



San Bernardino
National Forest



Environmental Assessment

Rattlesnake Mountain OHV Trails

United States
Department of
Agriculture

Forest
Service

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San Bernardino National Forest, Region 5 – USDA Forest Service

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CHAPTER 1- INTRODUCTION

1.1 Document Structure

This Environmental Assessment (EA) has been completed by the San Bernardino National Forest in compliance with the National Environmental Policy Act (NEPA) and other relevant federal and state laws and regulations. This report discloses the direct, indirect, and cumulative environmental effects that would result from the Proposed Action, the no-action alternative and one action alternative developed to respond to issues raised during public scoping. This EA is released to provide notice to the public of the Proposed Action and alternatives, and to seek public comments.

The document is organized as follows:

- **Chapter 1, Introduction:** This chapter includes information on the structure of the EA, location of the project, overview of the existing condition, the desired conditions, the purpose of and need for action, summary of the Proposed Action, applicable management direction, and the decision framework. This chapter describes public involvement, the issues identified during public scoping, and summarizes laws, regulations, and policies that are applicable to the proposed project.
- **Chapter 2, Alternatives, Including the Proposed Action:** This chapter provides descriptions of alternatives considered but dismissed from detailed analysis, the no-action alternative, and the Forest Service's Proposed Action and alternatives. It also describes the Proposed Action, the no-action alternative, and one alternative to the Proposed Action.
- **Chapter 3, Affected Environment and Environmental Consequences:** This chapter presents an overview of the analysis, the indicators used to document the effects, the existing conditions, and the environmental effects of implementing the Proposed Action and alternatives.
- **Chapter 4, Consultation and Coordination:** This chapter provides a list of preparers, and agencies consulted during the development of this document.
- **Appendix:** The Initial Study for State compliance with the California Environmental Quality Act (CEQA) is included here.

Additional documentation may be found on the Project website at <http://www.fs.usda.gov/project/?project=43331>, and in the project record located at the San Bernardino National Forest Supervisor's Office in San Bernardino, CA.

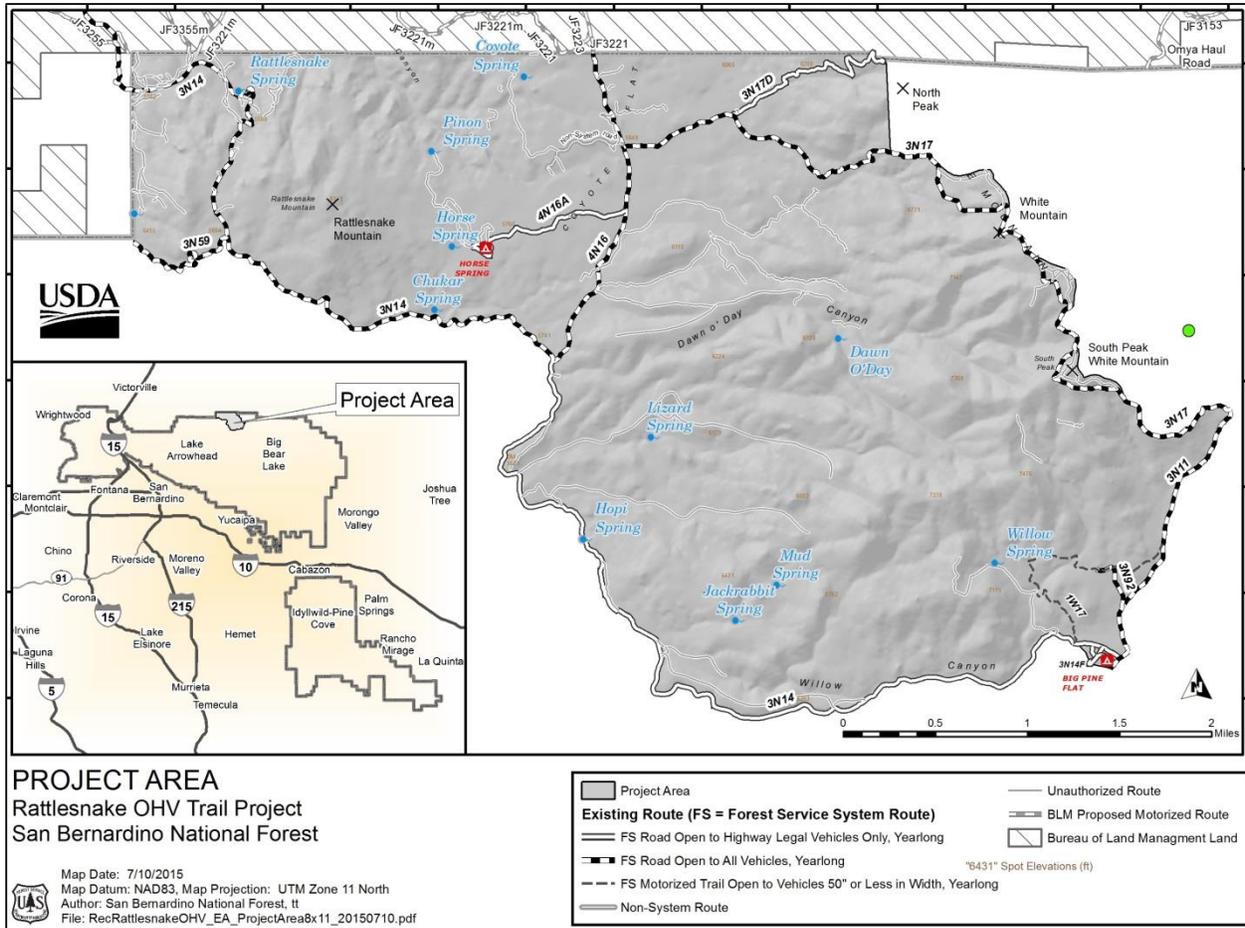
1.2 Location

The Project Area is located on Mountaintop Ranger District of the San Bernardino National Forest (SBNF). The area encompasses approximately 8,000 acres in the vicinity of Rattlesnake Mountain southeast to Big Pine Flat. The Project Area is generally defined by the SBNF boundary on the north, Forest Road 3N14 (Coxey Road) on the west and south, and by White Mountain and Forest Roads 3N17 and 3N11 on the northeast and east sides. The entire Project Area is within the Big Bear Back Country Place as described in the SBNF Forest Plan (SBNF 2006). The Project Area is primarily accessed via Coxey Road, from Hesperia and Apple Valley to the northwest and the town of Fawnskin to the southeast.

