the Kaibab NF in Coconino County. In 2014, the Forest Service closed the Elk Ridge Ski Area due to safety issues and has yet to be re-opened. In 2017, Mountain Capital Partners doing business as ERRI bought the Elk Ridge Ski Area (ERSA) located on Bill Williams Mountain, about 2.5 miles south of Williams, Arizona (Figure 1). The SUP would authorize only activities and operations permitted under the previous SUP with some exceptions for updating infrastructure to meet current safety standards.

Activities authorized under the new term SUP would allow for year-round, daytime operation of the ski area with no changes to existing facilities, the Master Development Plan, or activities authorized from the previous permit. The Forest Service will make exceptions to allow for upgrades to existing equipment needed to meet safety standards (*e.g.*, replacement of the rope tow with a modern ski lift). It would also allow for repair and maintenance of facilities as needed to reopen and operate as a winter resort, including deferred maintenance on the access road (Forest Service [FS] Road 106). The permittee will use heavy equipment for earthwork for erosion control, road repair, and possible excavation to remediate hazardous material, such as oil or fuel leaks from old equipment. All project activities will occur within the 66.5-acre existing SUP boundary or along the 60-foot right-of-way (ROW) (30 feet in either direction from centerline) of FS Road 106. Visitor capacity would remain the same, at a maximum of 250 skiers and 60 snow play guests at one time, as specified in the existing permit; capacity would be constrained by ticket sales, available parking, and food services.

Existing infrastructure at the Elk Ridge Ski Area includes:

- Eight ski runs for skiing and snowboarding, and a "tubing hill" for tubing. The ski runs include a rope tow (ERRI will upgrade the rope tow to a modern lift) on the beginner's slope and the existing Poma Lift. Outdoor activities at the site would occur between 8:00am and 5:00pm.
- A lodge at the base of the ski area (4,435 square feet [sq ft]), and an outside deck and walkway (1,008 sq ft). The lodge has a kitchen and dining area and ERRI may provide year-round up food service up to seven days per week. Activities at/around the lodge could occur around the clock.

- A propane-fueled 30-kilowatt generator for generating electricity for heating, food preparation, refrigeration, etc. ERRI plans to upgrade this generator. Propane is stored on-site.
- A cistern that contains potable water, which ERRI hauls to the site.
- A cistern that collects rainfall to provide water for toilets. The septic system provides for 515 people per day.
- A dirt parking lot (~68,250 sq ft) that allows for 170 vehicles. The access road (FS Road 106) to the ski area from the Perkinsville Road is 1.8 miles long and unpaved. ERRI must obtain an easement on this road to maintain it for public access.

Activities that will be authorized under the existing SUP

ERRI will focus immediate activities on deferred maintenance, clean-up and repair needed to re-open and operate the ski area as permitted under the previous permit. Repairs would include replacement of equipment/infrastructure, which does not meet current safety standards. Maintenance would include earthwork for erosion control, and possible trenching and excavation to remediate potential hazmat concerns, and installing culverts or underground power lines.

- Replace the wood decking on the lodge to meet safety code, within the existing footprint, subject to Forest Service approval of design prior to replacement.
- Replace the existing generator, which is the sole source of power for the ski area. ERRI needs a larger generator for food safety and area operations. They may place this new generator in a different location. This would involve trenching to lay new underground power lines, subject to Forest Service approval of design.
- Replace the deteriorated wood in the existing tubing course, within the existing location and current footprint, subject to Forest Service approval of design prior to replacement.
- Replace the existing potable water cistern to support permitted levels of operations at the restaurant/lodge. ERRI estimates they need to install a minimum 1,500-gallon tank (based on four gallons per person per day, multiplied by a maximum of 340 people at one time). The new potable water storage structure may be a cistern or an above ground tank and ERRI could place it in the same location as the existing site or in a new location, subject to Forest Service approval of design.
- Complete earth work/excavation to create water diversion structures, as well as other erosion control measures to address erosion problems with runoff from the existing ski runs (i.e., gullying and sediment deposits affecting the lodge and parking area). ERRI's erosion control plan is subject to Forest Service approval prior to commencement of work.
- Complete earth work/excavation to create water diversion structures, replace culverts, and resurface the access road (FS Road 106), as well as other possible erosion control measures to address erosion problems with the road accessing the ski area.
- Roadwork design plan would be subject to Forest Service approval prior to commencement of work. Roadwork may entail hazard tree/shrub trimming or removal along the 60-foot ROW.
- The Forest Service may provide the permittee with a free use permit for road aggregate material from Dead Horse or Jackass pits.

- Remove various pieces of defunct and inoperable equipment, such as old snowmobiles, snowcats, etc., as part cleaning up the area, in accordance with environmental site report, within the first year following permit issuance.
- If the permittee finds leaked fuel, oil, or other fluids, clean up would include hazmat remediation entailing excavation and soil removal.

Additional activities that will be authorized under the new SUP

- Remove and replace the existing inoperable surface lift (rope tow) with a modern lift to meet current safety standards.
- Replacement of the current rope tow lift with a "magic carpet" (escalator) within the current footprint. The magic carpet sits atop the ground with virtually no ground disturbance. The new lift design would be subject to FS approval. After removal of the defunct ski lift infrastructure, including towers, engine, operator shed, etc., installation of the magic carpet may proceed.
- Deferred maintenance of tree and shrub removal, as vegetation has grown into the existing ski lift corridor and ski slopes. The permittee may cut vegetation if needed to meet safety standards with a new lift, but the Forest Service must approve this action.
- Placement of "Neveplast" (artificial synthetic ski surface) on the beginner's ski run (~2,500 sq ft) to allow for skiing and snowboarding year-round. This covering is laid over the ground surface with very little ground disturbance.
- Operation of a snowcat for vertical transportation of skiers and boarders, in lieu of the existing inoperable ski lifts. This would require a designated route for snowcat travel, and a snowmobile escort to ensure skier safety.

Activities specifically not authorized under the existing or new SUP

- Replacement of Poma lift.
- Construction or building of new ski/earth trails.

