

**ENVIRONMENTAL ASSESSMENT
FOR THE
DESIGNATION OF CRITICAL HABITAT
FOR THE PEÑASCO LEAST CHIPMUNK**



Photo Credit: Jim Stuart, New Mexico Department of Game and Fish

Prepared for:

**The Department of the Interior
United States Fish and Wildlife Service**

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ACRONYMS

BIA	Bureau of Indian Affairs
CEQ	Council on Environmental Quality
DBH	Diameter at breast height
DOI	Department of Interior
EA	Environmental Assessment
ESA	Endangered Species Act
FONSI	Finding of No Significant Impact
IEC	Industrial Economics, Incorporated
IEM	Incremental effects memo
NEPA	National Environmental Policy Act
NMDGF	New Mexico Department of Game and Fish
NRHP	National Register of Historic Places
PBF	Physical and biological feature
TCP	Traditional Cultural Property
USDA	United States Agriculture Department
USFS	United States Forest Service

CHAPTER 1. PURPOSE OF AND NEED FOR ACTION

1.1 Introduction

The United States Department of the Interior, U.S. Fish and Wildlife Service (Service) has prepared this environmental assessment (EA) to analyze the potential environmental impacts that may result from designation of critical habitat for the Peñasco least chipmunk (*Neotamias minimus atristriatus*). On September 28, 2021, the Service published a proposed rule (86 FR 53583) to list the Peñasco least chipmunk, a mammal from New Mexico, as an endangered species under the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. 1531 et seq.), and to designate critical habitat. The primary threat affecting the viability of the Peñasco least chipmunk is small population size and connectivity (USFWS 2018). Additionally, the Service has found the existing regulatory mechanisms do not adequately reduce threats on the Peñasco least chipmunk to eliminate the risk of extinction.

The Service has determined that outside the jurisdiction of the U.S. Court of Appeals for the Tenth Circuit, we do not need to prepare environmental analyses pursuant to the National Environmental Policy Act (NEPA) (42 U.S.C. 4321 et seq.) in connection with designating critical habitat under the Act (48 FR 49244). However, when the range of the species includes States within the Tenth Circuit, in this instance New Mexico, under the Tenth Circuit ruling in *Catron County Board of Commissioners v. U.S. Fish and Wildlife Service*, 75 F.3d 1429 (10th Cir. 1996), the Service will undertake a NEPA analysis for critical habitat designation.

This EA will be used by the Service to determine whether the species' critical habitat will be designated as proposed, if the proposed action requires refinement, or if further analyses are needed through preparation of an Environmental Impact Statement. If the proposed action is selected as described or with minimal changes and no further environmental analyses are needed, a Finding of No Significant Impact (FONSI) will be prepared. This EA has been prepared in accordance with the requirements of NEPA of 1969 as implemented by the Council on Environmental Quality (CEQ) regulations (40 CFR 1500, et seq.), according to the U.S. Department of the Interior (DOI) NEPA procedures (43 CFR 46), and U.S. Fish and Wildlife Service NEPA Reference Handbook.

1.1.1 Purpose and Need for the Action

The purpose of this Proposed Action is to designate critical habitat for the Peñasco least chipmunk. Designated critical habitat identifies geographic areas occupied by the species that have physical or biological features essential to the conservation of the Peñasco least chipmunk and may also require special management considerations or protection; and specific areas outside the geographic area occupied that are determined essential for conservation of the chipmunk. The Peñasco least chipmunk is threatened by habitat loss from vegetation shifts, wildfire, and forest encroachment; increased recreational use; disease outbreak; destruction of habitat from feral hogs; and small population size and lack of connectivity (USFWS 2018). The primary threat is small population size and connectivity (USFWS 2018). The Peñasco least chipmunk population in the White Mountains, the only known currently occupied area, has been declining and catastrophic events like wildfire or disease could destroy it.

The need for the proposed action is to comply with Section 4(a)(3) of the Endangered Species Act that requires the Secretary of the Interior to designate critical habitat concurrently with

listing to the extent prudent and determinable. Regulations (50 CFR §424.12[a][1]) state that the designation of critical habitat is not prudent when one or both of the following situations exist: (1) the species is threatened by taking or other human activity, and identification of critical habitat can be expected to increase the degree of threat to that species; and (2) such designation of critical habitat would not be beneficial to the species. Critical habitat is one of several provisions of the ESA that aid in protecting the habitat of a federally listed species until populations have recovered and threats have been minimized such that the species may be removed from the list of threatened and endangered species. Critical habitat designation is intended to assist in achieving long-term protection and recovery of this subspecies and the habitat upon which it depends.

1.1.2 Proposed Action

The Proposed Action is to designate 3 units as critical habitat for the Peñasco least chipmunk (see Table 1 in Section 2.3). These critical habitat units represent the Service's current best assessment of areas that meet the definition of critical habitat for the Peñasco least chipmunk. All units have at least one physical and biological feature (PBF) the Service considers essential to the conservation of the Peñasco least chipmunk. Two of the three units are currently occupied, and one unit has currently unknown occupancy status due to lack of survey data but has PBFs essential to the conservation of the Peñasco least chipmunk. The unoccupied unit is considered essential to the conservation of the Peñasco least chipmunk because it provides connectivity between the two occupied units and supports population expansion if not populated already.

1.2 Background

1.2.1 Critical Habitat

1.2.1.1 Provisions of the ESA

The ESA sections that define critical habitat and requirements for designating critical habitat are described below.

Section 3(5)(A) of the ESA defines critical habitat as (i) the specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the provisions of section 4 of the ESA, on which are found PBFs (1) essential to the conservation of the species and (2) which may require special management considerations or protections; and (ii) specific areas outside the geographical area occupied by the species at the time it is listed in accordance with the provisions of section 4 of the ESA, upon determination by the Secretary that such areas are essential for the conservation of the species. Section 3(5)(C) also states that critical habitat "shall not include the entire geographic area which can be occupied by the threatened or endangered species," except when the Secretary of the Interior determines that the areas are essential for the conservation of the species.

Section 4(a)(3) of the ESA requires the Secretary of the Interior to designate critical habitat concurrent with listing to the maximum extent prudent and determinable and that such designations may be revised periodically as appropriate. Section 4(b)(2) of the ESA requires that critical habitat designations be based on the best available scientific data after considering the economic impact, the impact on national security, and other relevant impacts.

1.2.1.2 Section 4(b)(2) Exclusion Process

Section 4(b)(2) of the ESA states the Secretary of the Interior may exclude any area from critical habitat designation after considering the economic, national security, or other relevant impacts of designating the area as critical habitat or if the Secretary determines that the benefit of excluding the area exceeds the benefit of designating it as critical habitat, unless exclusion would result in extinction of the species. The final decision on whether to exclude any areas will be based on the best scientific data available at the time of the final designation, including substantial information obtained during the comment period on the proposal and information about the economic impacts of the designation, and final versions of the EA and economic analysis.

1.2.1.3 Section 7 Consultation Process

Section 7(a)(2) of the ESA requires federal agencies to consult with the Service to “ensure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined to be critical.” Each agency is required to use the best scientific and commercial data available. This consultation process is typically referred to as *section 7 consultation*. Section 7 of the ESA does not apply to state, local, or private land unless there is a federal nexus (i.e., federal funding, authorization, or permitting). Designation of critical habitat can help focus conservation efforts by identifying areas that are essential for the conservation of the species. Designation of critical habitat also serves to alert the public and land-managing agencies to the importance of an area for conservation of a listed species. As described above, critical habitat receives protection from destruction or adverse modification through required consultation under section 7 of the ESA.

The section 7 consultation process begins with a determination of the effects on a listed species and designated critical habitat by a federal action agency. If the federal action agency determines that there would be no effect on listed species or designated critical habitat, then the section 7 consultation process concludes. If the federal action agency determines that listed species or designated critical habitat may be affected, then consultation with the Service is initiated. Once it is determined that the proposed federal action may affect a listed species or critical habitat, the federal action agency and the Service typically enter into informal section 7 consultation.

Informal consultation is an optional process for identifying affected species and critical habitat, determining potential effects, and exploring ways to modify the action to remove or reduce adverse effects on listed species or critical habitat (50 CFR Part 402.13). During this process, the Service may make suggestions concerning conservation measures, which then can be adopted by the action agency. If the action agency decides to further modify the project as suggested by the Service, the Service would then concur in writing or recommend formal consultation. The informal section 7 consultation process concludes in one of two ways: (1) the Service concurs in writing that the proposed action is not likely to adversely affect listed species or critical habitat or (2) the Service determines that adverse impacts are likely to occur.

Formal consultation is initiated when it is determined that the proposed federal action is likely to adversely affect listed species or critical habitat (50 CFR Part 402.14). Formal consultation concludes with a biological opinion issued by the Service on whether the proposed federal action is likely to jeopardize the continued existence of a listed species or to destroy or adversely modify critical habitat (50 CFR Part 402.14[h]). Independent analyses are made under both the

jeopardy and the adverse modification standards. The jeopardy analysis evaluates potential impacts on the species, while the adverse modifications analysis specifically evaluates potential impacts on designated critical habitat.

A “non-jeopardy” or “no adverse modification” biological opinion concludes consultation, and the proposed action may proceed under the ESA. The Service may prepare an incidental take statement with reasonable and prudent measures to minimize take and associated, mandatory terms and conditions that describe the methods for accomplishing the reasonable and prudent measures. Discretionary conservation recommendations may be included in a biological opinion based on the effects on the species. Conservation recommendations, whether they relate to the jeopardy or adverse modification standard, are discretionary actions recommended by the Service. These recommendations may address minimizing adverse effects on listed species or critical habitat, identifying studies or monitoring, or suggesting how action agencies can assist species under their own authorities and section 7(a)(1) of the ESA. There are no ESA section 9 prohibitions that apply to critical habitat. Therefore, a biological opinion that concludes no destruction or adverse modification of critical habitat may contain conservation recommendations but would not include an incidental take statement, reasonable and prudent alternatives, or other terms and conditions.

In a biological opinion that results in a jeopardy or adverse modification conclusion, the Service develops mandatory reasonable and prudent alternatives to the proposed action. Reasonable and prudent alternatives are actions that the federal agency can take to avoid jeopardizing the continued existence of the species or adversely modifying the critical habitat. Reasonable and prudent alternatives may vary from minimal project changes to extensive redesign or relocation of the project, depending on the situations involved. Reasonable and prudent alternatives must be consistent with the intended purpose of the proposed action, and they also must be consistent with the scope of the federal agency’s legal authority. Furthermore, the reasonable and prudent alternatives must be economically and technically feasible. A biological opinion that results in a jeopardy finding, based on effects on the species, may also include an incidental take statement, reasonable and prudent measures, terms and conditions, and conservation recommendations. A biological opinion that results in an adverse modification finding (but no jeopardy to the species) may include reasonable and prudent alternatives and conservation recommendations but no incidental take statement or associated reasonable and prudent measures alternatives and terms and conditions.

1.3 Peñasco Least Chipmunk

The description below has been summarized from Chapter 2 of the Peñasco least chipmunk Special Status Assessment, and additional information regarding the life history, habitat needs, and distribution (historical and current) of the Peñasco least chipmunk can be found on the [chipmunk’s ECOS](#) page (USFSW 2018).

The Peñasco least chipmunk is one of 17 subspecies of least chipmunks. The Peñasco least chipmunk occurs as a disjunct subspecies at the southernmost extant of all the subspecies (Verts and Carraway 2001). Historically, the Peñasco least chipmunk inhabited the Sacramento and White mountains in Lincoln and Otero counties, New Mexico. Currently, this chipmunk subspecies is found in one isolated population within the White Mountains (USFWS 2018). In the Sacramento Mountains, the chipmunk inhabits meadows and grasslands in canyon bottoms,

and interspersed meadows and understory of old growth in Ponderosa pine (*Pinus ponderosa*) forests with open, park-like conditions at approximately 6,900 to 8,000 feet (2,103 to 2,438 meters) in elevation (USFWS 2018). The Peñasco least chipmunk may be extirpated from the Sacramento Mountains with the last observation in 1966, and the habitat is degraded and no longer supports the species; therefore, the Service did not include the Sacramento Mountains as part of the proposed critical habitat designation. In the White Mountains, north of the Sacramento Mountains, the Peñasco least chipmunk occurs in Thurber's fescue (*Festuca thurberi*) grassland meadow communities that are associated with rocky areas in high elevation above 10,200 feet (3,109 meters; USFWS 2018).

Least chipmunks forage on the ground or in shrubs, eating a variety of seeds, other plant parts, and fungi, as well as arthropods, carrion, and bird eggs. Peñasco least chipmunks in the White Mountains likely forage on seeds and flowers of forbs, primarily species in the Aster family. Their diet also includes flowers and fruits of gooseberry (*Ribes* spp.) and wild strawberry (*Fragaria* spp.), pinyon pine (*Pinus edulis*) nuts, Gambel oak (*Quercus gambelii*) acorns, insects, and other items (USFWS 2018). Like other least chipmunks, the Peñasco least chipmunk likely has relatively low water requirements, which may allow it to exploit the drier conditions of open subalpine meadows (Frey and Hays 2017).