This area is located between two popular Off Highway Vehicle (OHV) recreation areas: Big Pine Flat at the northeastern terminus of the popular Redonda Ridge Trail and the Juniper Flat area on Bureau of Land Management lands to the north.

The Project Area includes the following Sections (or parts thereof): 9, 10, 11, 12, 13, 14, 15, 16, 23, 24, 25 and 26, of Township 3 North, Range 2 West, and Sections 7, 17, 18, 19, 20, 29 and 30 of Township 3 North, Range 1 West, San Bernardino Baseline and Meridian.

Figure 1. Project Area Map



1.3 Overview of the Existing Condition

This section describes the general existing condition of the Project Area, in the context of the ‘Big Bear Back Country Place’, as described in the SBNF Forest Plan. Chapter 3 includes more detailed descriptions of existing conditions for specific affected resources.

In 2008, the SBNF received over 2.4 million visitors (NVUM 2009), up from 1.9 million visitors in 2003 (an increase of 79% over a five year period) (NVUM 2004). Visitor use surveys show that participation in off highway vehicles (OHV) and motorized trail use has increased over this period as well; it is estimated that over 250,000 visitors participate in OHV activities on the Forest each year. There are 804,846 registered OHVs in California. Statewide, there was a 5.9%

sales growth in 2013. If not managed carefully, motorized recreation can damage both the land and resources that visitors come to enjoy (FS-823 2005).

The Big Bear Back Country Place, as defined in the Forest Plan, is north of the Big Bear and Arrowhead Places, south of the Desert Rim, and stretches from near Deep Creek on the west to the eastern boundary of the National Forest. This area includes the Project Area, and other popular recreation areas such as Holcomb Valley and Cactus Flat. The Forest Plan describes the theme as follows: “The Big Bear Back Country Place has an abundance of roaded recreation opportunities and colorful gold mining history. The area is also biologically diverse, with important high desert, mountain meadow, and conifer forest ecosystems.”

Forest Plan zoning for the Project Area includes Back Country Non-Motorized north of 3N17 and in the Rattlesnake Mountain area between 3N14 and 4N16. The area between 3N14 and 3N17 is zoned Back Country, and a small area near Coxey Meadow that is important for rare butterflies is zoned Critical Biological. To the west of the Project Area is the Deep Creek Inventoried Roadless Area.

Parts of the Project Area burned in the Coyote Fire in 1976, Devil Fire in 1994, and the Willow Fire in 1999. As a result of this fire history, a long history of cattle grazing and associated type-conversion, the vegetation structure is relatively open with non-native grasses forming light and continuous fuels between trees and shrubs. This vegetation is susceptible to wildfire return intervals that are more frequent than some of the species can recover from, leading to a higher likelihood of vegetation type conversion (*i.e.*, from woodland to shrubland or annual grassland) with each successive wildfire.

1.3.1 Current Use

The primary public use of the area involves motorized vehicle travel. Forest Roads 3N14 (Coxey Road) and 4N16 (Grapevine Canyon Rd) are well-used thoroughfares for high clearance vehicles, and also provide access to two campgrounds within the Project Area. Forest Road 3N17 traverses White Mountain, and is classified as a “most-difficult” road that is popular with visitors who drive specially equipped four-wheel drive vehicles. Big Pine Flat campground is a developed concessionaire-run campground with 19 campsites, vault toilets, and drinking water. There is also an equestrian-oriented group campsite and a Forest Service fire station at Big Pine Flat. Horse Spring Campground is more rustic with no water, 11 campsites, and vault toilets. Both campgrounds are currently accessible to highway-legal vehicles only. The Project Area is also popular for dispersed recreation, finding solitude, hiking, birdwatching, botanizing, photography, and hunting.

1.3.2 Access and Travel Management

Within the Big Bear Back Country Place, there are about 160 miles of National Forest Transportation System (NFTS) roads open to highway legal vehicles, of which about 50 miles are open to all vehicles (*i.e.*, highway legal and green sticker). There are about 14 miles of designated OHV trail (50” wide or less) and about 2.2 miles of designated motorcycle trail (24” wide or less). Creation and use of unauthorized routes throughout the Big Bear Back Country Place impact hydrological, archaeological, botanical, and wildlife resources. Blocking and disguising these routes has been an ongoing priority for the SBNF, but new unauthorized routes

continue to be created. For more Travel Management information, refer to the Big Bear Back Country Place Travel Analysis Process (TAP).

Currently, the Project Area includes 22.25 miles of existing NFTS roads open to highway-legal vehicles, of which 14 miles are open to all vehicles (*i.e.* highway-legal and green-sticker), 1.6 miles of OHV trail (for vehicles 50” or less), no 24” motorcycle trail, and approximately 25 miles of unauthorized routes (Figure 1). There is a popular OHV trail network on BLM land to the north in the Juniper Flat area that connects to the Project Area via Forest Roads 3N14 and 4N16.

The NFTS roads within the Project Area include 3N14 (Coxey), 3N14F (Big Pine Flats Campground), 4N16 (Grapevine Canyon), 4N16A (Horse Springs Campground), 3N59 (Carbine Flat), 3N17 (White Mountain), 3N17D (North Peak), 3N11 (Wright Mine) and 3N92. A portion of the Redonda Ridge OHV Trail (1W17) is also within the Project Area.

1.5 Purpose and Need for Action

The need to develop an OHV trail system in the Project Area includes:

1. Demand for OHV opportunities is growing across the SBNF.
2. The Big Bear Back Country Place, as designated in the SBNF Forest Plan and includes the Rattlesnake Mountain area, has the highest number of unauthorized roads and trails in all of the four southern California National Forests. Unauthorized motorized use in the Project Area results in impacts to a variety of sensitive resources.
3. The Rattlesnake Mountain area is a strategic portal for OHV use on the SBNF. This area is located adjacent to the Redonda Ridge OHV trail (1W17) and BLM’s Juniper Flat trail system.
4. The lack of an authorized trail system to allow for managed OHV use leads to continued unauthorized use, with resulting impacts to sensitive resources.
5. The Forest Plan states that OHV opportunities will be improved in the Big Bear Back Country place. Specifically, unauthorized use is directed onto National Forest System roads and designated trails. Adequate OHV trails are designated, including the conversion of unclassified and decommissioned roads and trails to system trails (Forest Plan Part 2, p. 57).