Conservation Measures

- The Forest Service will continue survey/monitor Mexican spotted owls on Bill Williams Mountain annually to ascertain the status of owls in both the Bixler and Cataract Protected Activity Centers (PACs).
- In owl PAC and recovery habitat, the Forest Service will maintain and enhance key habitat components of owl habitat (*i.e.*, large Gamble oaks, large conifers, large snags, large logs, aspen, and 40% canopy cover) per the Kaibab NF Land and Resource Management Plan (USFS 2014), as long as they do not present safety hazards to the public.

Action Area

The action area is defined as all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action (50 CFR § 402.02). In delineating the

action area, we evaluated the farthest-reaching physical, chemical, and biotic effects of the action on the environment.

The action area consists of the entire approximately 67-acre permit area as well as FS Road 106 (1.8 miles) and the 60-foot ROW. We included a 0.25-mile area around the SUP area as part of the action area to account for disturbance associated with the lights, noise, human activity that will occur year-round at the ski area. The land contains and pure ponderosa pine, ponderosa pine-Gambel oak, and mixed conifer forest.

STATUS OF THE SPECIES AND CRITICAL HABITAT

Mexican spotted owl

In 1993, the FWS listed the Mexican spotted owl (hereafter, referred to as Mexican spotted owl, spotted owl, and owl) as threatened under the Act (58 FR 14248) and designated critical habitat in 2004 (69 FR 53182). The FWS appointed the Mexican spotted owl Recovery Team in 1993 (USFWS 1993), which produced the Recovery Plan for the Mexican spotted owl in 1995 (USFWS 1995). The FWS released the final Mexican spotted owl Recovery Plan, First Revision (Recovery Plan) in December 2012 (USFWS 2012).

Description and Life History

The Mexican spotted owl is a medium-sized owl without ear tufts. Spotted owls have mottled feathers with irregular white spots on a brown abdomen, back, and head. Mexican spotted owls nest in caves, in stick nest built by other birds, on debris platforms in trees, and in tree cavities. Mexican spotted owls have distinct annual breeding periods, with courtship beginning in March. Owls typically lay eggs in late March or early April, with eggs hatching approximately 30 days later. Nestling owls generally fledge in early to mid-June. A detailed account of the taxonomy, biology, and reproductive characteristics of the Mexican spotted owl is found in the Final Rule listing the owl as a threatened species (58 FR 14248), the original Recovery Plan (USFWS 1995), and in the revised Recovery Plan (USFWS 2012). We include the information provided in those documents by reference.

Habitat Requirements and Distribution

The spotted owl occurs in forested mountains and canyonlands throughout the southwestern United States and Mexico (Figure B.1 *in* USFWS 2012). The owl ranges from Utah, Colorado, Arizona, New Mexico, and the western portions of Texas south into several states in Mexico. Although the owl's entire range covers a broad area of the southwestern United States and Mexico, it does not occur uniformly throughout its range. Instead, the owl occurs in disjunct localities that correspond to isolated forested mountain systems, canyons, and in some cases steep, rocky canyon lands. Known owl locations in forested habitats indicate that the species has an affinity for older, uneven-aged forests, and the species inhabits a physically diverse landscape in the southwestern United States and Mexico.

In the Recovery Plan (USFWS 2012), the Recovery Team defined specific forest cover types (mixed conifer and pine-oak) and rocky-canyon habitats that provide nesting, roosting, and foraging habitat for Mexican spotted owls (USFWS 2012). The availability of habitat used for nesting/roosting of Mexican spotted owls in forested and rocky-canyon environments limits owl distribution (meaning the nesting and roosting habitat is a limiting factor for spotted owls). Habitat used for nesting/roosting also provides adequate conditions for foraging and dispersal activities. Thus, sustaining nesting/roosting habitat meets other survival and recovery requirements. Based on the specific forest cover type and rocky-canyon definitions, the Recovery Plan (USFWS 2012) focuses management recommendations on two categories of owl habitat: PACs and “recovery habitat” (the Recovery Team previously called recovery habitat “restricted habitat” in the 1995 Recovery Plan; the terms are synonymous).

PACs are intended to sustain and enhance areas that are presently, recently, or historically occupied by breeding Mexican spotted owls (USFWS 2012). Minimum PAC area is 600 acres and is based on the median size of the adaptive kernel contour enclosing 75% of the foraging locations for 14 pairs of radio-marked owls (595 ac) (Ganey and Dick 1995). Thus, PACs protect activity centers used by owls rather than entire home ranges. Consequently, there is no upper limit for PAC sizes; managers may create larger PACs if appropriate. The FWS and land managers establish PACs around owl sites (as defined in the Recovery Plan). All PACs should contain a designated 100-acre nest/roost core area, designed to offer additional protection to the nest or primary roost areas. The Recovery Plan (USFWS 2012) emphasizes protection of habitat used for nesting and roosting within PACs because the owls are most selective for such habitat (Ganey and Dick 1995, USFWS 2012 [Appendix B]) and these forest conditions are most limited across the landscape. These areas also provide resources to meet other life-history needs of the owl. Therefore, designating PACs protects and maintains occupied owl habitat.

Recovery habitat occurs in forest types and rocky canyons used by owls for roosting, foraging, dispersal and other life history needs; however, recovery habitat occurs outside of PACs. Recovery habitat is intended to: 1) provide protection for areas that may be used by owls; 2) foster creation of nest/roost habitat; 3) simultaneously provide managers with greater management flexibility than is allowed in PACs; and, 4) facilitate development and testing of management strategies that could be applied in PACs (USFWS 2012). Areas not classified as either PACs or recovery habitats, are classified as “Other Forest and Woodland Types” and “Other Riparian Forest Types” (USFWS 2012). These areas, which nesting owls rarely use, but owls may use for foraging and dispersal, generally include pure ponderosa pine forest, pinyon-juniper woodland, or other habitat types. Given their relatively limited importance to nesting owls, the Recovery Plan (USFWS 2012) contains no owl-specific recommendations in “Other Forest and Woodland Types” and “Other Riparian Forest Types”.