1.3.1 Physical and Biological Features for the Peñasco Least Chipmunk

In determining the proposed critical habitat areas, the Service considered the PBFs essential to the conservation of the Peñasco least chipmunk and that may require special management considerations and protections. The Service derived the PBFs from the best available scientific information on the species' habitat, ecology, and life history as described in the background section of the proposed listing rule (86 FR 53583). Additionally, the research used to derive the PBFs and the species' specific needs are identified in the proposed listing rule (86 FR 53583). The Service determined the following PBFs for the Peñasco least chipmunk:

- (1) Areas within the White Mountains:
 - (a) Between elevations of 2,500–3,597 meters (8,200–11,800 feet),
 - (b) That contain rock outcrops or talus, and
 - (c) That are subalpine Thurber's fescue meadow/grassland communities found within openings of spruce-fir forest, above tree line in the glacial cirque, containing tall bunchgrasses, including Thurber's fescue, sedges, flowering forbs, and shrubs.
- (2) Forage, including species of Asteraceae, flowers and fruits of gooseberry, wild strawberry, pinyon pine nuts, Gambel oak acorns, and insects.

1.4 Related Laws, Authorizations, and Plans

The following laws and their implementing regulations, programs, and plans have contributed to protection of the Peñasco least chipmunk and its habitat.

Endangered Species Act

The Peñasco least chipmunk was proposed for listing as endangered under the Endangered Species Act of 1973 (16 U.S.C. 1531 *et. seq.*) on September 21, 2021 (86 FR 53583). Listing provides the opportunity for conservation and protection under sections 6, 7, 9, and 10 of the Act. These sections include cooperative actions with States (section 6), consultation with federal agencies for actions that may affect the species (section 7(a)(2)), protection against take of the

species (“take” means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct) (section 9), cooperative actions with other entities and landowners for the purpose of scientific or enhancement of survival activities involving take (section 10(a)(1)(A) permit); and lastly, habitat conservation planning under section 10(a)(1)(B).

National Forest Management Act

Approximately 5,139 acres (about 78% of critical habitat units) of the proposed critical habitat units are located within the Lincoln National Forest Wilderness Area and managed by the U.S. Forest Service. The National Forest Management Act of 1976 (16 USC §1600 et seq.) requires the preparation of programmatic-level plans to guide long-term resource management decisions. Additionally, the Forest Service is required to manage habitat to maintain viable populations of existing native and desired nonnative vertebrate species in planning areas (36 CFR §219.19). The Peñasco least chipmunk is listed as an at-risk species on the Lincoln National Forest. The Forest’s land management plan provides desired conditions, standards, guidelines, and management approaches for at risk species that addresses ecological conditions and threats to the Peñasco least chipmunk.

Wilderness Act

All three critical habitat units are located either completely (Units 1 and 2) or partially (Unit 3) within the Lincoln National Forest White Mountains Wilderness Area (see Table 1). The Wilderness Act of 1964 (16 U.S.C. 1131–1136) provides protection to the Peñasco least chipmunk habitat. The wilderness designation provides restrictions and criteria for activities that may occur, such as limiting road construction and minimizing use of heavy equipment. The Wilderness Act states that wilderness should be managed to preserve its natural character and influence without permanent improvements or human modification. In addition, no commercial activities, no permanent or temporary roads, no motorized equipment or any form of mechanical transport, and no structures are permitted within the White Mountains Wilderness Area. However, this also limits management options and conservation efforts, such as the use of prescribed fire which is often not allowed in wilderness areas. Habitat for the Peñasco least chipmunk appears unaltered except for woody encroachment of trees into meadows (USFWS 2018).

New Mexico Wildlife Conservation Act

The New Mexico Department of Game and Fish (NMDGF) listed the Peñasco least chipmunk as a state endangered species in 1983. This designation provides protection under the New Mexico Wildlife Conservation Act of 1974 (i.e., State Endangered Species Act) (19 NMAC 33.6.8) by prohibiting direct take of the species without a permit issued from the State. “Take,” defined as “to harass, hunt, capture or kill any wildlife or attempt to do so” by NMSA 17-2-38. L. is prohibited without a scientific collecting permit. Being a state listed species does not provide regulatory authority to the NMDGF over the habitat of a species. However, NMDGF believes that listed status emphasizes the importance for state-level management to support the long-term persistence of otherwise imperiled native wildlife (NMDGF 2020). In addition, the NMDGF recognizes the Peñasco least chipmunk as a species of greatest conservation need in the State Wildlife Action Plan (NMDGF 2019).

1.5 Issues and Concerns from Public Comments

The following issues and concerns listed below were identified during the public comment period (September 21, 2021, to November 29, 2021) on the proposed rule for designation of critical habitat (86 FR 53583).

- The proposed designation needs to include climate change as a factor in listing the Peñasco least chipmunk.
- Sylvatic plague should be listed as a possible stressor based on current research.
- The Service should consider voluntary conservation measures before listing the Peñasco least chipmunk.
- The Lincoln National Forest Wilderness Area should be removed from the proposed designation to allow for more aggressive forest management activities that could help the Peñasco least chipmunk.
- The Mescalero Apache Tribe lands should not be excluded from proposed critical habitat Unit 3.
- The new conifer forest habitat requirements from McKibben and Frey 2020 surveys should be included in the final rule.
- The New Mexico Department of Game and Fish support research on Peñasco least chipmunk by Jacobson, Frey, and McKibben.
- Suggest that human disturbances may be beneficial to Peñasco least chipmunk, such as food base enhancement.

Other commenters raised questions outside the scope of this EA.

- The Service should conduct additional studies of recreational impacts, specifically mountain biking, to the Peñasco least chipmunk and its habitat.
- The Service should conduct new research on microhabitat conditions and habitat selection of the Peñasco least chipmunk.
- The Service should conduct new research to refute Puckett et al (2021) taxonomic determination.
- The Service should conduct new research to confirm Sacramento Mountain population extirpation.
- The Service should conduct new research to determine population abundance of Peñasco least chipmunk.
- Do not support the new taxonomic determination by Puckett et al. (2021).
- Support Hope et al. (2021) taxonomic challenge to Puckett et al. (2021).

1.6 Topics Analyzed in Detail in this Environmental Assessment

Resources have been identified as potentially affected by the designation during internal scoping and the issues identified by public comments. The resources analyzed in Chapter 3 are listed below.

1. Fish, wildlife, and vegetation
 - a. Wildlife, Threatened, endangered, and sensitive species

- b. Migratory Birds
 - c. Vegetation
 - d. Nonnative Species (feral hogs)
2. Land Use and Management
 3. Recreation
 4. Fire Management
 5. Development
 6. Socioeconomic
 7. Tribal Resources

1.6.1 Mandatory Topics Dismissed from Detailed Analysis

Federal regulations (40 CFR §1500 et seq.) require that certain topics be addressed as part of the NEPA analysis. The Service reviewed the mandatory topics listed below and determined that the proposed action has no potential to impact them. These topics have been dismissed from detailed analysis in this EA because designation of critical habitat for the Peñasco least chipmunk is likely to have no impact on them.

Energy requirements and conservation potential (§1502.16)—Critical habitat designation for the Peñasco least chipmunk is not likely to increase energy consumption and would not change any energy requirements already needed for conservation actions.

Natural or depletable resource requirements and conservation potential (§1502.16)—Critical habitat designation units do not occur within areas with oil, gas, coal, or other minerals, thus no natural or depletable resources would be lost from critical habitat designation for the Peñasco least chipmunk.

Urban quality and design of the built environment (§1502.16)—Critical habitat designation units do not occur within urban or other built environments and would not affect the quality of such environments.

Public Health and Safety (§1508.27)—The designation of critical habitat would not be expected to impact public health and safety. Actions taken to protect and manage critical habitat for the Peñasco least chipmunk would not introduce dangers likely to threaten public health and safety.

Prime and Unique Farmlands (§1508.27)—Prime agricultural land is defined in the Federal Farmland Protection Act (7 U.S.C. 4202(a)) as land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is also available for these uses. Unique agricultural land is defined as land other than prime farmland that is used for the production of specific high-value food and fiber crops (e.g., citrus, tree nuts, olive, cranberries, fruits, and vegetables). The designation of critical habitat will not cause, or result in, the conversion of prime farmland to nonagricultural uses.

Ecologically critical areas, wetlands, Wild and Scenic rivers, Wilderness, or other unique natural resources (§1508.27)—Proposed critical habitat Units 1 and 2 overlap entirely with the Lincoln National Forest White Mountains Wilderness Area. Unit 3 is partially within the wilderness area. The proposed critical habitat designation would not result in any ground disturbing activities that could affect the wilderness area or its character. No other ecologically critical areas or other unique natural areas occur within the proposed critical habitat units.

Important scientific, archeological, and other cultural resources, including historic properties listed in or eligible for the National Register of Historic Places (NRHP) (§1508.27)—The proposed critical habitat units primarily occur on federal lands managed by the U.S. Forest Service (78%). The Lincoln National Forest has recorded 3,435 cultural resources with 23 listed on the NRHP and 1,209 eligible properties (USFS 2021). In addition, there are traditional cultural properties (TCPs), which are historic properties that are in the main or in part eligible for listing on the NRHP because of their “association with cultural practices or beliefs of a living community that (a) are rooted in that community’s history, and (b) are important in maintaining the continuing cultural identity of the community” (Parker and King 1998). Native American communities are most likely to identify TCPs, although TCPs are not restricted to those associations. Some TCPs are well known, while others may only be known to a small group of traditional practitioners, or otherwise only vaguely known. Native American tribal perspectives on what is considered a TCP are not limited by a place’s age or its NRHP eligibility or lack thereof. TCPs cover a wide range of property types and may include rock shelters, shrines, caves, mountains, plant collection areas, and trails. The proposed critical habitat designation would not result in any ground disturbing activities that have the potential to affect archeological or other cultural resources. Therefore, the designation of critical habitat poses no potential for adverse impacts on archeological and other cultural resources.

Climate change—Climate change was analyzed in detail as a potential stressor in the Species Status Assessment and was predicted to have low impact on Peñasco least chipmunk viability (USFWS 2018). The analysis considered how changes in temperature and precipitation could affect food resources, life history characteristics (i.e., over-wintering habitat and behavior), and stressors (i.e., disease dynamics and outbreaks) impacting the least chipmunk. The analysis found climate change in the Sacramento and White Mountains of New Mexico that could impact resources or stressors appeared to be mild. Model outputs predicted less than one millimeter (mm) change in precipitation, less than 2 mm change in snowpack, and less than 1.5°Celsius change in temperature minimums and maximums (USFWS 2018). The designation of critical habitat would contribute to the maintenance of PBFs and would be expected to result in beneficial impacts by improving resilience of Peñasco least chipmunk habitat to adverse impacts of climate change.

The Council on Environmental Quality (CEQ) released draft guidance in 2010 that explains climate change impact analysis from proposed actions that create greenhouse gases (CEQ 2010). A threshold of 25,000 metric tons of carbon dioxide equivalent emissions from an action was proposed as the trigger to further quantitative analysis. A designation of critical habitat units does not create or develop projects that produce emissions, and therefore would not be subject to quantitative analysis.

CHAPTER 2. ALTERNATIVES

2.1 Development of Alternatives

The Service used the best scientific and commercial data available to designate critical habitat units for the Peñasco least chipmunk. The areas identified as critical habitat are geographic areas occupied by the species that have physical or biological features essential to the conservation of the Peñasco least chipmunk and may also require special management considerations or protection; and specific areas outside the geographic area occupied that are determined essential for conservation of the chipmunk. All units have at least one PBF the Service considers essential to the conservation of the Peñasco least chipmunk. The Service also considered all comments received from agencies and the public on the proposed rule for designating critical habitat for the Peñasco least chipmunk.

2.2 Alternative A: No Action Alternative

The No Action Alternative would not designate critical habitat for the Peñasco least chipmunk. If no critical habitat were designated for this species, the Service would not be meeting the requirements of the ESA. The ESA specifies that the Service must designate critical habitat concurrently with listing to the extent prudent and determinable. The proposed rule (86 FR 53583) indicates that critical habitat is both prudent and determinable. The No Action Alternative provides a baseline reference, enabling decision makers to compare the magnitude of environmental effects of the Proposed Action.

2.3 Alternative B: Critical Habitat Designation with No Exclusions

The Service is proposing three units—Nogal Peak, Crest Trail, and Sierra Blanca—as critical habitat for the Peñasco least chipmunk, totaling 6,574 acres (2,660 hectares) in Lincoln and Otero counties, New Mexico (Table 1, Figure 1). Two of the three units are currently occupied, and one unit has currently unknown occupancy status due to lack of survey data but has PBFs essential to the conservation of the Peñasco least chipmunk. The unoccupied unit is considered essential to the conservation of the Peñasco least chipmunk because it provides connectivity between the two occupied units and supports population expansion if not populated already. All three units overlap with designated critical habitat in Lincoln County, New Mexico, for the Mexican Spotted Owl, which is listed as a threatened species under the ESA. Full descriptions and maps of each unit are available in the proposed critical habitat rule (86 FR 53583).