In meeting these needs, the SBNF seeks to advance the following purposes:

1. Improve opportunities for managed OHV use in the Project Area. Designate a system of OHV trails, provide one or more 24” OHV trail connections to BLM’s proposed Juniper Flat trail system to the north of the Project Area, and improve access and connectivity to the Redonda Ridge Trail.
2. Protect and restore natural and cultural resources along authorized routes and eliminate the proliferation of unauthorized trails throughout the Project Area. Restore unauthorized routes. Discourage continued unauthorized OHV use with mitigation measures such as fencing, pipe-rail or other barriers, and provide additional public education.
3. Provide for public safety.

1.6 Summary of the Proposed Action

Under the Proposed Action, route designation would include trail construction and adoption of unauthorized routes with trail-bed upgrades to meet Best Management Practices (BMPs), trail maintenance standards, reconstruction, and relocation. Unauthorized trails in the Project Area are proposed to be blocked and restored to eliminate redundant routes and protect resources in those areas. Some currently unauthorized trails are proposed for adoption into the authorized trail network; these trails would be brought up to current standards. Proposed newly-constructed trails and trail segments are intended to provide improved and sustainable motorized recreation opportunities, and better connections within the Project Area and to adjacent areas.

Table 1 summarizes the miles of route designation that are included in the Proposed Action and Alternatives.

Table 1. Proposed Action Sum of Miles			
Route Description	Alt 1 Proposed Action	Alt 2 No Action	Alt 3 – Coxey Road Mixed Use
Add Mixed Use to Existing Road	1.5	0	6.4
Add Unauthorized Trail to System	4.0	0	4.0
Proposed New Trail Construction	2.6	0	2.6
Restore Unauthorized Routes (approx.)	25	undetermined	25

An additional action is proposed that would adopt and formalize an existing unmanaged parking and trailering area at Big Pine Flat, at the junction of Forest Roads 3N14 and 3N16.

Alternatives 1 and 3 also include re-zoning Back Country Non-Motorized land use areas along proposed trails to Back Country Motorized. This would constitute a project-specific Forest Plan amendment.

For a detailed description of the Proposed Action and alternatives, please see Chapter 2 of this Environmental Assessment.

1.7 Management Direction

The Proposed Action works toward the management goals described in the SBNF Forest Plan (USDA, 2006). Forest Plan goals, strategies, standards, and guidelines relevant to the Proposed Action are summarized below.

1.7.1 Desired Condition

The desired conditions for the Big Bear Back Country Place, which support the Purpose and Need for this project, are articulated in the Forest Plan and the TAP. From the Forest Plan: The Big Bear Back Country place is maintained as a historic and natural appearing landscape that functions as a recreation setting for backcountry rustic road touring...” Emphasis is also placed on conservation and protection of ground and surface water resources, preservation of landscape attributes including natural vegetation, landscape character associated with Native American presence, and improved conditions for endangered, threatened and sensitive species. The desired condition for the Big Bear Back Country Place also includes that adequate OHV staging locations and loop trails are designated, the OHV route system is improved, and unauthorized

use is redirected to National Forest System roads and trails. Ongoing management of OHV road and trail systems along with conservation education is a priority.

The desired condition for the Project Area reflects these broader place-based desired conditions. The emphases in the grant that funded the planning of this project are to provide connections to/from trails on BLM land, incorporate unauthorized trails into a well-managed trail system, and identify other unauthorized trails for restoration. The objective is generally to improve OHV recreation opportunities within the Project Area while also protecting resources and reducing motorized travel on unauthorized routes.

1.7.2 Forest Plan Goals

Goal 3.1 - Provide for Public Use and Natural Resource Protection (Forest Plan Part 1, Southern California National Forests Vision, pp. 34-36)

- Off-highway vehicle (OHV) systems provide a range of recreation opportunities, and challenges for OHV enthusiasts through the development of an integrated system of trails and low maintenance standard roads. OHV use is occurring on designated roads and trails only. High-use areas are managed within capacities in order to maintain the quality of experiences.

Big Bear Back Country Place: Program Emphasis (Forest Plan Part 2, SBNF Strategy, pp. 56-57)

- Desired Condition: The Big Bear Back Country Place is maintained as a historic and natural appearing landscape that functions as a recreation setting for backcountry rustic road-touring recreation experiences... Habitat conditions for threatened, endangered, proposed, and sensitive species are improving over time... Adequate OHV staging locations and loop trails are designated.
- Program Emphasis: Management will balance recreation use with protection of heritage resource properties within a natural appearing landscape. Facility improvements, management of OHV road and trail systems, non-motorized trails, and conservation education are priorities. Emphasis on the transportation system will continue due to the high number of roads and trails here. Relocation of classified roads out of sensitive habitat, analysis and decommissioning/adding to system/conversion to trails of existing unclassified roads and trails, and preventing the establishment of new roads are all priorities... The OHV route system is improved and unauthorized use is directed to National Forest System roads and national forest designated trails.

Place Specific Standards: Big Bear Back Country Place (Forest Plan Part 2, SBNF Strategy, pp. 99-101)

- SBNF S2 - Avoid or minimize new ground disturbing activities that cause long-term damage to pebble plain habitat.
- SBNF S5 - Evaluate potential long-term impacts of new projects and activities on important landscape level habitats that are identified in the places. These include landscape linkages, wildlife movement corridors, key deer and bighorn sheep fawning and lambing areas, and winter ranges, and raptor nesting sites. Minimize or mitigate impacts to maintain their functionality over the long-term.

Habitats specific to the SBNF: Description, Desired Conditions and Monitoring (Forest Plan Part 2, SBNF Strategy, pg. 101)

- Pebble plain habitat supports one of the most threatened and biologically rich plant communities within the SBNF. Seventeen rare plant species and four at-risk butterfly species are found within pebble plain habitat. Road density, unauthorized off-road driving, emergency fuelbreak construction, recreation activities and invasive nonnative plants pose some of the greatest threats to this habitat. The potential for an increase in unauthorized off-road driving on habitat adjacent to proposed vegetation treatments is also a concern. The desired condition is for pebble plain habitat to be conserved over the long-term. Incompatible uses are minimized.