In addition to this natural variability in habitat influencing owl distribution, human activities also vary across the owl’s range. The combination of natural habitat variability, human influences on owls, international boundaries, and logistics of implementation of the Recovery Plan necessitates subdivision of the owl’s range into smaller management areas. The 1995 Recovery Plan subdivided the owl’s range into 11 “Recovery Units” (RUs): six in the United States and five in Mexico. In the revision of the Recovery Plan (USFWS 2012), we renamed RUs as “Ecological Management Units” (EMUs) to be in accord with current FWS guidelines. The Recovery Team

divided the owl's range within the United States into five EMUs: Colorado Plateau (CP), Southern Rocky Mountains (SRM), Upper Gila Mountains (UGM), Basin and Range-West (BRW), and Basin and Range-East (BRE) (USFWS 2012). Within Mexico, the revised Recovery Plan delineated five EMUs: Sierra Madre Occidental Norte, Sierra Madre Occidental Sur, Sierra Madre Oriental Norte, Sierra Madre Oriental Sur, and Eje Neovolcanico.

Threats

We cited two primary reasons for the original listing of the Mexican spotted owl in 1993: (1) the historical alteration of its habitat as the result of timber-management practices; and, (2) the threat of these practices continuing. We also identified the danger of stand-replacing fire as a looming threat at that time. Since publication of the original Recovery Plan (USFWS 1995), the FWS and Recovery Team acquired new information on the biology, threats, and habitat needs of the owl. Threats to its population in the U.S. (but likely not in Mexico) have transitioned from commercial-based timber harvest to the risk of stand-replacing wildland fire (USFWS 2012). Recent forest management has moved away from a commodity focus, such as commercial-based timber harvest, and now emphasizes sustainable ecological function and a return toward pre-settlement fire regimes, both of which have potential to benefit the spotted owl. However, as stated in the revised Recovery Plan (USFWS 2012), there is much uncertainty regarding thinning and burning treatment effects and the risks to owl habitat with or without forest treatment as well.

Southwestern forests have experienced larger and more severe wildland fires from 1995 to the present, than prior to 1995 (Westerling 2016). Climate variability combined with unhealthy forest conditions (i.e., too many trees; high levels of insects and disease; excessive fuel loads; etc.) also synergistically result in increased negative effects to habitat from fire (Fulé *et al.* 2004, Littell *et al.* 2009). The intensification of natural drought cycles and the ensuing stress placed upon overstocked forested habitats could result in even larger and more severe fires in owl habitat (Jones *et al.* 2016, Ganey *et al.* 2017). Currently, high-severity, stand-replacing fires are influencing the persistence of ponderosa pine and mixed conifer forest types in Arizona and New Mexico. Wildland fire is likely the greatest threat to the Mexican spotted owl within the action area and fire severity and size have been increasing (USFWS 2012). Landscape level wildland fires, such as the Rodeo-Chediski Fire (2002), the Wallow Fire (2011), and the Whitewater-Baldy Complex (2012) have resulted in the loss of tens of thousands of acres of occupied and potential nest/roost habitat across significant portions of the owl's range. Although owls will forage in severely burned areas, habitat is often lacking for nesting and roosting in these areas, particularly when high severity fire affects large patches of habitat (Jones *et al.* 2016).

Fuels reduction treatments, though critical to reducing the risk of severe wildland fire, can have short-term adverse effects to owls through habitat modification and disturbance. As the human population grows in the southwestern United States, small communities within and adjacent to wildlands are being developed. This trend may have detrimental effects to spotted owls by further fragmenting habitat and increasing disturbance during the breeding season.

Global climate variability may also be a threat to the owl. Changing climate conditions may interact with fire, management actions, and other factors discussed above, to increase affects to

owl habitat. Studies have shown that since 1950, the snowmelt season in some watersheds of the western U.S. has advanced by about 10 days (Dettinger and Cayan 1995, Dettinger and Diaz 2000, Stewart *et al.* 2004). Researchers think such changes in the timing and amount of snowmelt are signals of climate-related change in high elevations (Smith *et al.* 2000, Reiners *et al.* 2003). The effect of climate change is the intensification of natural drought cycles and the ensuing stress placed upon high-elevation montane habitats (IPCC 2007, Cook *et al.* 2004, Breshears *et al.* 2005, and Mueller *et al.* 2005). The increased stress put on these habitats is likely to result in long-term changes to vegetation, and to invertebrate and vertebrate populations within coniferous forests and canyon habitats that affect ecosystem function and processes.

Historical and current anthropogenic uses of Mexican spotted owl habitat include both domestic and wild ungulate grazing, recreation, fuels reduction treatments, resource extraction (*e.g.*, timber, oil, gas), and development. These activities have the potential to reduce the quality of owl nesting, roosting, and foraging habitat, and may cause disturbance during the breeding season. Livestock and wild ungulate grazing is prevalent throughout the range of the owl and can have an adverse effect on the availability of grass cover for prey species. Recreation effects are increasing throughout the Southwest, especially in meadow and riparian areas. There is anecdotal information and research that indicates that owls in heavily used recreation areas are much more erratic in their movement patterns and behavior.

Several fatality factors have been identified as particularly detrimental to the Mexican spotted owl, including predation, starvation, accidents, disease, and parasites. For example, West Nile Virus also has the potential to effect the owl. We have not documented the virus in spotted owls in Arizona, New Mexico, and Colorado, but preliminary information suggests that owls may be highly vulnerable to this disease (Courtney *et al.* 2004). Unfortunately, due to the secretive nature of spotted owls and the lack of intensive monitoring of birds that we have banded, we will most likely not know when owls contract the disease or the extent of its effect to the owl range-wide.

Population Status and Process of Delisting

The recovery objective stated in the Recovery Plan (USFWS 2012) is “to support the Mexican spotted owl throughout its range into the foreseeable future, and to maintain the habitat conditions necessary to provide roosting and nesting habitat for the Mexican spotted owl.” In addition, the FWS and Recovery Team developed two recovery (or delisting) criteria (addressing listing factors A, C, and E) that we must meet before the owl can be delisted. These criteria are:

1. Owl occupancy rates must show a stable or increasing trend after 10 years of monitoring.
2. Indicators of habitat conditions (key habitat variables) are stable or improving for 10 years in roosting and nesting habitat.