The Sierra Blanca unit includes 1,435 acres (581 hectares) of Tribal lands (Figure 1). The Service is required to consider all land that contains the features essential to conservation of the species as critical habitat in the proposed rule, including Tribal lands. However, should this alternative be selected, the Service will work with the Mescalero Apache Tribe to exclude Tribal lands in the final critical habitat rule per Secretarial Order 3206.

Table 1. Proposed Critical Habitat Units for the Peñasco Least Chipmunk

Unit	Occupancy Status	Landownership	Area of Unit in Acres (Hectares)	Overlap with Mexican Spotted Owl Designated Critical Habitat	Overlap with Lincoln National Forest Wilderness
1. Nogal Peak	Yes	Federal	972 (393)	972 acres (100%)	972 acres (100%)
2. Crest Trail	No	Federal	2,249 (910)	2,011 acres (89.5%)	2,249 acres (100%)
3. Sierra Blanca	Yes	Federal Tribal	1,918 (776) 1,435 (581)	1,098 acres (56.9%)	577 acres (17.2%)
Grand Total			6,574 (2,660)		

2.4 Alternative C: Critical Habitat Designation with Exclusions

Alternative C would include all critical habitat units described under Alternative B except for the lands owned by the Mescalero Apache in the Sierra Blanca unit (1,435 acres). The Service is considering excluding these lands from critical habitat. The final decision on whether to exclude any areas will be based on the best scientific data available at the time of the final designation, including information received during the public comment period, and will give great weight to Tribal concerns.

Under section 4(b)(2) of the ESA, the Secretary of the Interior may exclude areas from critical habitat designation if the benefit of excluding the area outweighs the benefit of its inclusion, and if the exclusion will not result in the extinction of the species. The Service could exclude these lands because the benefits of Tribal management and the capability of the Tribe to appropriately manage their own resources outweigh the benefits of designation of critical habitat. In accordance with Secretarial Order 3206, the Service acknowledges the responsibilities to work directly with Tribes on a government-to-government basis in developing programs for healthy ecosystems, acknowledge that Tribal lands are not subject to the same controls as federal public lands, to remain sensitive to Indian culture, and to make information available to tribes.

Peñasco Least Chipmunk (*Neotamias minimus atristriatus*) Critical Habitat Units

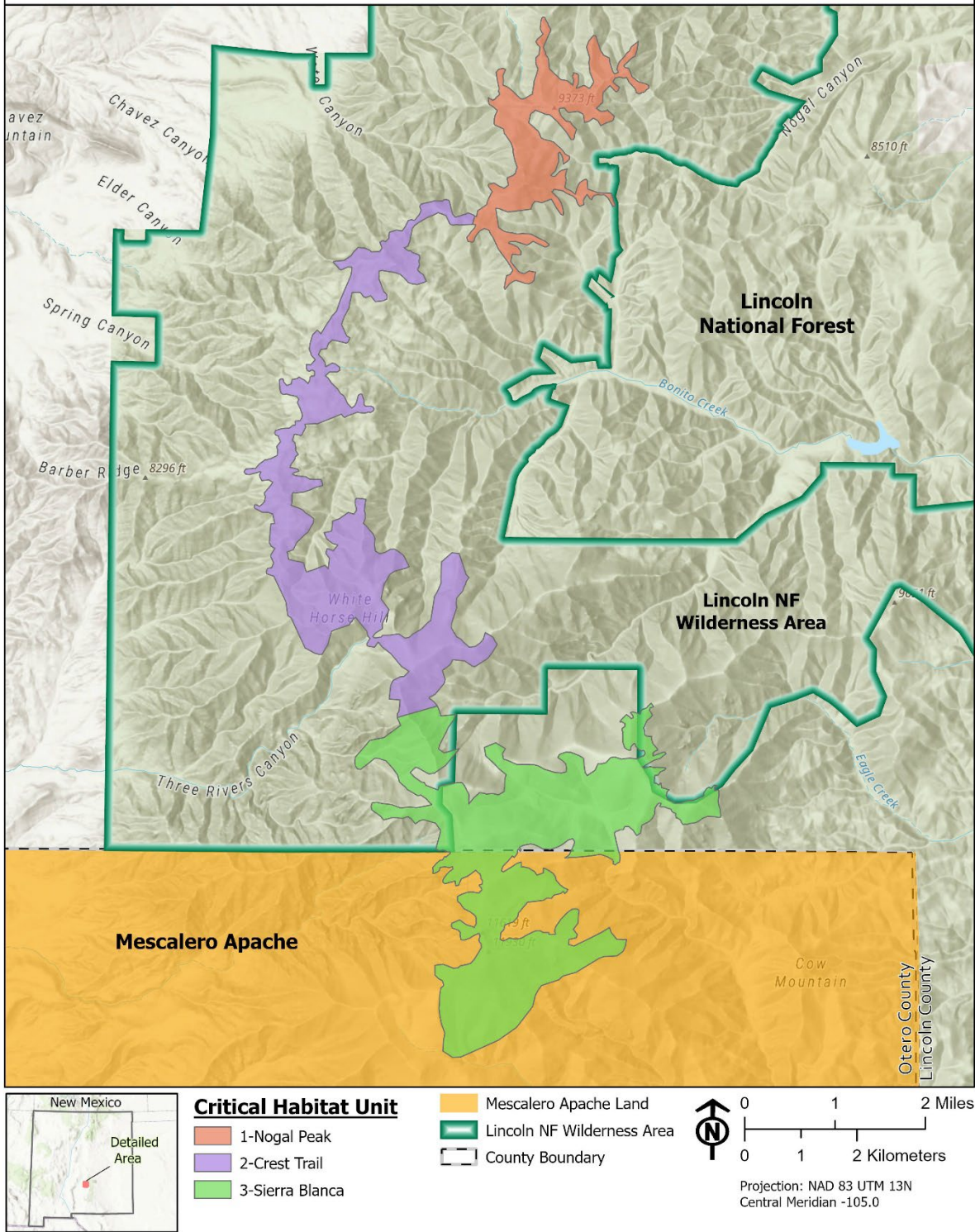


Figure 1. Proposed Critical Habitat Designation for Peñasco Least Chipmunk

Peñasco Least Chipmunk (*Neotamias minimus atristriatus*) Critical Habitat Units

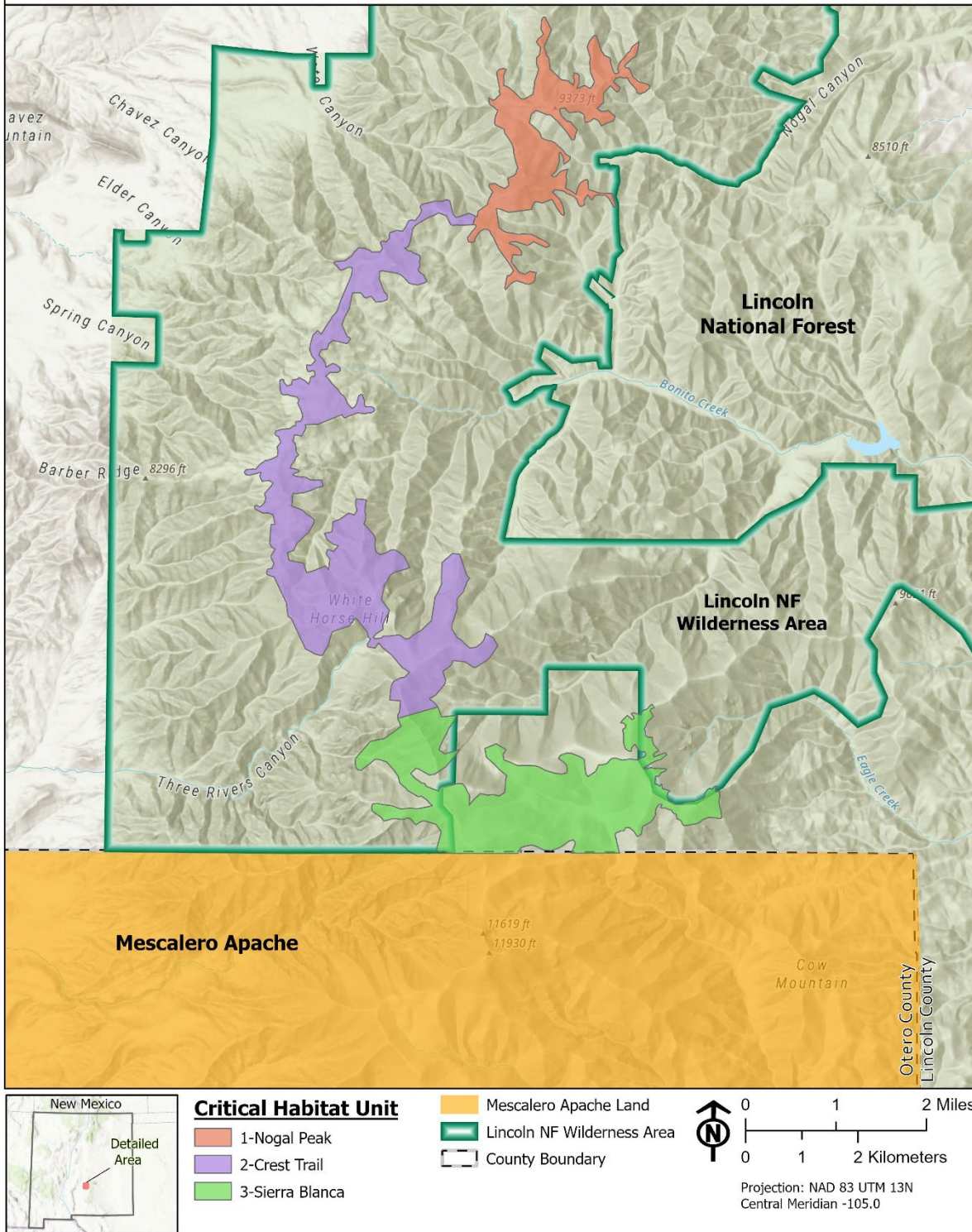


Figure 2. Proposed Critical Habitat Designation with Exclusions

CHAPTER 3. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This section describes the resources and uses that have the potential to be affected by designating critical habitat for the Peñasco least chipmunk as described in chapter 2. The resources analyzed in this EA were selected based on issues and concerns identified by the Service in the proposed rule listing the species and designating critical habitat (86 FR 53583) and public comments to the proposed rule.

3.1 Methodology

The descriptions of the affected environment presented in this section are based on sources that are listed below.

- Published literature
- Available state and agency reports
- Proposed rule for listing the Peñasco least chipmunk and designation of critical habitat (86 FR 53583)
- The Species Status Assessment Report (USFWS 2018)
- The Economics Analysis of the Potential Designation of Critical Habitat for the Peñasco least chipmunk (Industrial Economics, Inc 2019)

The evaluation of this EA focuses on outcomes of additional section 7 consultations resulting from the designation of critical habitat for the Peñasco least chipmunk and because of this species being listed under the ESA. Regarding critical habitat, the purpose of section 7 consultations is to ensure federal actions do not destroy or adversely modify critical habitat. Critical habitat is designated to support PBFs essential to the conservation of the listed species. Critical habitat designation does not itself authorize or produce direct physical impacts, nor impose broad rules or restrictions on land use, nor does it automatically prohibit any land use activity. Furthermore, critical habitat designation will not require that any parties proactively undertake habitat restoration activities within the designated areas.

3.1.1 Nature of Impacts from Critical Habitat Designation

Impacts from designation of critical habitat stem from section 7 consultation requirements of the ESA. Under section 7(a)(2) of the ESA, federal agencies are required to consult with the Service on actions that they fund, implement, or authorize that may affect listed species or critical habitat. Individuals, local governments, Tribes, states, and other nonfederal entities may be affected by the designation of critical habitat if their actions have a federal connection, such as actions occur on federal lands, require a federal permit, or involve federal funding.

Each proposed federal action that may potentially impact a listed species or its designated critical habitat is analyzed separately during the section 7 consultation process. Both a jeopardy analysis and an adverse modification analysis would focus on the impacts of a proposed project to the PBFs determined to be essential for the conservation of the Peñasco least chipmunk in areas designated as critical habitat. The threshold for destruction or adverse modification is evaluated in the context of whether the critical habitat would remain functional to serve the intended conservation role for the species. Conservation measures would be recommended to minimize impacts to the Peñasco least chipmunk, which would also minimize impacts to designated critical

habitat. Furthermore, it is unlikely that an analysis would identify different measures needed to avoid the destruction or adverse modification of critical habitat from measures needed to avoid jeopardizing the species. Critical habitat designation will not require that any parties proactively undertake habitat restoration activities within the designated areas.

The Service found that it is essential for the conservation of the Peñasco least chipmunk to include one unit that has currently unknown occupancy status due to lack of survey data but has PBFs essential to the conservation of the Peñasco least chipmunk. The unoccupied unit is considered essential to the conservation of the Peñasco least chipmunk because it would provide connectivity between the two occupied units and supports population expansion if not populated already (86 FR 53583). The Peñasco least chipmunk occurs to the north and south of Unit 2 and has adequate, suitable, and unfragmented habitat among all three units. Therefore, it is reasonable to conclude that the subspecies may be present within Unit 2. For the purpose of consultation, since the subspecies may be present in Unit 2 and there are currently no survey data within the unit, effects to the subspecies would be considered in Unit 2 during consultation. We expect costs associated with this unit would be attributable to designation of critical habitat rather than the listing of the subspecies. However, as stated above, project modifications likely to be recommended by the Service to avoid adverse modifications of critical habitat are expected to be the same as those recommended to avoid jeopardizing the subspecies (IEC 2019). The Peñasco least chipmunk habitat tolerances are inextricably linked to the health, growth, and reproduction of the chipmunk.