WL 1 - Threatened, Endangered, Proposed, Candidate, and Sensitive Species Management (Forest Plan Part 2, SBNF Strategy, p. 124)

- Emphasize the following practices within carbonate, montane meadow and pebble plain habitat:
 - Develop and implement a transportation plan that results in the reduction in road density and no new roads or motorized trails within carbonate, montane meadow and pebble plain habitat.
 - Develop and implement a facilities plan for carbonate, montane meadow, and pebble plain habitat that avoids construction of new recreation and administrative facilities within these habitats.

WAT 1 - Watershed Function (Forest Plan Part 2, SBNF Strategy, p. 136)

Protect, maintain and restore natural watershed functions including slope processes, surface water and groundwater flow and retention, and riparian area sustainability:

- Manage Riparian Conservation Areas (RCAs) to maintain or improve conditions for riparian dependent resources.
- Maintain or restore soil properties and productivity to ensure ecosystem health (soil microbiota and vegetation growth), soil hydrologic function, and biological buffering capacity.
- Achieve and maintain natural stream channel conductivity, connectivity and function.
- Restore, maintain and improve watershed conditions over the long-term.

WAT 2 - Water Management (Forest Plan Part 2, SBNF Strategy, p. 137)

Manage groundwater and surface water to maintain or improve water quantity and quality in ways that minimize adverse effects over the long-term:

- Protect and improve water quality by implementing best management practices and other project-specific water quality protection measures for all National Forest and authorized activities.

Link 1 - Landscape Linkages (Forest Plan Part 2, SBNF Strategy, p. 137)

Identify linkages to surrounding habitat reserves and other natural areas for maintenance of biodiversity.

- Manage National Forest uses and activities to be compatible with maintenance of habitat linkages.

Her 1 - Heritage Resource Protection (Forest Plan Part 2, SBNF Strategy, p. 140)

Protect heritage resources for cultural and scientific value and public benefit:

- Document known significant cultural properties to identify any activity that does or has the potential to adversely affect or does not complement the site. Develop measures to mitigate the adverse effects or impacts.

REC 2 - Sustainable Use and Environmental Design (Forest Plan Part 2, SBNF Strategy, p. 142)

Analyze, stabilize and restore areas where visitor use is appreciably affecting recreation experiences, public safety and environmental resources.

- Implement adaptive mitigation for recreation uses in existing and new recreation sites and uses whenever a conflict between uses or sensitive resources is detected.

REC 3 - Recreation Participation (Forest Plan Part 2, SBNF Strategy, p. 142)

Offer a wide range of high-quality, environmentally sustainable developed and dispersed recreation opportunities to a rapidly growing and culturally diverse visitor population. Ensure minimal visitor conflicts and effects to other resources:

- Develop new, environmentally sustainable recreation opportunities, areas and infrastructure to relieve concentrated demand within existing high-use areas and to accommodate future growth and new uses elsewhere.

LM 2 - Landscape Restoration (Forest Plan Part 2, SBNF Strategy, p. 144)

Restore landscapes to reduce visual effects of nonconforming features:

- Prioritize landscape restoration activities in key places (Big Bear Backcountry).

LM 3 - Landscape Character (Forest Plan Part 2, SBNF Strategy, p. 144)

Maintain the character of "Key Places" (see LM2) to preserve their intact nature and valued attributes:

- Maintain the integrity of the expansive, unencumbered landscapes and traditional cultural features that provide the distinctive character of the place.

Trans 1 - Transportation Management (Forest Plan Part 2, SBNF Strategy, p. 147)

Plan, design, construct, and maintain the National Forest System roads and trails to meet plan objectives, to promote sustainable resource conditions, and to safely accommodate anticipated levels and types of use. Reduce the number of unnecessary unclassified roads and restore landscapes:

- Add unclassified roads to the National Forest System roads or trails when site-specific road analysis determines there is a public need.
- Decommission roads and trails that have been determined to be unnecessary and establish level of restoration during project planning.

Off-Highway Vehicles

Improve off-highway vehicle opportunities and facilities for highway licensed and non-highway licensed vehicles:

- Manage the National Forest System roads for a spectrum of 4-wheel drive opportunities in the easy, more difficult, and most difficult categories of route difficulty.
- Develop motorized trails that address the needs of off-highway vehicle enthusiasts in

conjunction with the designation of low-maintenance standard roads.

Fish and Wildlife Standards (Forest Plan Part 3, Design Criteria for Southern California National Forests, pp. 6-11)

- S12: When implementing new projects in areas that provide for threatened, endangered, proposed, and candidate species, use design criteria and conservation practices (see Appendix H of Forest Plan) so that discretionary uses and facilities promote the conservation and recovery of these species and their habitats
- S31: Design new facilities or expansion of existing facilities to direct public use away from occupied habitat for threatened, endangered, proposed and candidate species.

Soil, Water, Riparian and Heritage Standards (Forest Plan Part 3, Design Criteria for Southern California National Forests, p. 11)

- S47: When designing new projects in riparian areas, apply the Five-Step Project Screening Process for Riparian Conservation Areas as described in Appendix E.
- S50: Mitigate negative long-term impacts from recreation use to soil, watershed, riparian or heritage resources.

Appendix D – Adaptive Mitigation for Recreation Uses & Recreation Implementation Guidelines (Forest Plan Part 3, Design Criteria for Southern California National Forests, pp. 63-64)

These guidelines apply to all existing and new recreation sites and uses whenever a conflict between uses or sensitive resources is detected. Sensitive resources include threatened, endangered, proposed, candidate, and sensitive species and habitats; riparian habitats, soil and watersheds; heritage resources; user conflicts; or other resources. The management actions will be implemented in the order (education; perimeter control; management presence; redirection of use-if appropriate) listed below unless analysis of the conflict clearly indicates a stronger measure is immediately necessary.

The actions and practices include, but are not limited to:

Conservation Education

- Use information networks, including public service announcements, internet sites and links, and visitor guides and newsletters to communicate information regarding sensitive resources.
- Install and maintain appropriate multilingual information boards, interpretive panels and regulatory signs at developed sites and dispersed areas within sites of sensitive resources.