Once the FWS can show that we have met these two criteria across the range of the owl, the FWS would then review the regulations and known distribution (the spatial arrangement across its range) of Mexican spotted owls to determine if the delisting process should proceed. At this time, we cannot describe the future desired distribution of owls across their range because changes in the species' range may occur due to factors such as climate change, which could

result in shifts in the owl population to the northern portion of its range. In addition to meeting the delisting criteria, to delist the Mexican spotted owl, the FWS must be able to demonstrate, using the best scientific information, that Federal, state, and tribal land managers have moderated and/or regulated anthropogenic and non-anthropogenic threats to the Mexican spotted owl (USFWS 2012). We derive the best scientific information from research, management experiments, and monitoring conducted at the appropriate scales and intensity. The FWS must also conduct an analysis of the five listing factors to verify that threat levels are acceptable for likely persistence of owl populations into the future.

In the Recovery Plan (USFWS 2012), the Recovery Team identified two types of monitoring recommended for the Mexican spotted owl. The first is surveying for individual owls by using the FWS Mexican spotted owl survey protocol (USFWS 2012 [Appendix D]). These are surveys conducted to locate individual owls (which allows FWS and land managers to designate PACs) and to monitor the status of owls associated with known PACs (to locate nests and roosts, and determine their reproductive status in a given year). Mexican spotted owl surveys conducted since the 1995 Recovery Plan have increased our knowledge of owl distribution, but not necessarily of owl abundance. Population estimates, based upon owl surveys, recorded 758 owl sites from 1990 to 1993, and 1,222 owl sites from 1990 to 2004 in the United States. The Recovery Plan (USFWS 2012) lists 1,324 known owl sites in the United States. An owl site is an area used by a single owl or a pair of adult or subadult owls for nesting, roosting, or foraging. The increase in number of known owl sites is mainly a product of agencies completing new owl surveys within previously unsurveyed areas (*e.g.*, several National Parks within southern Utah, Guadalupe National Park in West Texas; Guadalupe Mountains in southeastern New Mexico and West Texas; Dinosaur National Monument in Colorado; and the Cibola and Gila NFs in New Mexico). Thus, we cannot infer an increase in abundance in the species range-wide from these data (USFWS 2012). However, the Recovery Team and FWS do assume that an increase in the number of occupied sites is a positive indicator regarding owl abundance.

In addition to this survey protocol for individual owls, the Recovery Team also developed and recommended a methodology for conducting Mexican spotted owl population monitoring, using an occupancy (presence/absence) model to determine the population trend (stable, increasing, decreasing) of owls range-wide (USFWS 2012 [Appendix E]). We are currently working with the Southwestern Region of the Forest Service to conduct the population monitoring recommended in the Recovery Plan (USFWS 2012 [Appendix E]) on NFS lands in Arizona and New Mexico. The effort to conduct this work has occurred during the 2014-2019 breeding seasons (six years). The Recovery Team, Forest Service, FWS, and the Bird Conservancy of the Rockies (BCR, contractor) are continuing to collect data on NFS lands. There are approximately 200 quadrats sampled each year on NFS lands in Arizona and New Mexico. We are developing a strategy for incorporating additional lands (*e.g.*, National Park Service, Bureau of Land Management, and Department of Defense) into the monitoring. It is important to state that delisting criteria in the Recovery Plan (USFWS 2012) require that monitoring occur across the range of the owl, not just across an individual land management entity (*e.g.*, must include lands managed by all entities, *i.e.*, not just NFS lands). Currently, based on the work conducted by the Forest Service and BCR, we have further developed the process for conducting rangewide population monitoring as described in Appendix E of the Recovery Plan (USFWS 2012).

It is important to note that the entire range of Mexican spotted owls covers area in five U.S. states (Arizona, Colorado, New Mexico, Texas, and Utah) and a large area of Mexico. Within the United States, Region 3 (Southwestern) NFS lands are located in Arizona and New Mexico, which is only a portion of the range of the Mexican spotted owl. Occupancy monitoring conducted on NFs in Region 3 alone may not allow the FWS to meet rangewide-delisting criteria, but it will allow the FWS and Forest Service to assess population trends on Region 3 NFS lands in Arizona and New Mexico. The spatial scale at which this monitoring is occurring allows for interpretation of owl population trends for all Region 3 NFS lands. However, we (BCR, the Forest Service and the FWS) did not design the current NFS occupancy sampling scheme to scale down to monitor owl occupancy trends on any individual NF within the Southwestern Region. We did not design it to meet this smaller scale objective because the objective is to develop a trend for all NFS lands in Region 3, not for each individual forest.

Previous Consultations

Given the wide-range of this species, several Federal actions affect this species every year. A complete list of all formal consultations affecting this in Arizona is located on our Arizona Ecological Services [website](#).

ENVIRONMENTAL BASELINE

Regulations implementing the Act (50 CFR 402.02) define the environmental baseline as the condition of the listed species or its designated critical habitat in the action area, without the consequences to the listed species or designated critical habitat caused by the proposed action. The environmental baseline includes the past and present effects of all Federal, State, or private actions and other human activities in the action area, the anticipated effects of all proposed Federal projects in the action that have already undergone formal or early section 7 consultation, and the effect of State or private actions which are contemporaneous with the consultation in process. The consequences to listed species or designated critical habitat from ongoing agency activities or existing agency facilities that are not within the agency's discretion to modify are part of the environmental baseline.

Status of the species within the action area

Records of Mexican spotted owl detections on Bill Williams Mountain date back to 1978. The Kaibab NF has no known Mexican spotted owl nest locations on the mountain, but an adult owl with a juvenile were observed near Bixler Saddle on the west side of the mountain in 1983 indicating reproduction has occurred. Based on those detections and survey results from the early 1990s, Forest Service and FWS biologists designated the Bill Williams PAC in 1995.

Surveys detected Mexican spotted owls intermittently on Bill Williams Mountain from 1978 to 1994. Surveys conducted between 1994 and 2008 did not detect owls; however, surveys were conducted in only 10 of those 16 years and many of these survey efforts were not to protocol. Between 2009 and 2018, biologists conducted surveys on Bill Williams Mountain in 2011, 2013-2016 and 2018, with spotted owl detections in 2014 and 2016. On April 30, 2019, a Forest

Service silviculturist incidentally observed a pair of owls perched together in a tree in just west of the Elk Ridge Ski Area. Subsequent surveys over the next several weeks documented Mexican spotted owls nearby (in Cataract Canyon and at the Benham Trailhead). On August 23, 2019, another Forest Service employee observed a Mexican spotted owl pair perched together about 0.3 mile west of the April 2019 observation.