In occupied critical habitat, federal agencies and project activities that would incur baseline costs for section 7 consultation to avoid jeopardy are expected to be the primary agencies and actions that would also consult with the Service under section 7 to avoid destruction or adverse modification of least chipmunk critical habitat. In unoccupied critical habitat, federal agencies would be required to ensure their actions do not destroy or adversely modify that critical habitat. Based on the existing baseline protections afforded the Peñasco least chipmunk, no incremental costs associated with project modifications are anticipated. Incremental costs are anticipated to be limited to additional administrative effort triggered by designation of critical habitat when section 7 consultations occur.

If a species is not present and the action is not likely to adversely affect the species within a particular area designated as critical habitat at the time of consultation, the effects of the consultation would likely be considered an incremental impact to critical habitat because in almost all cases, the consultation would not have occurred absent the critical habitat designation. These incremental impacts would derive both from changes in management, such as costs resulting from restrictions on development and other activities due solely to critical habitat, and changes in the scope of administrative review, such as the added costs of considering effects to critical habitat during consultation. Additional administrative costs would also occur in occupied areas due to the need to analyze destruction or adverse modification of critical habitat along with jeopardy to the species. In this EA, when we describe occupancy for purposes of estimating the probable incremental impacts and therefore, potential economic costs of critical habitat designation, we are referring to the occupancy status within the action area of a particular federal action at the time of a consultation under section 7 of the Act. In this context the “geographical area occupied by the species” under section 3(5)(A)(i) and the area where a species may be present or may be affected by a particular federal action under a section 7 consultation may differ. The difference lies in the implementation of the critical habitat designation for purposes of

the section 7 consultation, although within the geographical range occupied by the species under 3(5)(A)(i), the species may or may not be present at the time of consultation.

The evaluation of impacts in this chapter focuses on costs and outcomes of the potential expansion of section 7 consultations resulting from the designation of critical habitat for the Peñasco least chipmunk. Potential incremental effects of expanded consultation are listed below.

- Additional expenditures of time and money by federal agencies, including the Service, to consider adverse modification in its consultations on the Peñasco least chipmunk.
- Additional time and costs to implement the reasonable and prudent alternatives and (possibly) discretionary conservation recommendations specified in biological opinions in which adverse modification was concluded.
- A greater probability that the PBFs identified in section 1.3.1 would be maintained. The requirement to consult on activities that may adversely modify designated critical habitat may cause action agencies and project proponents to alter their proposals to reduce, minimize, or avoid impacts on PBFs. Such alterations may obviate the need for consultation. If a consultation is initiated, then the outcome of critical habitat designation could be the modification of the proposal to limit the impacts on PBFs or the imposition of reasonable and prudent alternatives that would reduce impacts on PBFs.

For the purposes of this evaluation, it is assumed that designation of critical habitat protects PBFs for the Peñasco least chipmunk as a result of section 7 consultation or conservation measures made in anticipation to avoid section 7 consultation. Benefits of these protections extend indirectly to other components of interconnected ecosystems. In some cases, the resource discussion generally applies to all the proposed units; in other cases, more specificity may be warranted, and the discussion and impact assessment is specifically tied to proposed units.

3.1.2 Economic Analysis

A separate analysis was conducted by Industrial Economics Incorporated (IEC) to assess the potential incremental economic impacts from designating critical habitat areas (IEC 2019) to comply with section 4(b)(2) of the ESA. The Incremental effects memo (IEM) describes and monetizes, where possible, the economic impacts from the designation of critical habitat. Determining the economic impacts involved evaluating a baseline, no designation of critical habitat, compared to the proposed critical habitat designation scenario, to identify those effects expected to occur solely from the designation of critical habitat and not from the protections that are in place due to the species being listed under the ESA. The screening analysis focused on the key factors that are expected to result in incremental economic impacts. Impacts that are incremental to the baseline are those that are solely attributable to the designation of critical habitat. Economic effects solely due to the critical habitat designation include both: (1) the costs of increased administrative efforts that result from the designation; and (2) the economic effects of changes in the action to avoid destruction or adverse modification of critical habitat. Where appropriate, information from the IEM was incorporated into this EA.

3.2 Fish, Wildlife, and Vegetation

3.2.1 Existing conditions

3.2.1.1 Wildlife (including non-native species)

The proposed designated critical habitat units are located within the Arizona/New Mexico Mountains Ecoregion that includes mixed conifer forests, Petran subalpine spruce-fir forests, and Montane/subalpine grasslands (NMDGF 2019). Wildlife species found in these habitat types includes numerous mammals, birds, and some reptiles. The proposed designated critical habitat units are located within Montane/subalpine grasslands surrounded by Petran subalpine spruce-fir forests.

All three proposed designated critical habitat units are in the White Mountains above tree line in the glacial cirque, within the southernmost subalpine biotic communities in the United States. The biotic communities are characterized by subalpine Thurber's fescue (*Festuca thurberi*) meadow/grassland communities in openings of spruce-fir forests with rock outcrops and talus (USFWS 2018). This biotic community is dominated by tall bunchgrasses, including Thurber's fescue, sedges, flowering forbs, and shrubs, such as orange gooseberry (*Ribes pinetorum*) and mountain snowberry (*Symphoricarpos oreophilus*) (Frey and Hays 2017). The surrounding spruce-fir forest is dominated by Englemann spruce (*Picea engelmanni*), quaking aspen (*Populus tremuloides*), corkbark fir (*Abies lasiocarpa*), and Douglas fir (*Pseudotsuga menziesii*) (Frey and Boykin 2007, Frey and Hays 2017). This biotic community remains unaltered except for woody encroachment of the meadows and development of the Ski Apache Resort (USFWS 2018). Wildlife species that may be found in the Montane/subalpine grassland habitat include but are not limited to yellow-bellied marmot (*Marmota flaviventris*), White-tailed Ptarmigan (*Lagopus leucurus*), White-crowned Sparrow (*Zonotrichia leucophrys*), and Water Pipit (*Anthus spinoletta*; Brown 1994). There are no reptiles or amphibians because of the cold temperatures. Mammal species common to the spruce-fir forests, include but are not limited to small rodents, mule deer (*Odocoileus hemionus*), rabbits (*Sylvilagus* spp.), squirrels, and shrews. Reptiles, such as lizards and snakes, may be found at lower elevations where the spruce-fir forests transition to mixed conifer forests.

Feral Hogs

Feral hogs are an established nuisance wildlife species in New Mexico and occur in Lincoln and Otero counties, NM (USDA Wildlife Services 2010) and on the Lincoln National Forest (USFS 2021). The 2021 Lincoln National Forest Land Management Plan has an objective to "treat or remove invasive species in 1,000 acres of habitat during each 10-year period following plan approval." Unpublished data from the USDA Wildlife Services indicate feral hogs have been removed north of Peñasco least chipmunk habitat in the White Mountains. Feral hogs are known to occur in the vicinity of the Peñasco least chipmunk habitat or areas formerly occupied by the subspecies (USFWS 2018). Feral hogs root in areas until resources are depleted, which causes long-term degradation of native ecosystems and plant communities (USDA Wildlife Services 2010). In addition, feral hogs have been documented eating several vertebrate species, including small mammals. Impacts from feral hogs to Peñasco least chipmunks and their habitat could include rooting, predation, spreading of diseases and parasites, spreading noxious weeds, and competition for water and food resources (USFWS 2018).

3.2.1.2 Migratory Birds

All migratory birds are protected under the 1918 Migratory Bird Treaty Act (16 USC 703), as well as the Neotropical Migratory Bird Conservation Act (16 USC Chapter 80) and the Bald and Golden Eagle Protection Act of 1940 (16 USC 668). The forests and grasslands provide nesting and foraging habitat for many migratory birds within the proposed designated critical habitat. Nearly all bird species occurring on the proposed critical habitat units are protected under the Migratory Bird Treaty Act (USFWS 2020). Non-native bird species are the exception and includes House Sparrow (*Passer domesticus*) and European Starling (*Sturnus vulgaris*).

3.2.1.3 Threatened and Endangered Wildlife Species

The proposed designated critical habitat units overlap with Mexican Spotted Owl designated critical habitat (Table 1, Figure 3; USFWS 2021). The Mexican Spotted Owl does not have overlapping conservation requirements with the Peñasco least chipmunk (USFWS 2021). The Mexican Spotted Owl inhabits forested mountains and rocky canyonlands in the southwestern U.S. and Mexico (Gutiérrez et al. 1995). Mexican spotted owls generally nest in both mature mixed-conifer forest, mature ponderosa pine (*Pinus ponderosa*) (Peery et al. 1999), and younger mixed-conifer forests with high canopy cover with large standing dead trees (May and Gutiérrez 2002). The Mexican spotted owls have declined due to loss of habitat, degradation and/or fragmentation (USFWS 2012). Currently, the primary threat to Mexican spotted owls in the U.S. is the increased risk of stand replacing wildfires due to human-caused alterations of forests in the southwest, such as fire exclusion, timber harvesting, and livestock grazing (USFWS 2012, 2013). The designated critical habitat is in mixed-conifer, pine-oak, and riparian forest types and consists of the following (USFWS 2012):

- Range of tree species, including mixed-conifer, pine-oak, and riparian forest types, composed of different ages of trees, 30–45% of which are large trees with diameter at breast height (DBH) of 12 inches or more;
- Shade canopy created by the tree branches covering 40% or more of the ground; and
- Large dead trees (snags) with a DBH of at least 12 inches.

Primary constituent elements related to maintenance of adequate prey species include (USFWS 2012):

- High volumes of fallen trees and other woody debris;
- Wide range of tree and plant species, including hardwoods; and
- Adequate levels of residual plant cover to maintain fruits and seeds and allow plant regeneration.

Primary constituent elements related to canyon habitat include (USFWS 2012):

- Presence of water (often providing cooler and more humid conditions than the surrounding areas);
- Clumps of stringers of mixed-conifer, pine-oak, pinyon—juniper, or riparian vegetation;
- Canyon walls containing crevices, ledges, or caves; and
- High percent of ground litter and woody debris.

Mexican Spotted Owl (*Strix occidentalis lucida*) Designated Critical Habitat

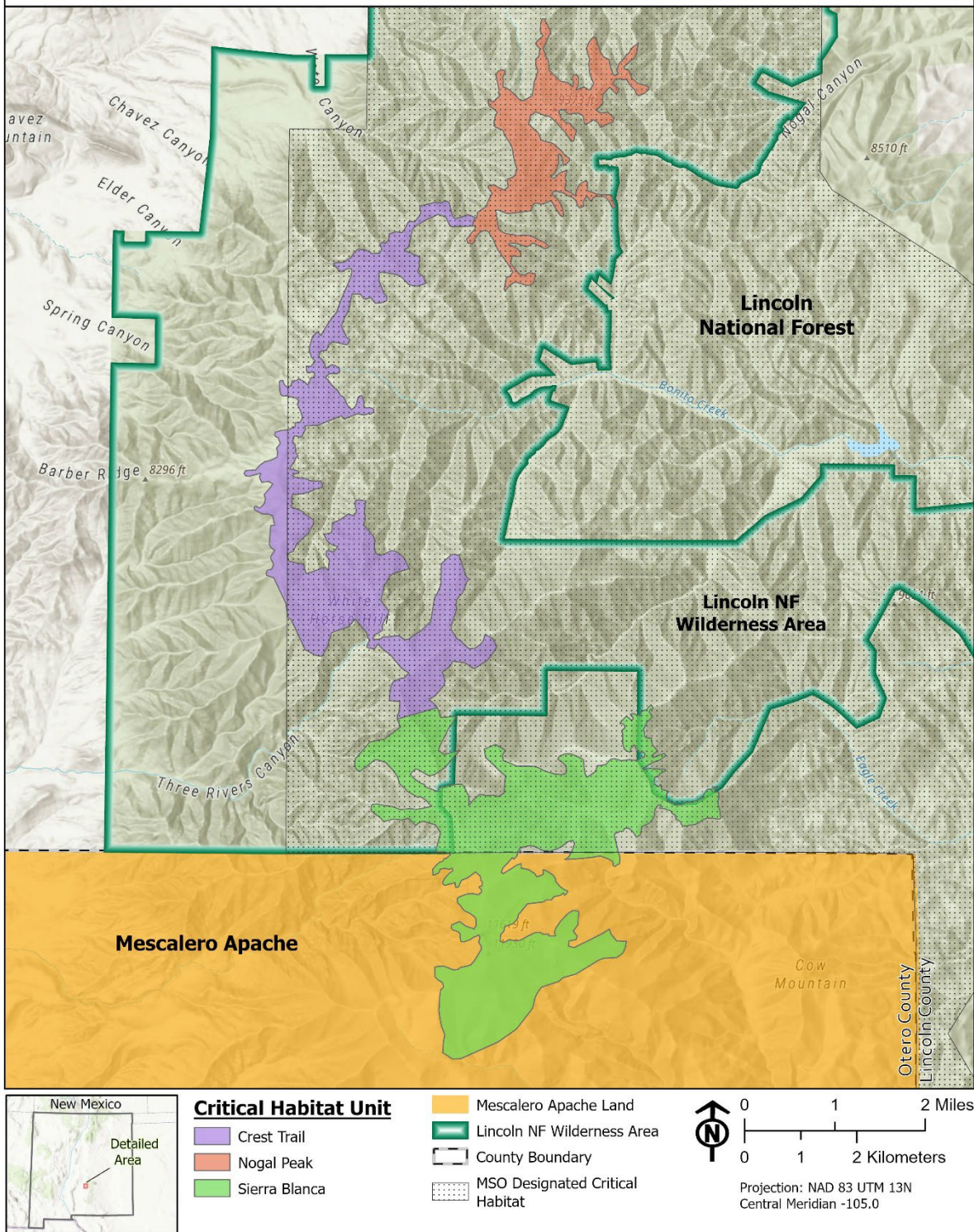


Figure 3. Mexican Spotted Owl Designated Critical Habitat Overlap with Critical Habitat Designation for Peñasco Least Chipmunk