Perimeter Control

- Modify visitor access to manage use. Install and maintain appropriate fencing or other barriers to protect sensitive resource areas. Limit the number of users at the site or area.

Presence

- Provide adequate management presence to ensure protection of sensitive resources. This presence could include Forest Service personnel, peer education, contractors, concessionaires, other permit holders, and volunteer support.

Direct Action

- Seek opportunities to proactively design and locate new facilities and areas for re-distributing human use away from sensitive resources.

1.8 Decision Framework

The SBNF is the lead federal agency responsible for the environmental analysis and public involvement under NEPA for this project. The deciding official will be the Forest Supervisor. The planning for this project is funded by a State of California Off-Highway Motor Vehicle Recreation Division grant, and implementation may be funded at least in part by the State, subject to future grants. Therefore, the project triggers requirements under the California Environmental Quality Act (CEQA). It is our intent to prepare and distribute the NEPA documentation such that the State can meet its CEQA requirements without additional documentation and process. The Initial Study is included as Appendix 1.

The appropriate level of NEPA for this project is an EA, with a Finding of No Significant Effect (FONSI), and a Decision Notice as the decision document. It is our intent that the EA will be used to meet the Initial Study (IS) and the FONSI will be used to meet the Negative Declaration required under CEQA. The draft EA was submitted to the California State Clearinghouse and circulated for a 30-day public comment period.

1.9 Public Involvement

The project proposal was listed in the Schedule of Proposed Actions on January 1, 2014, and project information has been available since then via the SBNF public website for projects at http://data.ecosystem-management.org/nepaweb/project_list.php?forest=110512. A press release was sent out on February 27, 2015 to inform the media and public about the project proposal, and in particular, the open house public meeting to be held Saturday March 7, 2015. The proposal was provided to the public and other agencies for comment during scoping, which began March 6, 2015. Scoping materials were provided via mail, email, and the internet. On March 7, 2015 the public meeting was held in Apple Valley, California, with 14 interested members of the public in attendance. Scoping materials were distributed at a SBNF OHV coordination meeting on 3/17/2015, with 7 interested members of the public in attendance. A legal notice of scoping and opportunity for public comment was published in the San Bernardino County Sun (the SBNF newspaper of record) on March 18, 2015. The scoping period ended 30 days after the publication of the legal notice, on April 17, 2015.

A total of 134 written or electronic comment letters were received. The comments and their disposition are summarized in **Table 2**.

1.10 Issues

Comments were reviewed to determine if they contained issues, which are points of discussion, debate or dispute about specific environmental effects of the proposed action. Issues serve to highlight effects or consequences that may occur by implementing the proposed action, and are used to compare alternatives and minimize impacts.

Identified issues were evaluated to determine if they were significant or non-significant. Non-significant issues were identified as those that were 1) outside the scope of the Proposed Action; 2) already decided by law, regulation, policy, Forest Plan, or other higher-level decision; 3) not relevant to the decision to be made; or 4) conjectural or not supported by scientific or factual evidence. All other issues were considered significant. The term 'significant issue' should not be confused with 'significant effects', which are assessed through effects analyses and determine the required level of analysis and documentation under NEPA.

Significant issues are further sorted into ‘key issues’ and ‘measured issues’. Key issues drive the development of alternatives to the proposed action. Measured issues are addressed through project design and effects analysis, to develop design features that minimize effects to the environment (Chapter 2), and to highlight differences between alternatives (Chapter 3).

Table 2. Issue Summary		
Issue	Category	Disposition
Commenters expressed that the proposed trails are not adequately connected to existing OHV routes. Specifically, commenters expressed that Forest Road 3N14 (Coxey Road) being currently designated as open to highway-legal vehicles only, isolates the Big Pine Flat area and associated existing and proposed trails from the Horse Spring area and associated existing and proposed trails. To get from Horse Spring to Big Pine Flat (or vice versa), riders of green-sticker vehicles need to trailer-up, negotiate the highly-technical Forest Road 3N17, risk citation for riding 3N14, or attempt unauthorized travel off of designated roads and trails. These options for bridging the identified gap raise concerns of public safety, compliance, and environmental effects. Commenters also raised the need for a safer connection, proposing mixed use for 3N14 due to its suitability for a range of rider skill levels.	Key	Alternative 3 was developed to address this issue. Alternative 3 would designate the section of 3N14 between Big Pine Flat and Forest Road 4N16 as Mixed Use, open to all vehicles (street legal and green sticker).
Commenters expressed belief that proposed trails cross streams and riparian areas that would be degraded by the presence of the trails.	Measured	Addressed in the effects analysis for soils and hydrology in Chapter 3.
Commenters expressed that erosion from unauthorized trails, including trails proposed for designation, is visible from Coxey Road, a scenic historic road.	Measured	Addressed in the effects analyses for soils and hydrology and heritage resources in Chapter 3.
Commenters expressed that the quality of recreation for ‘quiet visitors’ should not be compromised by OHV recreation.	Measured	Addressed in the effects analysis for recreation in Chapter 3.
Public scoping comments and internal review by SBNF staff and specialists raised issues about effects of route designation and restoration on wildlife, rare plants, weeds, soils, hydrology, noise, air quality, greenhouse gas, and heritage resources.	Measured	Addressed in the effects analyses in Chapter 3.
Commenters expressed that the element of the proposed action to restore approximately 25 miles of unauthorized routes is not warranted, is excessive, or is not well justified. Commenters expressed that restoration of unauthorized routes meant a loss of existing riding	Non-Significant	Status of unauthorized routes is already decided (Travel Management Rule of November 9, 2005, Federal Register 68263, and February 2009 SBNF Travel Management Decision), and proposed additional route