Based on the locations of the 2019 Mexican spotted owl detections and LiDAR images to determine the best potential habitat the Forest Service and FWS revised the 1,017-acre Bill Williams PAC into two new PACs –the Cataract (797 acres) and Bixler PACs (520 acres). The Cataract PAC lies adjacent to and nine acres overlap with the Elk Ridge Ski Area permit area, including 6.5 acres in the eastern nest/roost core area. There are two core areas in the Cataract PAC because we are unable at this time to determine if there are one or two pairs of owls using the area. The Bixler PAC is not located within or adjacent to the ski area.

Vegetation in the Cataract PAC consists of mixed conifer forest. Understory species found in the PAC include Gamble's oak and aspen.

Factors affecting the species within the action area

Beginning in 2014, operations ceased at the Elk Ridge Ski Area, and very little human activity has occurred in this area during the last five years. However, there is considerable recreation and other human activity on Bill Williams Mountain. The Bill Williams Trail is located 1.1 miles west of the ski area and receives about five to 15 groups of hikers per week during the spring, summer, and fall months. The Bixler Saddle Trail on the west side of Bill Williams Mountain receives little use. The Bill Williams Lookout Road (FS Road 111) is closed in the winter (late December through early May) but receives both recreational and administrative vehicle use the rest of the year, including traffic associated with maintenance of the communications facilities on the summit, and Forest Service fire lookouts in the summer. Overall, vehicle use on this road is relatively light. FS Road 106 is a passenger car appropriate road, used only to serve the Elk Ridge Ski Area, and it is the responsibility of ERRI (permittee) to obtain an easement and maintain the road.

On 342 acres, 320 within the newly designated Cataract PAC, implementation of the first steep slope treatment of the Bill Williams Mountain Restoration Project (BWMP) began in September 2019, and is expected to continue for three more years. Operators are conducting tree thinning with steep slope equipment (harvester/ forwarders and steep slope excavators), hand thinning with chainsaws, and removal of logs by helicopters. In addition, the operator will clear 0.35 mile of temporary roads and three acres of landings within the PAC, and they will clear an additional five acres for landings in recovery habitat. For more details on implementation of the BWMP and assessment of the effects to the Mexican spotted owl, refer to our biological opinions on the project (USFWS 2015, 2019; consultation #22140-2011-F-0233-R001). All thinning and burning treatments within the Cataract PAC will occur outside of the owl-breeding season (September 1 to February 28); nevertheless, implementation of this project is a significant noise and habitat disturbance to resident Mexican spotted owls, particularly combined with the re-opening of the ski area.

EFFECTS OF THE ACTION

In accordance with 50 CFR 402.02, effects of the action are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of all other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action (see §402.17).

Effects of the action on the Mexican spotted owl and its habitat

Disturbance Effects

The proposed action would result in audio and visual disturbance to Mexican spotted owls associated with the Cataract Mexican spotted owl PAC due to noise, lights, and human activity in the action area, which includes the PAC and nest/roost core area. Based on the proposed action, we expect these effects to occur year-round and they will be long-term as the life of the SUP will be 40 years. The effects will likely vary seasonally, with more people on-site, in the winter (non-breeding season for Mexican spotted owls) than during the breeding season (March 1-August 31).

Sources of noise from the proposed action (deferred maintenance and restoration of the facility and access road, and subsequent operation of the ski area) include human vocalizations throughout the ski area, and noise from vehicles, heavy equipment, and other infrastructure (e.g., slamming doors, engines, generators, etc.). Noise from these sources would occur during the day (approximately 0800 – 1700 hours) when the ski area is open and potentially into the night at the restaurant or for other special events or circumstances. The overall noise level would depend on the number of visitors at the resort (maximum of 310), and the season, time of the day, and day of the week, but is assumed to be long-term and potentially significant to Mexican spotted owls.

We expect that noise generated within the action area will disturb owls in the Cataract PAC, particularly during the breeding season (March 1-August 31). The noise and visual disturbances may disrupt normal behaviors, causing owls to avoid about 116 acres of the Cataract PAC nest/roost core area and up to 51 additional acres of recovery habitat within the action area. There is some potential for forest vegetation to assist with noise attenuation, but there are far fewer trees in this area following the forest thinning associated with the BWMRP that occurred in 2019 and will continue for up to three more years.

Artificial light from the proposed action would be limited because hours of ski area operation would be 0800 – 1700 hours. Artificial light use from administrative needs and/or nighttime events could result in lights from vehicles after sunset, and lighting from the lodge and associated infrastructure, affecting owl behavior within the Cataract PAC. Light effects may disrupt foraging behavior and/or cause the owls to avoid otherwise suitable habitat adjacent to the ski area.

Research results indicate that recreational activities including hiking, camping, equestrian use, and mountain biking may affect the Mexican spotted owl depending on location, intensity, frequency, and duration (USFWS 1995). Direct effects may occur when these activities affect individual birds at nests, roosts, and foraging sites. Indirect effects may occur when recreational activities degrade habitat through vegetation modification (trampling, removal, accidental burning, and soil compaction) or when human-caused disturbance stimuli act as a form of predation risk (Frid and Dill 2002).

There are a growing number of studies attempting to describe and quantify the impacts of non-lethal disturbance on the behavior and reproduction of wildlife, and Mexican spotted owls in particular. Delaney *et al.* (1997) reviewed literature on the response of owls and other birds to noise. They concluded that raptors are more susceptible to disturbance-caused nest abandonment early in the nesting season; birds generally flush in response to disturbance when distances to the source are less than approximately 200 feet and when sound levels are in excess of 95 dBA; and the tendency to flush from a nest declines with experience or habituation to the noise, although the startle response cannot be completely eliminated by habituation. Delaney *et al.* (1999) found that ground-based disturbances elicited a greater flush response than aerial disturbances. Our guidance is to limit potentially disturbing activities to areas ≥ 0.25 mile from Mexican spotted owl nest sites during the breeding season (March 1 through August 31), which corresponds with Delaney *et al.*'s (1999) 0.25-mile threshold for alert responses to helicopter flights. In addition, Delaney *et al.* (1999) found that Mexican spotted owls did not flee from helicopters when caring for young at the nest, but fled readily during the post-fledgling period. This could be because of optimal fleeing decisions that balance the cost-benefit of fleeing. Frid and Dill (2002) hypothesize that using predator risk-disturbance theory may explain this and perhaps the cost of an adult Mexican spotted owl fleeing during the nestling period may be higher than during the post-fledgling period.