3.2.2 Environmental Consequences

3.2.2.1 Alternative A: No Action Alternative

Under the No Action Alternative, critical habitat for the Peñasco least chipmunk would not be designated. The section 7 consultation process would continue as currently conducted with consultations initiated only for *may affect* determinations of impacts to the Peñasco least chipmunk. Special management considerations would be expected to be minimal because most of the proposed critical habitat occurs within the White Mountains Wilderness on Forest Service lands. Actions likely to require section 7 consultation include (IEC 2019):

- Actions associated with managing prescribed and wildland fire (e.g., timing, seasonality, fire line construction, heavy equipment use, fire retardant applications, post-fire salvage, logging, or rehabilitation efforts, etc.)
- Road management and maintenance
- Development and use around Ski Apache Resort
- Feral hog management
- Plague management

Therefore, this alternative would not have any impacts on wildlife and vegetation resources, including proposed or federally listed species, beyond any conservation measures resulting from the listing of the Peñasco least chipmunk and associated requirements of section 7 of the ESA.

3.2.2.2 Alternative B: Critical Habitat Designation

All proposed critical habitat units are occupied or assumed to be occupied by the Peñasco least chipmunk, therefore actions subject to section 7 Consultation would be required regardless of the area's critical habitat designation status. Two of the proposed critical habitat units are occupied and one proposed critical habitat unit—Crest Trail—is listed as unoccupied because there is no survey data. However, the Peñasco least chipmunk occurs to the north and south of the proposed Crest Trail Unit (Unit 2) and there is adequate, suitable, and unfragmented habitat present. Therefore, it is reasonable to conclude that the subspecies may be present within the Crest Trail Unit. Since the subspecies may be present in Unit 2 and there is currently no survey data, effects to the subspecies would be considered during section 7 consultation to determine jeopardy regardless of critical habitat designation. Therefore, federal actions in all proposed critical habitat units would be subject to section 7 consultations even without designation of critical habitat. The project modifications under the jeopardy standard for the subspecies would be the same under an adverse modification standard for critical habitat because the Peñasco least chipmunk is present year-round and are tightly tied to their habitat. There would be additional analysis of adverse modifications for critical habitat that would be expected to slightly increase administrative efforts to conduct section 7 consultation for projects with a federal nexus. There would be no impacts to wildlife and vegetation resources beyond project modifications recommended to avoid jeopardy.

3.2.2.3 Alternative C: Critical Habitat Designation with Exclusions

The impacts to wildlife and vegetation resources from designating critical habitat would be the same as described for Alternative B. The exclusion of Tribal lands from proposed critical habitat

Unit 3 is not expected to reduce the number of section 7 consultations as Unit 3 includes the Ski Apache Resort. Periodic maintenance to the ski lifts, gondola, and zip lines at the Ski Apache Resort may affect the Peñasco least chipmunk and require section 7 consultation. Furthermore, the Service believes future activities with a federal nexus (e.g., through funding provided by the Bureau of Indian Affairs) are unlikely in the portion of Unit 3 overlapping the reservation (IEC 2019). However, the Service would continue to collaborate with the Tribe on a government-to-government basis to develop voluntary measures adequate to conserve Peñasco least chipmunk on Tribal lands as they did for the Mexican Spotted Owl. Tribal lands were excluded from Mexican Spotted Owl critical habitat designation, but the Tribe developed a Mexican Spotted Owl Management Plan that implements measures to protect the owl and its habitat on Tribal lands.

3.3 Land Use and Management

3.3.1 Existing conditions

The proposed designated critical habitat units include lands under Federal (78%) and Tribal (22%) ownership. The federal lands are owned by the U.S. Forest Service and are mainly in the White Mountains Wilderness within Lincoln National Forest (3,798 acres, 58%). The White Mountains Wilderness Area is managed according to the Wilderness Act of 1964, applicable Forest Service manuals and handbooks, and the Lincoln National Forest Land and Resource Management Plan. The Wilderness Act prohibits permanent roads, and the use of vehicles or motorized equipment, which includes but is not limited to bicycles, wagons, and hang gliders. The wilderness is managed to provide a natural area with intact ecosystems with native plants and animals for solitude or primitive recreation opportunities. Therefore, the White Mountains Wilderness has little management and no commercial activities, with land use and management constrained to outside the wilderness boundary. Historically, grazing occurred in the White Mountains Wilderness Allotment at the base of Buck Mountain, and likely did not impact current Peñasco least chipmunk high-elevation meadow habitat (USFWS 2018). The Mountains Wilderness Allotment has been closed to grazing for the past 20 years and will remain closed for the recovery and protection of the Peñasco least chipmunk (USFWS 2021). In addition to recreation, land management activities that may occur on the proposed critical habitat units in the White Mountains Wilderness Area include road management and maintenance, wildfire suppression, hazard fuel reduction treatments, feral hog management, and plague management. These activities and potential impacts are discussed in the fire management, recreation, and development sections.

Federal lands outside the White Mountains Wilderness Area includes the Ski Apache Resort. Although, the Ski Apache Resort is owned by the U.S. Forest Service, the Mescalero Apache Tribe operates the resort under a special-use permit. Information on land use within the Mescalero Apache Tribal boundary in the White Mountains is unknown (USFWS 2018). In general, the U.S. Forest Service collaborates with the Mescalero Apache Tribe on timber management, watershed restoration, wildland fire management, and habitat improvement projects (USFS 2021).

3.3.2 Environmental Consequences

3.3.2.1 Alternative A: No Action Alternative

Under the No Action Alternative, critical habitat would not be designated for the Peñasco least chipmunk. Proposed Actions with a federal nexus that may impact the Peñasco least chipmunk would trigger section 7 consultation with the Service, even without designation of critical habitat to determine whether actions would jeopardize the species. Formal section 7 consultations would be initiated only for *may affect, likely to adversely affect* determinations of impacts to the Peñasco least chipmunk. Informal section 7 consultations would be initiated for *may affect, not likely to adversely affect* determinations of impacts to the Peñasco least chipmunk. There would be no impacts to land use and management beyond conservation measures resulting from listing the Peñasco least chipmunk and associated ESA section 7 requirements. Conservation recommendations that could be included for road management and maintenance and new construction activities include the following:

- Seasonal timeframes to avoid or reduce the likelihood of direct effects to the species (would be related to the type of action and whether chipmunks are active or underground in a state of torpor).
- Consider and evaluate road alignment alternatives that avoid habitat fragmentation or compromise habitat connectivity.
- Provide awareness training to personnel using, managing, and maintaining existing roads as to the presence of the Peñasco least chipmunk to avoid and reduce inadvertent vehicle strikes.

General management practices that would be recommended include:

- Avoid creating any new roads or trails that may fragment or compromise Peñasco least chipmunk habitat.

3.3.2.2 Alternative B: Critical Habitat Designation

It is unlikely that designating proposed critical habitat units would result in an increase in the number of section 7 consultations because all proposed units are considered occupied. Two of the proposed critical habitat units are occupied and one proposed critical habitat unit—Crest Trail—is listed as unoccupied because there is no survey data. However, the Peñasco least chipmunk occurs to the north and south of the proposed Crest Trail Unit (Unit 2) and there is adequate, suitable, and unfragmented habitat present. Therefore, it is reasonable to conclude that the subspecies may be present within the Crest Trail Unit. Since the subspecies may be present in Unit 2 and there is currently no survey data, effects to the subspecies would be considered during section 7 consultation to determine jeopardy regardless of critical habitat designation. Therefore, land management actions in all proposed critical habitat units would be subject to section 7 consultations even without designation of critical habitat. The project modifications under the jeopardy standard for the subspecies would be the same under an adverse modification standard for critical habitat because the Peñasco least chipmunk is present year-round, and threats are tied to their habitat. There would be the addition of analysis of adverse modifications of critical habitat, slightly increasing administrative efforts to conduct section 7 consultation for projects with a federal nexus. There would be no impacts to land use and management activities beyond project modifications recommended to avoid jeopardy.

3.3.2.3 Alternative C: Critical Habitat Designation with Exclusions

The impacts to land use and management activities from designating critical habitat would be the same as described for Alternative B. The exclusion of Tribal lands from proposed critical habitat Unit 3 is not expected to reduce the number of section 7 consultations because it includes the Ski Apache Resort. The Ski Apache Resort maintenance activities to existing roads and facilities may affect the Peñasco least chipmunk and could require section 7 consultation. Furthermore, the Service believes future activities with a federal nexus (e.g., through funding provided by the Bureau of Indian Affairs) are unlikely in the portion of Unit 3 overlapping the reservation (IEC 2019). However, the Service would continue to collaborate with the Mescalero Apache Tribe on a government-to-government basis to develop voluntary measures adequate to conserve Peñasco least chipmunk on Tribal lands as they did for the Mexican Spotted Owl. Tribal lands were excluded from Mexican Spotted Owl critical habitat designation, but the Tribe developed a Mexican Spotted Owl Management Plan that implements measures to protect the owl and its habitat on Tribal lands.

3.4 Recreation

3.4.1 Existing conditions

The proposed critical habitat units include the White Mountain Wilderness Area (58% of proposed critical habitat), Ski Apache Resort (20% of proposed critical habitat), and Mescalero Apache Tribal lands (22% of proposed critical habitat). Dispersed recreation may occur throughout the White Mountains Wilderness Area but is limited by the rough terrain and remote location. The Ski Apache Resort on Lookout Mountain has been operating since 1961 by the Mescalero Apache Tribe (Ski Apache Resort 2022). The Ski Resort offers snow-based activities in the winter and hiking, gondola rides, mountain biking, and zip lines in the summer.

The proposed rule listed the opening, operating, and maintaining Ski Apache Resort as the most significant recreational, development, and land use activities likely to affect the Peñasco least chipmunk (USFWS 2021). Maintaining existing ski runs or recreational trails, access roads, facilities (including ski lift features and structures), gondola, and zip lines; and development of new recreation sites could remove vegetation and destroy or modify proposed critical habitat (USFWS 2018). The Forest Service and Mescalero Apache Tribe have been working on building mountain bike trails and zip lines to increase developed recreational use of the area (USFS 2021). The 2021 Lincoln National Forest Land Management Plan proposes the following recreation objectives listed below.

Developed recreation sites

- Ninety-five percent of recreation facilities are maintained in a fair to good condition within 15 years.

Dispersed recreation

- Twenty percent of trails are maintained to meet national quality standards within 10 years.
- Verify and correct signage for 100 percent of system trails within 15 years.

In 2016, three Peñasco least chipmunks were observed on Lookout Mountain, with two out of three observations located just off the access road that leads to, and is near, the Ski Apache zip

line infrastructure (USFWS 2018, Frey and Hays 2017). Vehicle use on the access road and human use for the zip line have the potential to impact the Peñasco least chipmunk from vehicle strikes and disturbance from human presence (USFWS 2018). Mountain bike riders could also hit a least chipmunk while descending the mountain through open meadow habitat (USFWS 2018). However, these recreational activities have not been observed to significantly decrease Peñasco least chipmunk resources in the area (USFWS 2018).

3.4.2 Environmental Consequences

3.4.2.1 Alternative A: No Action Alternative

Under the No Action Alternative, critical habitat would not be designated for the Peñasco least chipmunk. Proposed actions with a federal nexus that may impact the Peñasco least chipmunk would trigger section 7 consultation with the Service, even without designation of critical habitat to determine whether actions would jeopardize the species. Formal section 7 consultations would be initiated only for *may affect, likely to adversely affect* determinations of impacts to the Peñasco least chipmunk. Informal section 7 consultations would be initiated for *may affect, not likely to adversely affect* determinations of impacts to the Peñasco least chipmunk. There would be no impacts to recreation activities beyond conservation measures resulting from listing the Peñasco least chipmunk and associated section 7 of the ESA requirements. Conservation recommendations that could be included for road management and maintenance associated with recreation activities include the following:

- Seasonal timeframes to avoid or reduce the likelihood of direct effects to the species (would be related to the type of action and whether chipmunks are active or underground in a state of torpor).
- Consider and evaluate road alignment alternatives that avoid habitat fragmentation or compromise habitat connectivity.
- Provide awareness training to personnel using, managing, and maintaining existing roads as to the presence of the Peñasco least chipmunk to avoid and reduce inadvertent vehicle strikes.