Table 2. Issue Summary		
Issue	Category	Disposition
opportunities. Commenters proposed additional specific unauthorized routes for designation.		designations are outside the scope of the proposed action.
Commenters expressed beliefs and observations that additional trail designation should not occur in the project area, and that designation increases the formation and use of unauthorized routes, with associated increase in specific environmental effects including wildlife impacts, erosion, dust and noise.	Non-Significant	Suitability of trail designation in the Big Bear Back Country Place is already decided (Forest Plan). Causality of increased unauthorized use as a function of route designation is conjectural.
Commenters expressed that equestrian and hiking trails need to be designated to reduce conflicts with OHV. One commenter further expressed that barriers placed to deter unauthorized OHV use also deter equestrian use, thereby increasing the need for designation of equestrian trails.	Non-Significant	Outside the scope of the proposed action.
One commenter expressed that wildfire danger increases with OHV use.	Non-Significant	Conjectural
Commenters expressed that mixed use should not be added to 4N16A because it would change the character of Horse Spring Campground and exclude other [non-OHV] types of recreation.	Non-Significant	Conjectural
Commenters expressed that adoption of unauthorized trails rewards bad behavior and encourages more unauthorized use.	Non-Significant	Conjectural
One commenter expressed that inviting more OHV use and staging at Big Pine Flat will be difficult and expensive to monitor and enforce, and suggested that staging would be better located where it would be more easily accessible to law enforcement.	Non-Significant	Conjectural
Commenters expressed that the proposed action should include an interpretive program to inform and educate OHV visitors about natural resources and responsible use of the National Forest and to reduce environmental effects.	Non-Significant	Outside the scope of the proposed action. The SBNF acknowledges the importance of such interpretation and education, and intends to increase interpretive efforts in this general area, subject to funding.
Commenters expressed that the proposed action should include increased law enforcement and presence in the project area to minimize environmental effects of OHV use.	Non-Significant	Outside the scope of the proposed action. The SBNF acknowledges the need for better presence, and intends to increase patrols and enforcement in this general area, subject to funding.

1.10.1 Draft EA Review and Comment

A draft of this EA, along with supporting documentation, was released for public review and comment for 30 days, beginning November 17, 2015 and ending December 16, 2015. Twenty-one comment letters were received. The comments are listed and a response to comments is provided at **Appendix B**.

1.11 Applicable Laws, Regulations, and Policies

All resource management activities described and proposed in this document would be implemented to the extent that they are consistent with applicable federal law, USDA regulations, Forest Service policies, and applicable provisions of state law. The major applicable laws are outlined below.

1.11.1 National Environmental Policy Act

The National Environmental Policy Act (NEPA) was signed into law on January 1, 1970, and was the one of the first major environmental laws in the United States to establish this country's environmental policies. To implement these policies, NEPA instructs agencies to assess the environmental effects of their proposed actions before making decisions. Two of the major purposes of this process are to disclose environmental effects, and to make informed decisions. The Forest Service NEPA procedures emphasize open and transparent decision making. The NEPA regulations ensure that the public has a voice in Forest Service decisions about its on-the-ground activities and that those decisions are well documented and fully disclosed to the public.

1.11.2 National Forest Management Act

The National Forest Management Act (NFMA) requires the development of long-range land and resource management plans. The Forest Plan was approved in 1989 and revised in 2006 as required by this Act. The Forest Plan provides guidance for all natural resource management activities. The NFMA requires that all projects and activities be consistent with the Forest Plan. The Forest Plan has been reviewed in consideration of this project. If approved, this project would require a project-specific Forest Plan amendment to adjust zoning. Otherwise, the design of the Rattlesnake OHV project is consistent with the Forest Plan.

1.11.3 Endangered Species Act

In accordance with Section 7(c) of the Endangered Species Act, the U.S. Fish and Wildlife Service (FWS) provided a list of endangered and threatened species that may be present in the project area (September 15, 2015). Those species have been assessed for potential effects.

1.11.4 National Historic Preservation Act

Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to take into account the effect of a project on any district, site, building, structure, or object that is included in, or eligible for inclusion in, the National Register of Historic Places. Surveys were conducted for Native American religious or cultural sites, archaeological sites, and historic properties or areas that may be affected by this project.

1.11.5 Clean Water Act of 1972, as amended

The objective and supporting national goals and policies of the Federal Water Pollution Control Act commonly known as the Clean Water Act is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters including, but not limited to the elimination of pollutants discharged into navigable waters, and where attainable, water quality which provides

for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water.

All federal agencies must comply with the provisions of the Clean Water Act (CWA). The Design Features and Best Management Practices included in the Proposed Action ensure that the terms of the CWA are met, primarily prevention of pollution caused by erosion and sedimentation.

1.11.6 Environmental Justice (Executive Order 12898)

Executive Order 12898 requires that all federal actions consider potentially disproportionate effects on minority and low-income communities, especially if adverse effects to environmental or human health conditions are identified. Adverse environmental or human health conditions created by any of the alternatives considered would not affect any minority or low-income neighborhood disproportionately.

1.11.7 Invasive Species, Executive Order 13112 of February 3, 1999

This EA covers Invasive Species. The project's Design Features are designed to minimize risk of invasive species introduction and spread.

1.11.8 Floodplain Management, Executive Order 11988 of May 24, 1977, and Protection of Wetlands, Executive Order 11990 of May 24, 1977

Executive Order 11988 requires federal agencies to avoid to the extent possible the long and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative.

The purpose of Executive Order 11990 is to “minimize the destruction, loss or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands”.

Compliance with these orders will be ensured by incorporating and adhering to the project Design Features, including the implementation of BMPs.

1.11.9 Use of Off-Road Vehicles on the Public Lands, Executive Order 11644 of February 8, 1972

The purpose of this order establishes policies and provides for procedures that will ensure that the use of off-road vehicles on public lands will be controlled and directed so as to protect the resources of those lands, to promote the safety of all users of those lands, and to minimize conflicts among the various uses of those lands.

Regulations and administrative instructions direct that the designation of such areas and trails will be based upon the protection of the resources of the public lands, promotion of the safety of all users of those lands, and minimization of conflicts among the various uses of those lands. The regulations further require that the designation of such areas and trails shall be in accordance with the following:

- Areas and trails shall be located to minimize damage to soil, watershed, vegetation, or other resources of the public lands.

1.11.10 Off-Road Vehicles on Public Lands, EO 11989 of May 24, 1977

This Order amended EO 11644 of February 8, 1972 by adding a new section regarding the closing of areas used by off-road vehicles as a result of adverse effects resulting from off-road vehicles. Specifically, the new section reads as the following:

Sec. 9. Special Protection of the Public Lands. (a) Notwithstanding the provisions of Section 3 of this Order, the respective agency head shall, whenever he determines that the use of off-road vehicles will cause or is causing considerable adverse effects on the soil, vegetation, wildlife, wildlife habitat or cultural or historic resources of particular areas or trails of the public lands, immediately close such areas or trails to the type of off-road vehicle causing such effects, until such time as he determines that such adverse effects have been eliminated and that measures have been implemented to prevent future recurrence.