Swarthout and Steidl (2001) found that Mexican spotted owls modified their behavior (*e.g.*, increased perch height) and/or flushed in response to recreationists (hikers), which could similarly occur, from skiers, particularly during the early owl-breeding season (March). Based on their results, they recommended placing buffer zones (conservative buffer = 180 ft; less conservative buffer = 40 ft.) around known roosting sites to minimize effects. In a study to assess the effects of hikers on the behavior of nesting Mexican spotted owls, Swarthout and Steidl (2003) noted that female owls decreased the amount of time they handled prey by 57% and decreased the amount of time they performed daytime maintenance activities by 30%. In addition, hikers caused both female and male owls to increase the frequency of contact vocalizations. Birds may respond to disturbance during the breeding season by abandoning their nests or young; by altering their behavior such that they are less attentive to the young, which increases the risk of the young being preyed upon or disrupting feeding patterns; or by exposing young to adverse environmental stress (Knight and Cole 1995). There is also evidence that disturbance during years of a diminished prey base can result in lost foraging time which, in turn, may cause some raptors to leave an area or not to breed at all (Knight and Cole 1995). Topographic screening between the area of disturbance and the bird's location creates a noise buffer, and may assist in the reduction of noise disturbance (Knight and Cole 1995).

Research on all spotted owl subspecies indicate that it exhibits docile behavior when approached by researchers, and there is no clear evidence of significant effect by research activity. The exception to this is the negative effect on reproduction from backpack radio transmitters (Gutierrez *et al.* 1995). However, researchers usually minimize disturbance to the extent possible, which may not be the case for recreational trail users. In the long-term, some species may become less responsive to human disturbance if they are not deliberately harassed; others may become very stress-prone towards humans (Bowles 1995, Hammitt and Cole 1987). Excessive interaction with humans may cause a lowering of call response rates or habituation; the effects of habituation on spotted owls are unknown (Gutierrez *et al.* 1995). Habituation, though it may occur to some extent, often is partial or negligible (Frid and Dill 2002). However, it would be logical to assume that wildlife rarely have perfect information and we would expect them to maximize fitness by overestimating rather than underestimating predator risk. It may be that Mexican spotted owls, which appear to be “habituated” to recreationists, in reality, may have no suitable alternative habitats and remain within areas because other suitable habitat is not available.

Habitat Effects

The proposed action will include vegetation maintenance on existing ski runs and lift corridors, including removal and/or pruning of trees and shrubs. The permit area includes nine-acres within the Cataract PAC (including 6.5 acres of the eastern nest/roost core area) where it overlaps the cross-country ski course. The pruning of shrubs or trees in owl habitat is unlikely to change habitat or reduce the ability of owls to use the Cataract PAC. However, the removal of trees, particularly those greater than 18 inches diameter-at-breast height (dbh) could remove important overstory cover for the owls, particularly within the nest/roost core area. However, the Forest Service must approve tree removal and requests removal be limited to small trees or shrubs that may have encroached on infrastructure in the past four years, and possibly a few large hazard trees (trees that could fall on people or infrastructure). This vegetation maintenance activity would be long-term, but probably always minimal, and minimized by overall efforts to maintain and or enhance key habitat components within the PAC.

Road reconstruction and maintenance may remove vegetation, including trees, within the 60-foot ROW. Thus, this action may result in a reduction in key habitat components of owl and their prey species within the ROW. This permittee may implement this action over several years, but it would affect a relatively small area as only about 0.28 mile of FS Road 106 intersects Mexican spotted owl recovery habitat.

Summary

Resuming operation of the Elk Ridge Ski Area would result in significant human activity (up to 340 people at any one time every day, all year long), including noise and lights in close proximity to owls in the Cataract PAC. This disturbance may adversely affect owls in the by disrupting normal foraging and reproductive behaviors, and causing them to avoid otherwise suitable protected and recovery habitat. Specifically, within the action area, it could result in owls avoiding up to 116 acres of the Cataract PAC, including 52 acres of the eastern nest/roost core area; or possibly abandon the PAC altogether.

We expect that year-round human activity that overlaps with the PAC and the nest/roost core area will deter owls from nesting and roosting in this high-quality owl habitat (large trees, canopy cover, and multi-storied forest). The defined action area (SUP area plus a 0.25-mile buffer) overlaps with 52 acres (95%) of the eastern nest/roost core area in the Cataract PAC. Approximately 6.5 acres of the nest/roost core is within the actual SUP footprint. The rugged topography and dense vegetation between the permit area and the portion of the PAC it overlaps may reduce the potential disturbance to Mexican spotted owls from noise and lights. However, we expect that the proposed action will amplify the existing baseline recreational activities and management activities (mechanical thinning and prescribed burning) that are ongoing on Bill Williams Mountain.

We do not think that effects to the key owl habitat components within the Cataract PAC or in the recovery habitat will be significant. It is likely that the tree removal will be a relatively rare event and since the Forest Service will approve all requests for tree removal, we do not anticipate this action to affect the persistence of large trees within owl habitat.

CUMULATIVE EFFECTS

Cumulative effects are those effects of future State or private activities, not involving federal activities, that are reasonably certain to occur within the action area considered in this biological opinion (50 CFR 402.02).

Climate change, in combination with drought cycles, is likely to exacerbate existing threats to all these species' habitats in the southwestern U.S., now and into the near future. Increased and prolonged drought associated with changing climatic patterns will adversely affect streams and riparian habitat by reducing water availability and altering food availability and predation rates. The continued warming and drying of forested habitats will likely alter vegetation structure and composition and reduce the amount and quality of nesting and roosting habitat for Mexican spotted owls in the action area.