General management practices that would be recommended include:

- Avoid creating any new roads or trails that may fragment or compromise Peñasco least chipmunk habitat.

3.4.2.2 Alternative B: Critical Habitat Designation

It is unlikely that designating proposed critical habitat units would result in an increase in the number of section 7 consultations because all proposed units are considered occupied. Two of the proposed critical habitat units are occupied and one proposed critical habitat unit—Crest Trail—is listed as unoccupied because there is no survey data. However, the Peñasco least chipmunk occurs to the north and south of the proposed Crest Trail Unit (Unit 2) and there is adequate, suitable, and unfragmented habitat present. Therefore, it is reasonable to conclude that the subspecies may be present within the Crest Trail Unit. Since the subspecies may be present in Unit 2 and there is currently no survey data, effects to the subspecies would be considered during section 7 consultation to determine jeopardy regardless of critical habitat designation.

Additionally, the project modifications under the jeopardy standard for the subspecies would be the same under an adverse modification standard for critical habitat because the Peñasco least chipmunk is present year-round, and habitat health is a main component of the PBFs. There would be additional analysis for adverse modifications of critical habitat, slightly increasing administrative efforts to conduct section 7 consultation for projects with a federal nexus. Therefore, there would be no impacts to recreation activities beyond project modifications recommended to avoid jeopardy.

3.4.2.3 Alternative C: Critical Habitat Designation with Exclusions

The impacts to recreational activities from designating critical habitat would be the same as described for Alternative B. The exclusion of Tribal lands from proposed critical habitat Unit 3 is not expected to reduce the number of section 7 consultations because the Service believes future activities with a federal nexus (e.g., through funding provided by the Bureau of Indian Affairs) are unlikely in the portion of Unit 3 overlapping the reservation (IEC 2019). Furthermore, maintenance activities associated with the Ski Apache Resort in proposed Unit 3 would more likely correspond with activities that could require section 7 consultation. The Service would continue to collaborate with the Tribe on a government-to-government basis to develop voluntary measures adequate to conserve Peñasco least chipmunk on Tribal lands as they did for the Mexican Spotted Owl. Tribal lands were excluded from Mexican Spotted Owl critical habitat designation, but the Tribe developed a Mexican Spotted Owl Management Plan that implements measures to protect the owl and its habitat on Tribal lands.

3.5 Fire Management

3.5.1 Existing conditions

The proposed rule lists forest encroachment due to altered fire regimes as a threat to Peñasco least chipmunk habitat. In the White Mountains, wildfire was a natural, periodic disturbance in spruce-fir forests that helped to maintain montane grassland openings and prevent woody encroachment into the subalpine Thurber's fescue meadow/grassland communities (Dyer and Moffett 1999, Finch 2004). Exclusion of wildfires combined with overgrazing has resulted in a widespread reduction of the Thurber's fescue meadow/grassland communities (Finch 2004). Both fire and climate are thought to be the primary factors for creating and maintaining the high-elevation montane grasslands (Finch 2004). The woody encroachment in the White Mountains is thought to be primarily from climatic events, and over time encroaching trees promotes establishment of additional trees nearby (Dyer and Moffett 1999, Halpern et al. 2012).

Altered fire regime combined with increased temperature and decreased precipitation amounts has resulted in larger and more intense burning wildfires compared to historical occurrences. Historically, the subalpine grasslands had stand replacing wildfires occurring every 0 to 35 years (USFS 2021). The current fire return interval is stand replacing wildfires occurring every 73 years (USFS 2021). There have been three large wildfires in the past 10 years, with the Little Bear Fire in 2012 burning 44,00 acres in the White Mountains (National Interagency Fire Center 2022). In 2021, the Three Rivers Fire burned 7,000 acres in the White Mountains and crossed both the proposed Crest Trail and Sierra Blanca units (National Interagency Fire Center 2022). Wildfires are not likely to create Peñasco least chipmunk habitat in the White Mountains because subalpine meadows are not a seral vegetation community of spruce-fir forests; spruce-fir forests

regenerate to an herbaceous and shrub-thicket community transitioning into a mature forest (USFWS 2018). However, the altered fire regimes and current climatic events could result in high severity wildfires that could impact the chipmunk and its habitat. Impacts to Peñasco least chipmunk from wildfires are not known (USFWS 2018). Prescribed fire and forest management activities could help to maintain open subalpine meadows with native vegetation.

The proposed critical habitat designation occurs primarily on federal lands (78%) where wildland fire management activities could occur. The U.S. Forest Service manages fuels through mechanical or prescribed fire treatments on the Lincoln National Forest. Section 7 consultations regarding fire management are often programmatic in nature, covering broad-based fire management plans and programs, but consultations may be required for individual burn and rehabilitation plans. Emergency section 7 consultations for wildland fire suppression are typically conducted after the fact. The Peñasco least chipmunk proposed critical habitat overlaps with Mexican Spotted Owl critical habitat, so federal agency fire management plans are already required to consult with the Service under the ESA. Currently, the Forest Service has requested early consultation for a landscape restoration project in the Sacramento Mountains, which is outside the proposed critical habitat units, which would include thinning followed by prescribed fire (IEC 2019).

The Bureau of Indian Affairs Mescalero Agency Division of Forestry and Wildland Fire Management provides oversight and planning for forestry and fire management activities on the Mescalero Apache Reservation. Fuel reduction and fire management activities are coordinated with the Tribal Government and carried out jointly by the Bureau of Indian Affairs, Branch of Fire Management and the Tribe's Division of Resource Management and Protection. The Tribe has been implementing hazard fuel reduction projects through the Department of Interior's National Fire Plan Program and other federal programs since 1999 (United States Committee on Indian Affairs 2014).

3.5.2 Environmental Consequences

3.5.2.1 Alternative A: No Action Alternative

Under the No Action Alternative, projects on federal lands or federally supported projects that may affect the Peñasco least chipmunk would require section 7 consultation to determine jeopardy to the subspecies. Formal section 7 consultations would be initiated only for *may affect, likely to adversely affect* determinations of impacts to the Peñasco least chipmunk. Informal section 7 consultations would be initiated for a *may affect, not likely to adversely affect* determinations of impacts to the Peñasco least chipmunk. There would be no impacts to fire management activities beyond conservation measures resulting from listing the Peñasco least chipmunk and associated section 7 of the ESA requirements. Conservation recommendations that would be expected for fire management actions could include the following:

- Seasonal timeframes to avoid or reduce the likelihood of direct effects to the species (would be related to the type of action and whether chipmunks are active or underground in a state of torpor).
- Provide awareness training to personnel using, managing, and maintaining existing roads as to the presence of the Peñasco least chipmunk to avoid and reduce inadvertent vehicle strikes.

3.5.2.2 Alternative B: Critical Habitat Designation

It is unlikely that designating proposed critical habitat units would result in an increase in the number of section 7 consultations even though one of the units is unoccupied. One out of the three proposed critical habitat units—Crest Trail—is listed as unoccupied because there is no survey data. However, the Peñasco least chipmunk occurs to the north and south of the proposed Crest Trail Unit (Unit 2) and there is adequate, suitable, and unfragmented habitat present. Therefore, it is reasonable to conclude that the subspecies may be present within the Crest Trail Unit. Since the subspecies may be present in Unit 2 and there is currently no survey data, effects to the subspecies would be considered during section 7 consultation to determine jeopardy regardless of critical habitat designation. Additionally, the project modifications under the jeopardy standard for the subspecies would be the same under an adverse modification standard for critical habitat because the Peñasco least chipmunk is present year-round, and threats are tied to their habitat. There would be the additional analysis of adverse modifications for critical habitat designation, slightly increasing administrative efforts to conduct section 7 consultation for projects with a federal nexus. Therefore, there would be no impacts to fire management activities beyond project modifications recommended to avoid jeopardy.

3.5.2.3 Alternative C: Critical Habitat Designation with Exclusions

The impacts to fire management activities from designating critical habitat would be the same as described for Alternative B. The exclusion of Tribal lands from proposed critical habitat Unit 3 is not expected to reduce the number of section 7 consultations. In Unit 3, the operation and maintenance of the Ski Apache Resort may affect the Peñasco least chipmunk and could require section 7 consultation. Furthermore, the Service has not consulted with the Mescalero Apache in the past 3 years for the Mexican Spotted Owl and believes future activities with a federal nexus are unlikely in the portion of Unit 3 overlapping the reservation (IEC 2019). The Service would continue to collaborate with the Tribe on a government-to-government basis to develop voluntary measures adequate to conserve Peñasco least chipmunk on Tribal lands as they did for the Mexican Spotted Owl. Tribal lands were excluded from Mexican Spotted owl designated critical habitat, but the Tribe developed a Mexican Spotted Owl Management Plan that implements measures to protect the owl and its habitat on Tribal lands (USFSW 2001).

3.6 Development

3.6.1 Existing conditions

Development of the Ski Apache Resort and associated infrastructure modified approximately 450 acres in the White Mountains. Historically, there were 4,358 acres of potential Peñasco least chipmunk habitat in the White Mountains, but development of Ski Apache Resort altered the potential habitat by approximately 10% (USFWS 2018). There are currently 3,809 acres of potential habitat in the White Mountains (USFWS 2018). The proposed rule lists recreation development as a threat to Peñasco least chipmunk and its habitat. The proposed rule also states that critical habitat does not include any manmade structures already in place at the time of the listing, such as buildings, runways, roads, and other paved surfaces, and the land on which they are located (USFWS 2021; Figures 4 and 5).

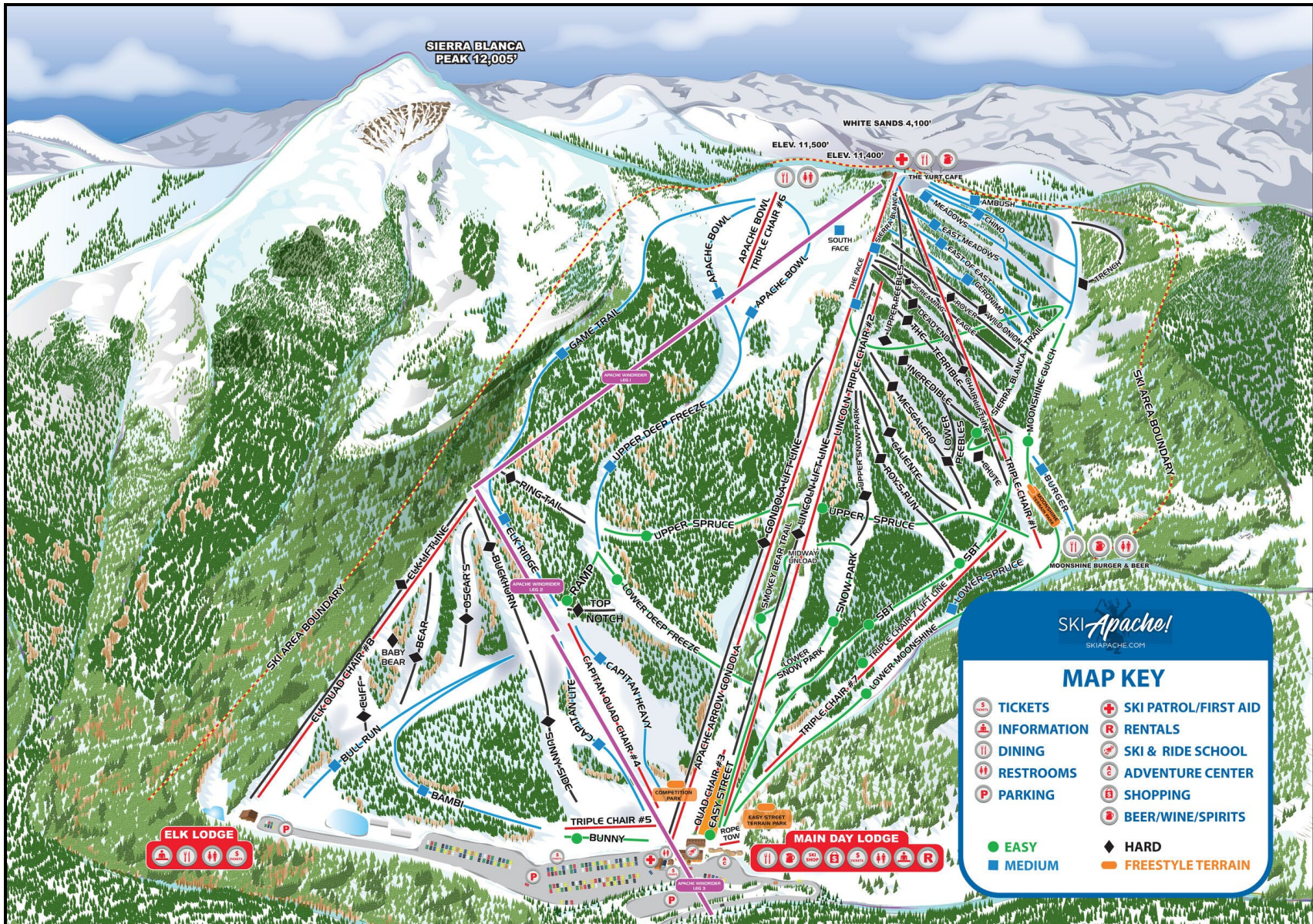


Figure 4. Ski Apache Resort Existing Ski Infrastructure (Source: www.skiapache.com)