1.11.11 Local Agency Permitting Requirements and Coordination

This EA is intended to meet CEQA compliance requirements with the inclusion of a CEQA Initial Study (Appendix) and is being circulated compliant with the provisions of CEQA (Article 14, Sec. 15225 directing meeting standards at Sec. 15072(a) or 15087(a)). The purpose of including the CEQA components is to streamline future CEQA compliance should the project receive funding from a State Agency, such as the Off-Highway Motor Vehicle Recreation Division of California State Parks. In addition, the analysis presented in this EA concludes there are no significant impacts that are not mitigated, and therefore this EA serves as the Notice of Intent that the Forest Service proposes to make a Finding of No Significant Effect (FONSI) equivalent to a CEQA Negative Declaration. Circulation of the Negative Declaration (FONSI) will also be CEQA compliant (Article 14, 15225).

Measures necessary to reduce impact to a level less than significant are presented in EA Section 2.2, Design Features.

Compliance with Sections 401 and 404 of the Clean Water Act will be sought as needed through the Lahontan Regional Water Quality Control Board and the U.S. Army Corps of Engineers for stream, bridge and trail activities.

CHAPTER 2 – PROPOSED ACTION AND ALTERNATIVES

This chapter describes and compares the alternatives considered for the Rattlesnake Mountain OHV Trails project. This chapter also presents the alternatives in comparative form, defining the differences between each alternative.

Each action alternative describes in detail the proposal for each road/trail in the Project Area, which includes the following management actions:

- New Construction: New trail would be constructed where no route currently exists. This action entails constructing new trail segments in previously-undisturbed areas to replace existing unauthorized trail segments that are poorly located, or to complete connections. Details such as tread width and designed use are described below for each proposed trail segment.
- Reconstruction: This action includes constructing new trails along non-system route alignments that have become revegetated. These may include historic mining or ranching routes, user created routes, and decommissioned roads and trails. Details such as tread width and designed use are described below for each proposed trail segment.
- Designate Unauthorized Route (UR): Existing trails that are not currently part of the official National Forest Transportation System (NFTS) would be designated as an authorized trail through this proposal and upgraded to meet NFTS motorized trail standards. This action includes bringing a variety of existing routes into the NFTS. Details such as tread width and designed use are described below for each proposed trail segment.
- Add Mixed Use to System Road: NFTS roads that are currently open only to highway-legal vehicles would be re-designated to allow travel by authorized off-highway vehicles (e.g., Green-Sticker). In some cases, adding mixed use would also include a change to the maintenance level of the road from Level 3 (maintenance standard suitable for travel by standard passenger vehicles) to Level 2 (maintained for travel by high clearance vehicles).
- Unauthorized Route Restoration: Unauthorized routes would be blocked and disguised, allowing the areas to be restored over time to a more natural condition. Access blocking may include use of barriers including rock and/or fence. Disguising routes may include chunking, use of natural vegetation slash, mulch (surface and vertical), use of direct seeding of locally native species, and in limited instances, planting container stock of locally native species. Routes would be stabilized where needed using water bars or other means to control erosion and restore natural drainage patterns.

Approximately 25 miles of unauthorized routes are mapped within the Project Area, as shown on Figure 2. Some of these routes would be actively-restored using blocking/disguising methods under the Proposed Action while others may warrant less intensive treatment or no treatment at all. The Proposed Action includes addressing all of these mapped routes according to site-specific needs and also addressing any other newly-discovered and newly-created routes in the Project Area throughout the life of the project. A restoration plan would be developed and maintained to prescribe site-specific

treatments, monitoring, and maintenance needs. All restoration treatments would be subject to design features under section 2.2 below.

- Develop and Designate Parking/Trailer Site: An existing undesignated parking area at Big Pine Flat, the junction of Forest Roads 3N14 and 3N16, would be designated and improved for OHV visitors to park and directly access OHV routes. Pipe and cable fencing would be used to delineate the parking area and provide drive-thru access to accommodate trailers. Amenities including an information kiosk, picnic tables, trash cans, and portable or vault toilets would be provided and maintained subject to available funding.
- Change Forest Plan Land Use Zone: Some of the proposed trails pass through Back Country Non-Motorized zoned lands, as defined under the Forest Plan. This is a land use zone where roads and motorized trails are not considered to be suitable uses. The Proposed Action and Alternative 3 would both include a project-specific Forest Plan amendment to bring the proposed trails into consistency with the Forest Plan. A 400'-wide area, 200' on center of each proposed trail that occurs within the Back Country Non-Motorized land use zone, would be rezoned to Back Country. This rezoning would also change the Recreation Opportunity Spectrum (ROS) of these corridors from Semi-Primitive Non-Motorized to Semi-Primitive Motorized. A decision on this project that selects Alternative 1 or 3 would amend the Forest Plan to show this project-level zone and ROS change. These narrow corridors of new Back Country Motorized zoning are specific to routes included with this proposed action (see Fig. 2) and would not provide for additional future route designation within these defined areas.

2.1 Alternatives

2.1.1 Alternative Considered But Not Analyzed In Detail

3N17 Improvements

An alternative involving improving and/or bypassing sections of Forest Road 3N17 was considered as a way to address public comments that expressed a need for a better OHV connection between the Horse Spring area and the Big Pine Flat area. A review of this concept determined that the alternative would not be feasible nor would it adequately address improved access.

This alternative was not considered in detail for the following reasons:

1. White Mountain, which 3N17 traverses, is too steep to provide a non-technical OHV route between the Rattlesnake Mountain area and the Big Pine Flat area.
2. Improvements to 3N17 (including bypasses of the steepest sections) would be very expensive, and also would impact endangered plant species and designated critical habitat.
3. Even if funding and environmental constraints were resolved, the maximum feasible improvement of 3N17 would be from a most difficult to a moderately difficult technical route. This would not address the expressed public need for a non-technical connection. Furthermore, there are current users of this route, including a club that has adopted the road, who value its most-difficult condition.