The main non-Federal activities that may affect the Mexican spotted owl habitat within the project area are the loss of habitat through development of private inholdings and related disturbance at these properties. Within these private lands, there is the potential for activities that create disturbance to owls or removal of key habitat components on private lands, through recreation or other activities.

JEOPARDY AND ADVERSE MODIFICATION ANALYSIS

Section 7(a)(2) of the ESA requires that federal agencies ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of designated critical habitat.

Jeopardy Analysis Framework

Our jeopardy analysis relies on the following:

“Jeopardize the continued existence of” means to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species (50 CFR 402.02). The following analysis relies on four components: (1) Status of the Species, which evaluates the range-wide condition of the listed species addressed, the factors responsible for that condition, and the species’ survival and recovery needs; (2) Environmental Baseline, which evaluates the condition of the species in the action area, the factors responsible for that condition, and the relationship of the action area to the survival and recovery of the species; (3) Effects of the Action (including those from conservation measures), which determines the direct and indirect impacts of the proposed federal action and the effects of any interrelated or interdependent activities on the species; and (4) Cumulative Effects, which evaluates the effects of future, non-federal activities in the action area on the species. The jeopardy analysis in this biological opinion emphasizes the range-wide survival and recovery needs of the listed species and the role of the action area in providing for those needs. We evaluate the significance of the proposed Federal action within this context, taken together with cumulative effects, for making the jeopardy determination.

Conclusion

After reviewing the status of the Mexican spotted owl, the environmental baseline for the action area, the effects of the action, as proposed, and the cumulative effects, it is our biological opinion that the action, as proposed, is not likely to jeopardize the continued existence of the owl.

We base this conclusion on the following:

- The scope of the project is limited to one Mexican spotted owl PAC (the Cataract PAC) and a small amount of recovery habitat outside of the PAC. Therefore, the proposed action will not affect the survival or recovery of the Mexican spotted owl within the Upper Gila Mountains EMU.

We based the conclusions of this biological opinion on full implementation of the project as presented in the Description of the Proposed Action section of this document.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulations pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. “Take” is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. “Harm” is further defined (50 CFR § 17.3) to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. “Harass” is

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

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

AMOUNT OR EXTENT OF TAKE

For the purpose of evaluating incidental take of Mexican spotted owls from Elk Ridge Ski Area SUP, we anticipate that incidental take will occur as harassment of individual owls to such a degree that we considered owls lost as viable members of the population and thus “taken.” Mexican spotted owls experiencing disturbance from activities at the ski area are expected to fail to breed, fail to successfully rear young, or raise less fit young; longer-term disturbance can result in owls deserting the area because of chronic disturbance that no longer allows for the habitat to meet the owl’s needs.

We anticipate that the proposed action is reasonably certain to result in incidental take of Mexican spotted owls. However, it is difficult to quantify the number of individual owls potentially taken because: (1) dead or impaired individuals are difficult to find and losses may be masked by seasonal fluctuations in environmental conditions; (2) the status of the species could change over time through immigration, emigration, and loss or creation of habitat; and (3) the species is secretive and we rarely have information regarding the number of owls occupying a PAC and/or their reproductive status. For these reasons, we will attribute incidental take at the PAC level. This fits well with our section 7 consultation policy, which provides for incidental take if an activity compromises the integrity of an occupied PAC to an extent that we are reasonably certain that incidental take occurred (USFWS 1996). Actions outside PACs will generally not result in incidental take because we are not reasonably certain that Mexican spotted owls are nesting and roosting in areas outside of PACs. We may modify this determination in cases when managers have not adequately surveyed areas that may support spotted owls and we are reasonably certain spotted owls are present.

Using available information as summarized within this document, we have identified conditions of incidental take for the Mexican spotted owl associated with the proposed action. Based upon

the potential for incidental take to occur as part of implementation of the project, we anticipate the following incidental take for the proposed action:

- We anticipate the incidental take of one pair of Mexican spotted owls and/or associated eggs/juveniles in the Cataract PAC in the form of long-term (more than three breeding seasons) disturbance (non-habitat altering action that disrupts or is likely to disrupt owl behavior within the PACs) associated with actions implemented under the Elk Ridge Ski Area SUP Project. Owls experiencing long-term harassment may not only fail to rear young successfully, but may desert the area.
- We do not expect that incidental take will occur each year to owls associated with the Cataract PAC because of the disturbance; however, we think the potential is there in any given year depending upon the activities conducted at the Elk Ridge Ski Area, particularly activities that occur early in the owl-breeding season. The disturbance generated by activities associated with the ski area is likely to interrupt, impede, or disrupt normal behavior patterns to the point that they affect breeding and feeding activities over the course of the life of the permit (up to 40 years). Incidental take is exceeded if there are more than six consecutive years of no Mexican spotted owl detections within the Cataract PAC.

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

EFFECT OF THE TAKE

In the accompanying biological opinion, we have determined that the level of anticipated take is not likely to result in jeopardy to the Mexican spotted owl.

REASONABLE AND PRUDENT MEASURES AND TERMS AND CONDITIONS

We think the following reasonable and prudent measure(s) are necessary and appropriate to minimize take of Mexican spotted owls associated with the Cataract PAC:

1. The Forest Service shall monitor incidental take resulting from the proposed action and report to the FWS the findings of that monitoring.
2. The Forest Service shall minimize the effects of the action on the owls and habitat within the Cataract PAC.