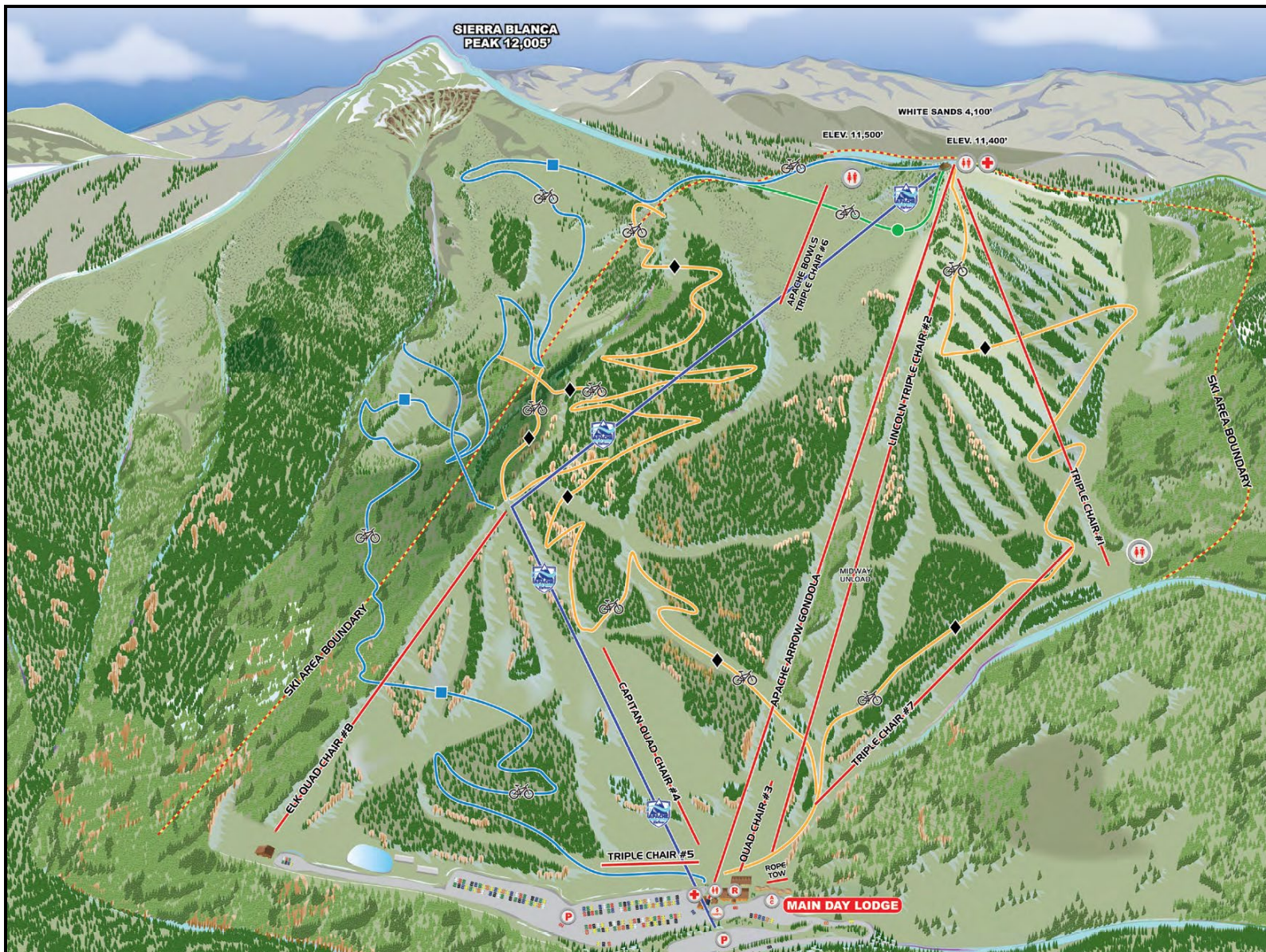


Figure 5. Ski Apache Resort Existing Mountain Bike and Zip Line Infrastructure (Source: www.skiapache.com)

Development is likely constrained to areas outside the White Mountains Wilderness boundary because the Wilderness Act prohibits commercial development and permanent roads. There are no planned projects in the White Mountains Wilderness or the Ski Apache Resort. The Forest Service assisted the Mescalero Apache Tribe in rebuilding Ski Apache infrastructure destroyed in the Little Bear Fire of 2012, but this is within the existing footprint (USFS 2021). Future development at the Ski Apache Resort could fragment potential habitat or compromise habitat connectivity, especially foraging habitat and travel corridors in mixed-conifer forest patches.

3.6.2 Environmental Consequences

3.6.2.1 Alternative A: No Action Alternative

Under the No Action Alternative, projects on federal lands or federally supported projects that may affect the Peñasco least chipmunk would require section 7 consultation to determine jeopardy to the subspecies. Formal section 7 consultations would be initiated only for *may affect, likely to adversely affect* determinations of impacts to the Peñasco least chipmunk. Informal section 7 consultations would be initiated for *may affect, not likely to adversely affect* determinations of impacts to the Peñasco least chipmunk. However, there would be no impacts to development and road maintenance beyond conservation measures resulting from listing the Peñasco least chipmunk and associated section 7 of the ESA requirements. Conservation recommendations that would be expected for development and road maintenance would include the following:

- Seasonal timeframes to avoid or reduce the likelihood of direct effects to the species (would be related to the type of action and whether chipmunks are active or underground in a state of torpor).
- Consider and evaluate road alignment alternatives that avoid habitat fragmentation or compromise habitat connectivity.
- Provide awareness training to personnel using, managing, and maintaining existing roads as to the presence of the Peñasco least chipmunk to avoid and reduce inadvertent vehicle strikes.

General management practices that would be recommended include:

- Avoid creating any new roads or trails that may fragment or compromise Peñasco least chipmunk habitat.

3.6.2.2 Alternative B: Critical Habitat Designation

It is unlikely that designating proposed critical habitat units would result in an increase in the number of section 7 consultations. Two of the proposed critical habitat units are occupied and one proposed critical habitat unit—Crest Trail—is listed as unoccupied because there is no survey data. However, the Peñasco least chipmunk occurs to the north and south of the proposed Crest Trail Unit (Unit 2) and there is adequate, suitable, and unfragmented habitat present. Therefore, it is reasonable to conclude that the subspecies may be present within the Crest Trail Unit. Since the subspecies may be present in Unit 2 and there is currently no survey data, effects to the subspecies would be considered during section 7 consultation to determine jeopardy regardless of the area's status as critical habitat. Additionally, the project modifications under the jeopardy standard for the subspecies would be the same under an adverse modification

standard for critical habitat because the Peñasco least chipmunk is present year-round and habitat health is a main component of the PBFs. There would be the addition of analysis for adverse modifications of critical habitat, slightly increasing administrative efforts to conduct section 7 consultation for projects with a federal nexus. Therefore, there would be no impacts to development and road maintenance beyond project modifications recommended to avoid jeopardy, such as designing new road or trail alignments, so they avoid fragmenting Peñasco least chipmunk habitat.

3.6.2.3 Alternative C: Critical Habitat Designation with Exclusions

The impacts to development from designating critical habitat would be the same as described for Alternative B. The exclusion of Tribal lands from proposed critical habitat Unit 3 is not expected to reduce the number of section 7 consultations because the Ski Apache Ski Resort maintenance activities in this unit would more likely correspond with activities that could require section 7 consultation. Furthermore, the Service has not consulted with the Mescalero Apache Tribe in the past 3 years on the Mexican Spotted Owl and believes future activities with a federal nexus are unlikely in the portion of Unit 3 overlapping the reservation (IEC 2019). The Service would continue to collaborate with the Tribe on a government-to-government basis to develop voluntary measures adequate to conserve Peñasco least chipmunk on Tribal lands as they did for the Mexican Spotted Owl. Tribal lands were excluded from Mexican Spotted owl designated critical habitat, but the Tribe developed a Mexican Spotted Owl Management Plan that implements measures to protect the owl and its habitat on Tribal lands (USFSW 2001).

3.7 Socioeconomic

3.7.1 Existing conditions

Regulations for implementing NEPA require analysis of social effects when they are interrelated with effects on the physical or natural environment (40 CFR §1508.14). A separate economic analysis of the proposed critical habitat designation for the Peñasco least chipmunk was conducted (IEC 2019). As part of the rulemaking process, the Service must consider the economic impacts, including costs and benefits, of the proposed rule in the context of three separate requirements:

- **Executive Order 12866 *Regulatory Planning and Review***, which directs Agencies to assess the costs and benefits of the regulatory action;
- **Section 4(b)(2) of the Endangered Species Act**, which requires the Secretary of the Interior to consider economic impacts prior to designating critical habitat; and
- **Regulatory Flexibility Act**, which requires federal agencies to prepare and make available for public comment an initial regulatory flexibility analysis that describes the effect of a proposed rule on small entities. No initial regulatory flexibility analysis is required if the head of the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities.

The proposed critical habitat units are mostly within the White Mountains Wilderness Area in Lincoln National Forest (58%). The Wilderness Act of 1964 prohibits commercial activities; thus, the intensity of management activities is low and is expected to remain similar to the current conditions. Proposed critical habitat Unit 3 in addition to the Wilderness Area consists of

non-wilderness portions of the Lincoln National Forest and Mescalero Apache Tribal lands. The Ski Apache Resort operated by the Mescalero Apache Tribe is also located in proposed critical habitat Unit 3.

3.7.2 Environmental Consequences

3.7.2.1 Alternative A: No Action Alternative

There would be no socioeconomic impacts due to critical habitat designation for the Peñasco least chipmunk as none would be designated. Under the No Action Alternative, projects on federal lands or federally supported projects that may affect the Peñasco least chipmunk would require section 7 consultation to determine jeopardy to the subspecies. Consultations with potential socioeconomic impacts would be conducted primarily on lands managed by the U.S. Forest Service. Land management activities that could require consultation include:

- Prescribed and wildland fire management activities
- Road management and maintenance
- Development and use around Ski Apache Resort
- Feral hog management
- Plague management

There are no formal consultations in areas where proposed critical habitat units for the Peñasco least chipmunk are located. There has been one request for early consultation by the U.S. Forest Service for a landscape restoration project that involves thinning followed by prescribed fire, but this project is outside proposed critical habitat in the Sacramento Mountains. Consultations for these activities would likely continue with similar frequency under the No Action Alternative.

3.7.2.2 Alternative B: Critical Habitat Designation

Critical habitat designation for the Peñasco least chipmunk is unlikely to generate costs exceeding \$100 million in a single year. Therefore, the rule is unlikely to meet the threshold for an economically significant rule, regarding costs, under E.O. 12866. The economic costs of implementing the rule by means of section 7 of the Act would be expected to be limited to additional administrative effort to consider adverse modification. This finding is based on the following factors:

- For the purposes of consultation, the Service considers all three proposed critical habitat units to be occupied by the subspecies. Thus, incremental consultations resulting solely from the designation of critical habitat are unlikely.
- Project modifications likely to be recommended by the Service to avoid adverse modification of critical habitat are anticipated to be the same as those needed to avoid jeopardizing the subspecies.

Therefore, in the event of an adverse modification determination for critical habitat, we expect that reasonable and prudent alternatives to avoid jeopardy to the subspecies would also avoid adverse modification of the critical habitat. The project modifications that would be recommended to avoid adverse alterations of PBFs of critical habitat would be the same to avoid adverse impacts to the Peñasco least chipmunk. The recommendations would be the same

because the Peñasco least chipmunk is present year-round in the subalpine grasslands/meadow habitat and habitat health is a main component of the PBFs.

Proposed critical habitat units 1 and 2 are located within the White Mountains Wilderness Area in Lincoln National Forest. The Wilderness Act of 1964 prohibits commercial activities. Thus, the intensity of future activity is likely to remain low and similar to current conditions. A small portion of Unit 3 overlaps with the Wilderness Area, with the remainder of the unit in Lincoln National Forest and on Mescalero Apache Tribal lands. Routine maintenance for the ski resort infrastructure would continue to occur, and those activities associated with routine maintenance can be programmatically consulted on through the U.S. Forest Service. Future activities funded by the Bureau of Indian Affairs are unlikely in the portion of Unit 3 that overlaps with Tribal lands (IEC 2019). We also do not anticipate costs to State or local agencies, or impacts on property values related to the public's perception of additional regulation, because we do not expect the proposed designation of critical habitat for the Peñasco least chipmunk to result in changes to New Mexico local regulations (IEC 2019).

No more than two informal consultations are likely to occur each year based on review of available information (IEC 2019). The additional administrative cost of addressing adverse modification in these consultations is not expected to exceed \$5,000 each year (IEC 2019).