Terms and Conditions

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

Mexican spotted owl

The following terms and conditions implement reasonable and prudent measure #1 for Mexican spotted owl:

- 1.1 The Forest shall conduct FWS protocol level surveys throughout the life of the project in the Cataract Mexican spotted owl PAC to determine annual occupancy and reproductive success. In coordination with the FWS, the Forest shall ensure they conduct these surveys until such a time that the FWS and Forest Service determine that we do not need annual surveys either because owls are consistently occupying the area or because we no longer detect owls following a minimum of six years of protocol survey with no detections. After six consecutive years with no Mexican spotted owl detections, the FWS and Forest Service will consider reinitiating Section 7 consultation.
- 1.2 The Forest Service shall submit annual monitoring reports to the Arizona Ecological Services Field Office (Flagstaff) by January 15 beginning in 2021. This would include datasheets and maps; and, the location, species, and dbh of trees removed from the PAC and the nest/roost core area, as well as any other relevant information. These reports shall document for the previous calendar year the effectiveness of the terms and conditions and locations of listed species observed. The report shall also summarize tasks accomplished under the conservation measures and terms and conditions. The report shall make recommendations for modifying or refining these terms and conditions to enhance Mexican spotted owl protection.
- 1.3 The Forest Service shall immediately report any Mexican spotted owl fatality to the FWS Mexican spotted owl lead (928-556-2118) within 24 hours of finding the owl(s).

The following terms and conditions implement reasonable and prudent measure #2:

- 2.1 The Forest shall limit, to the extent practicable, tree removal within the Cataract PAC, especially within the eastern core area. This should include limitations on removing large trees (greater than 18 inches diameter-at-breast height) from the existing cross-country ski trail unless there is a hazard to human health and safety. Removal of all trees within the PAC and nest/core should be included in the annual report, as noted above.

- 2.2 The Forest Service shall limit the operating period for special events, particularly those held in the evening or late night hours in March through May, in order to limit disturbance to nesting owls. If owls are determined to be non-nesting (per protocol) in a given year, this restriction may be lifted in coordination with the FWS.

Review requirement: We designed the reasonable and prudent measures, with their implementing terms and conditions, to minimize the effect of incidental take that might otherwise result from the proposed action. If, during the course of the action, the level of incidental take is exceeded, such incidental take would represent new information requiring review of the reasonable and prudent measures provided. The Forest Service must immediately provide an explanation of the causes of the taking and review with the FWS the need for possible modification of the reasonable and prudent measures.

Disposition of Dead or Injured Listed Species

Upon locating a dead, injured, or sick listed species you must provide initial notification to the Service's Law Enforcement Office, 4901 Paseo del Norte NE, Suite D, Albuquerque, NM 87113, (505-248-7889) within three working days of its finding. You must make written notification within five calendar days and include the date, time, and location of the animal, a photograph if possible, and any other pertinent information. Send the notification to the Law Enforcement Office with a copy to this office. You must take care in handling sick or injured animals to ensure effective treatment and in handling dead specimens to preserve the biological material in the best possible state.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of 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. Due to the nature of the proposed action, namely the transfer of ownership from federal to private lands, there are no conservation recommendations identified.

1. We recommend that the Kaibab NF work with ERRI to minimize noise effects from the Elk Ridge Ski Area and to minimize light effects through the downward facing/shielded lights, and covering of lights.

REINITIATION NOTICE

This concludes formal consultation for the issuance of the Elk Ridge Ski Area SUP. As provided in 50 CFR 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not

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

In keeping with our trust responsibilities to American Indian Tribes, we encourage you to continue to coordinate with the Bureau of Indian Affairs in the implementation of this consultation and, by copy of this biological opinion, are notifying the Fort Mojave Indian Tribe, Hopi Tribe, Hualapai Tribe, Havasupai Tribe, Navajo Nation, and Zuni Tribe of its completion. We also encourage you to coordinate the review of this project with the Arizona Game and Fish Department.

We appreciate the Kaibab NF's efforts to identify and minimize effects to listed species from this project. Please refer to the consultation number, 02EAAZ00-2020-F-0531 in future correspondence concerning this project. Should you require further assistance or if you have any questions, please contact Shaula Hedwall (928-556-2118).

Sincerely,



Jeffrey A. Humphrey
Field Supervisor

cc (electronic):

Chief, Habitat Branch, Arizona Game and Fish Department, Phoenix, AZ
Regional Supervisor, Arizona Game and Fish Department, Flagstaff, AZ
Fish and Wildlife Biologist, U.S. Fish and Wildlife Service, Flagstaff AZ
(Attn: Shaula Hedwall)
District Ranger, Williams Ranger District, Kaibab National Forest, Williams, AZ
(Attn: Debra Mollet)
District Biologist, Kaibab National Forest, Williams, AZ (Attn: Travis Largent)
Director, Aha Makav Cultural Society, Fort Mojave Indian Tribe, Mohave Valley, AZ
Director, Hopi Cultural Preservation Office, Kykotsmovi, AZ
Director, Tribal Historic Preservation Office, Hualapai Tribe, Peach Springs, AZ
Tribal Secretary, Havasupai Tribe, Supai, AZ
Director, Historic Preservation Department, Navajo Nation, Window Rock, AZ
Director, Zuni Heritage and Historic Preservation Office, Zuni, NM
Environmental Protection Officer, Environmental Quality Services, Western Regional
Office, Bureau of Indian Affairs, Phoenix, AZ

APPENDIX A: CONCURRENCE

This appendix contains our concurrence for Mexican spotted owl critical habitat.

Mexican spotted owl critical habitat

The proposed action includes pruning and/or removing trees or shrubs that encroach on existing ski runs or trails and along FS Road 106 or that might pose a safety hazard to the public. It is possible that tree/shrub removal could occur in protected Mexican spotted owl habitat within a nine-acre portion of the Cataract PAC (including 6.5 acres of the eastern core area) that overlaps the Elk Ridge Ski Area's cross-country ski course. The Forest Service must approve any vegetation removal/modification actions proposed by the permittee prior to the action occurring.

We concur with your determination that the proposed action "may affect, but is not likely to adversely affect" the Mexican spotted owl and its critical habitat for the following reasons:

- The potential effects of the proposed action to primary constituent elements (PCEs) of critical habitat are from the removal of encroaching vegetation or hazardous tree removal in the nine-acre portion of the Elk Ridge Ski Area's cross-country ski run that overlaps protected habitat. Effects to PCEs will be insignificant and discountable because the Kaibab NF will continue to follow the recommendations of the Recovery Plan for the Mexican spotted owl (USFWS 2012) for forest management actions in owl habitat, which will minimize the amount of vegetation removed within the nine-acre area. In addition, the Forest Service will maintain and encourage the development of primary constituent elements within the action area as long as they do not present safety hazards to the public.

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