3.7.2.3 Alternative C: Critical Habitat Designation with Exclusions

The impacts Alternative C (exclusion of Mescalero Apache Tribal lands) would be the same as described for Alternative B. Future activities funded by the Bureau of Indian Affairs, establishing a federal nexus for section 7 consultation, are unlikely on the Tribal lands excluded from designated critical habitat under this alternative (IEC 2019). The Service would continue to collaborate with the Tribe on a government-to-government basis to develop voluntary measures adequate to conserve Peñasco least chipmunk on Tribal lands as they did for the Mexican Spotted Owl. Tribal lands were excluded from Mexican Spotted Owl critical habitat designation, but the Tribe developed a Mexican Spotted Owl Management Plan that implements measures to protect the owl and its habitat on Tribal lands.

3.8 Tribal Resources

3.8.1 Existing conditions

Tribal trust resources are legal interests in assets held in trust by the federal government for federally recognized Indian tribes or individual Indians (25 CFR § 1000.352). Trust assets may include land, water, fish, wildlife, rangeland, timber, minerals, fossils or other resources. Tribal lands are not federal public lands or part of the public domain, and thus are not subject to public federal land laws. Indian tribes manage Tribal land in accordance with tribal goals and objectives, within the framework of applicable laws. However, as trustee for land held in trust by the United States for Indian tribes, Bureau of Indian Affairs (BIA) provides technical assistance on management planning and oversees a variety of programs on Tribal lands. In accordance with the ESA of 1973, as amended, the BIA must consult with the U.S. Fish and Wildlife Service with regards to federally listed species.

Secretarial Order No. 3206 outlines the responsibilities of the Service when actions taken under the authority of the ESA may affect Indian lands and tribal trust resources. The agency's

responsibilities include ensuring that Indian tribes do not bear a disproportionate burden for the conservation of listed species. In addition, the Secretarial Order provides for the role of BIA in the section 7 consultation process, “in addition to circumstances where BIA is the agency proposing an action, BIA also has a role to play where another federal agency is proposing an action that may affect Tribal rights or Tribal trust resources.” In such cases, the Service shall notify the affected tribe(s) and either provide for (where the action agency is another agency of the Department of Interior) or encourage (if the action agency is outside DOI) participation of the BIA in the consultation process.

Proposed critical habitat Unit 3 overlaps with Mescalero Apache Tribal lands. Approximately, 1,435 acres of Tribal trust lands occupied by the Peñasco least chipmunk meet the definition of critical habitat. Tribal lands include Sierra Blanca, a 12,000-foot peak, which is a significant sacred site in Mescalero Apache culture. The Sierra Blanca is one of four sacred mountains that represents the spiritual direction for the Mescalero Apache Tribe (Mescalero Apache 2022) Since 1960, the Mescalero Apache has leased approximately 1,340 acres from the U.S. Forest Service under a special use permit to establish, manage, and operate Ski Apache. Ski Apache is along the northern boundary of the Reservation and is part of the Tribe’s ancestral homelands.

The Mescalero Apache Tribe has used and will continue to use lands managed by the U.S. Forest Service for a variety of traditional, cultural, and religious activities. These activities may include, but are not limited to, collecting plants, minerals, pigments, and feathers; hunting; religious ceremonies; and visiting shrines and springs (USFS 2021). The U.S. Forest Service has an agreement with the Mescalero Apache Tribe authorizing the tribe to remove up to 4,400 trees annually to use as teepee poles for ceremonial purposes. The Mescalero Apache Tribe and the U.S. Forest Service work closely together to ensure that trees removed by the tribe provide a beneficial effect on the overall forest health.

3.8.2 Environmental Consequences

3.8.2.1 Alternative A: No Action Alternative

Under the No Action Alternative, section 7 consultations on Tribal lands would be triggered for proposed actions with a federal nexus under the jeopardy standard in all areas occupied by the subspecies. Formal section 7 consultations would be initiated only for *may affect, likely to adversely affect* determinations of impacts to the Peñasco least chipmunk. Informal section 7 consultations would be initiated only for *may affect, not likely to adversely affect* determinations of impacts to the Peñasco least chipmunk Project modifications and conservation measures to minimize project-related impacts would be implemented.

3.8.2.2 Alternative B: Critical Habitat Designation

Actions taken to protect and restore critical habitat would be the same as those taken to provide recovery for the subspecies, therefore designation of critical habitat would have no effect on Tribal resources. There have been no formal consultations within the areas proposed for critical habitat and this is expected to remain the same with two informal consultations (one for units 1 and 2 and one for unit 3) occurring in a year (IEC 2019). The additional administrative cost of addressing adverse modification in these consultations is not expected to exceed \$5,000 each year (IEC 2019). The Service has not consulted with the Mescalero Apache Tribe in the past 3

years on the Mexican Spotted Owl and believes future activities with a federal nexus are unlikely in the portion of Unit 3 overlapping the reservation (IEC 2019).

3.8.2.3 Alternative C: Critical Habitat Designation with Exclusions

The exclusion of Mescalero Apache Tribal lands from proposed critical habitat Unit 3 would have impacts like those described for Alternative B. Although, Mescalero Apache Tribal lands would be excluded from designated critical habitat, the Service would continue to collaborate with the Tribe on a government-to-government basis to develop voluntary measures adequate to conserve Peñasco least chipmunk on Tribal lands. The Tribe promotes the conservation of native species and their habitats. For example, Tribe Tribal lands were excluded from designated critical habitat for the Mexican Spotted Owl but developed a Mexican Spotted Owl Management Plan that provides measures to protect the owl and its habitat on their lands.

3.9 Cumulative Impacts

The Council on Environmental Quality regulations define cumulative effects as “the impact on the environment which results from the incremental impact of the proposed action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions” (40 CFR §1508.7). Actions that could have cumulative impacts include: (1) section 7 outcomes from consultations on other species; (2) designation of critical habitat for other species; and (3) existing land management policies and plans.

Past Actions

Past actions that could have impacted the Peñasco least chipmunk and its habitat in the White Mountains include livestock grazing, recreation, development, and land use activities. Historically, livestock grazing occurred in the White Mountains Wilderness Allotment at the base of Buck Mountain but likely did not impact current conditions of the Peñasco least chipmunk in the subalpine meadow habitat (USFWS 2018). Livestock grazing within the White Mountains Wilderness Allotment has been closed for 20 years and will remain closed (USFWS 2021). The development of the Ski Apache Resort in 1960 modified approximately 450 acres in the White Mountains and altered approximately 10% of potential Peñasco least chipmunk habitat (USFWS 2018).

Present Actions

Current operations and maintenance activities at the Ski Apache Resort are expected to continue to occur in proposed critical habitat units and surrounding areas of influence. These activities include maintaining ski runs or recreational paths clear of trees; maintaining existing roads by grading; and maintaining facilities including structures and features for ski lifts, gondola, and zip line.

Reasonably Foreseeable Future Actions

There are no reasonably foreseeable planned projects in the White Mountains Wilderness or the Ski Apache Resort. The Ski Apache Resort has discussed building a restaurant at the top of the mountain, but there is no schedule or timeline.

Effects of the proposed critical habitat designation for the Peñasco least chipmunk consist of the potential for increases in administrative effort for section 7 consultations to consider adverse

modifications and to incorporate project modifications to reduce impacts to PBFs. Project modifications likely to be recommended by the Service to avoid adverse modification of critical habitat are anticipated to be the same as those needed to avoid jeopardizing the subspecies. Furthermore, the Service considers all three proposed critical habitat units to be occupied by the subspecies. Thus, incremental consultations resulting solely from the designation of critical habitat are unlikely. These potential project modifications would primarily affect project costs. The total estimated costs are not likely to exceed \$100 million, with annual costs not expected to exceed \$5,000 each year (IEC 2019). Although, the proposed critical habitat units overlap with occupied designated critical habitat for the Mexican Spotted Owl, conservation requirements for the two species do not overlap; thus, the types of actions recommended to avoid impacts to the Mexican Spotted Owl and its habitat are likely to be different than the types of actions likely to be recommended to protect the chipmunk. Therefore, the designation of critical habitat for the Peñasco least chipmunk would not result in substantial cumulative effects when added to the effects of section 7 consultations for other species and land management plans and policies.

3.10 Irreversible and Irretrievable Commitment of Resources

NEPA requires a review of irreversible and irretrievable effects that result from the Proposed Action. Irretrievable effects apply to losses of use, production, or commitment of non-renewable natural resources caused by the action. Irreversible effects apply primarily to the use of non-renewable resources, such as minerals or cultural resources, or to those resources that are only renewable over long periods of time, such as soil productivity and forest health. Irreversible effects could also include the loss of future opportunities in the area of impact. The types of impacts caused by the designation of critical habitat for the Peñasco least chipmunk—expanded consultation—would not be expected to result in lost production or use of non-renewable natural resources. There would be no loss of future opportunities resulting from designation of critical habitat because conservation measures to avoid or reduce adverse effects to critical habitat would be the same as those proposed to avoid jeopardy.

CHAPTER 4. ANALYSIS OF SIGNIFICANCE

The EA evaluates whether designating critical habitat for the Peñasco least chipmunk would significantly affect the quality of the human environment. If significant impacts to the quality of the human environment may result from the proposed action, then preparation of an Environmental Impact Statement would be required (40 CFR §1502.3). Significance requires considering the context and intensity of the proposed action's impacts (40 CFR§1508.27). Context refers to the location of the proposed action and potential impacts of the action. The context in which impacts are considered could be society as a whole (human, national), the affected region, the affected locale, or the affected interests (40 CFR§1508.27(a)).

The context of short and long-term impacts of the proposed designation of critical habitat for the Peñasco least chipmunk includes the designation of 3 units, totaling 6,574 acres (2,660 ha), in Lincoln and Otero counties of New Mexico. federal lands account for 78% of the proposed acreage and Tribal lands account for 22% of the proposed acreage. The total acreage proposed for designation represents 0.09% of the areas of the counties involved, therefore the size context of the designation suggests that impacts of critical habitat designation would not be significant.

Intensity refers to the severity of the impact and under Council of Environmental Quality regulations require you to consider 10 criteria (40 CFR§1508.27(b)):

- Beneficial and adverse impacts
- The degree of impacts on public health or safety
- Impacts to unique characteristics of the geographic area
- The degree to which the effects on the quality of the human environment are likely to be highly controversial.
- The degree to which the potential impacts are highly uncertain or involve unique or unknown risks.
- The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.
- Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.
- The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.
- The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.
- Whether the action threatens a violation of federal, state, or local law or requirements imposed for the protection of the environment.

We consider each of the 10 criteria below.

- 1) Potential impacts on environmental resources, both beneficial and adverse, would be minor. Impacts of critical habitat designation on natural resources within the areas proposed as Peñasco least chipmunk critical habitat were analyzed and discussed in Chapter 3 of this EA. Applying the analysis of impacts to the significance criteria

identified above, the Service concludes that the adverse impacts of critical habitat designation would not be significant.

- 2) There would be no impacts on public health or safety from the proposed designation of critical habitat. No significant impacts on fire management activities would occur.
- 3) There is designated Wilderness within the proposed critical habitat units, but activities proposed by the federal land managers in the White Mountains Wilderness would only be those specifically intended to improve the health of these ecosystems, and thus they would be expected to help maintain the PBFs in the Peñasco least chipmunk habitat. Therefore, any adverse impacts to proposed critical habitat units would be negligible at most.
- 4) Potential impacts would not be highly controversial because conservation measures recommended under jeopardy would be the same under adverse modifications for critical habitat. All proposed critical habitat units are occupied or assumed to be occupied by the Peñasco least chipmunk, therefore actions subject to section 7 Consultation would be required regardless of the area's critical habitat designation status. The project modifications under the jeopardy standard for the subspecies would be the same under an adverse modification standard for critical habitat because the Peñasco least chipmunk is present year-round, and threats are tied to their habitat.
- 5) The impacts do not pose any uncertain, unique, or unknown risks. New activities with a federal nexus would result in section 7 consultations.
- 6) The designation of critical habitat by the Service for the conservation of endangered species is not a precedent-setting action with significant effects. The agency has designated critical habitat for numerous other species.
- 7) The proposed action is not related to other actions which cumulatively could produce significant impacts. There would not be significant cumulative impacts because the cumulative impacts would be limited to section 7 consultation outcomes.
- 8) Critical habitat designation is not likely to affect sites, objects, or structures of historical, scientific, or cultural significance. The proposed designation would not result in any ground-disturbing activities that have the potential to affect archeological or other cultural resources. Potential conservation measures or project modifications to protect critical habitat PBFs would not modify or pose risk of harm to any historic properties listed in or eligible for the National Register of Historic Places.
- 9) Critical habitat designation would not adversely affect an endangered or threatened species or its habitat. Designation will have long-term, beneficial, conservation-related effects on the survival and recovery of the Peñasco least chipmunk, as well as all native terrestrial species that occur within these designated units, through maintenance of PBFs.
- 10) Proposed critical habitat designation would not violate any federal, state, or local laws. The designation of critical habitat is required by law to comply with the ESA.

CHAPTER 5. PREPARERS AND CONTRIBUTORS

This environmental assessment was prepared by BRIC, LLC under contract to the U.S. Fish and Wildlife Service, Region 2. The economic analysis was prepared by Industrial Economics, Inc.

U.S. Fish and Wildlife Service

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