2.1.2 Alternatives Considered In Detail

Alternative 1- Proposed Action

The following descriptions and tables represent the actions that would be implemented under the Proposed Action. These descriptions differ somewhat from the Proposed Action that was presented during the public scoping period in order to reflect new information that was received during scoping, as well as to clarify certain actions.

Changes from the Initial Proposed Action as Presented During Public Scoping

The Proposed Action distributed for public scoping included minor elements that have since been determined not to be feasible. Minor adjustments to the route alignments have been made to the current Proposed Action relative to the preliminary Proposed Action. The minor adjustments to the Proposed Action include:

- alignment of the proposed section of trail near Horse Springs Campground;
- alignment of the northern section of the proposed Redonda Ridge Trail extension;
- an approximately- 800' connector trail from Forest Road 3N17D north to BLM land that was included in the preliminary Proposed Action is not part of the current Proposed Action because BLM does not have an existing designated or proposed route to legally receive the traffic;
- mixed use proposed under the preliminary Proposed Action for a portion of 3N17D to provide OHV access to the above-mentioned connector trail is also not part of the current Proposed Action.

The current Proposed Action also includes more detail about elements including the proposed routes, trailering site, mixed use, restoration, and the Forest Plan amendment related to land use zoning than the preliminary Proposed Action did.

Proposed Action Description

The following route designations constitute the Proposed Action. The order, as presented, is generally from northwest to southeast. Route numbers and trail names would be assigned as part of implementation if Alternative 1 or 3 is selected.

1. *3N14 to JF3221M connector*: Designate an existing unauthorized route (UR) approximately 0.1 miles long as a 24" system trail that connects Coxey Road (3N14) to a BLM 24" trail (JF3221M). This trail would improve connection between motorcycle riding opportunities on the SBNF with opportunities on BLM land in the Juniper Flat area. It also completes loop ride opportunities from existing trails. The trail would be brought up to standard and equipped with a 24" restrictor gate at the intersection with 3N14. This route would be open to street legal and green sticker motorcycles.

2. *3N14 to 3N59 connector*: Designate an existing unauthorized route approximately 1.4 miles long as a 24" system trail that connects Carbine Flat Road (3N59) with Coxey Road (3N14). This trail would provide motorcycle riders an alternative to travelling sections of 3N59 and 3N14, adding to the diversity of riding opportunities in the area, and providing new loop ride opportunities. Designation of this trail would require rezoning 9.1 acres of Back Country Non-motorized to Back Country under a project level Forest Plan amendment. The trail would be brought up to standard and equipped with 24" restrictor gates at intersections with 3N14 and 3N54. This route would be open to street legal and green sticker motorcycles.

3. *Horse Spring Campground to JF3221 connector*: Designate a 1.7 mile 24" trail from the Horse Spring Campground Road (4N16A) to BLM Route JF3221. This trail would provide a new loop ride opportunity and improve connection between Horse Spring campground and BLM land to the north. Designation of this trail would require rezoning 75.9 acres of Back Country Non-motorized to Back Country under a project level Forest Plan Amendment. The first 0.1 miles of this route from 4N16A would be new construction to avoid having the trail pass through the campground itself. The remaining 1.6 miles of unauthorized route would be designated and brought up to standard, and equipped with restrictor gates at 4N16A and JF3221. This route would be open to street legal and green sticker motorcycles.

4. *Mixed Use designation for Horse Spring Road (4N16A)*: Designate all 1.1 miles of 4N16A, from 4N16 to and including the Horse Springs Campground loops as mixed use. This would provide access for all authorized vehicles (street legal and OHV) to Horse Springs Campground, and along with the JF3221 connector this completes a loop opportunity for motorcycle riders. This designation may also involve reducing the maintenance level of the road from level 3 (maintained for passenger vehicles) to level 2 (maintained for high clearance vehicles). Implementation for this route would involve updating maps and signage.

In the process of planning this project, minor errors in the Forest Plan land use zone mapping were identified where the 400-foot wide corridor of Back Country Motorized zone for 4N16A and Horse Spring Campground were not properly centered on the actual road and Campground as intended. Additional Backcountry Motorized alignment errors within the Project Area along 3N17 and 3N17A were also identified. These mapping errors have been corrected by shifting the corridors to be properly centered on their respective roads. These corrections were not an element of this Proposed Action, nor did they constitute a Forest Plan amendment.

5. *4N16 to 3N17 Connector*: Designate a 0.7 mile 24" trail from Grapevine Canyon Road (4N16) to White Mountain Road (3N17). This trail would provide a new loop ride opportunity and a new riding opportunity. Designation of this trail would require rezoning 26.3 acres of Back Country Non-Motorized to Back Country Motorized under a project level Forest Plan Amendment. The middle 0.4 miles of this route would be new construction to remove the trail from an intermittent stream course. The existing unauthorized route section through the stream course would be restored. The remaining 0.3 miles of unauthorized route would be designated and brought up to standard, and equipped with restrictor gates at 4N16 and 3N17. This route would be open to street legal and green sticker motorcycles.

6. *3N17 to 4N16 Connector*: Designate a 1.5 mile 24" trail from White Mountain Road (3N17) to Grapevine Canyon Road (4N16). This trail would provide a new ride opportunity and build on loop ride opportunities with other trails under the Proposed Action. The middle 0.5 miles of this route would utilize and bring up to standard an existing unauthorized route, about 0.9 miles would involve trail reconstruction following the alignment of pre-existing /historic routes that have since naturally revegetated, with a short (less than 0.1 mi) stretch of new construction to complete the connection. The trail would be equipped with restrictor gates at 4N16 and 3N17. This route would be open to street legal and green sticker motorcycles.

7. *Redonda Ridge Trail Extension*: Extend the 50” Redonda Ridge Trail 1.1 miles from its current terminus at Wright Mine Road (3N11) north to White Mountain Road (3N17). The southern 0.7 miles would involve trail reconstruction following the alignment of the former 3N11C, which was decommissioned in 1999 and has since revegetated. The northern 0.4 miles would be new construction to complete the connection with 3N17. The trail would be equipped with restrictor gates at 3N11 and 3N17, and would be open to street legal vehicles and authorized OHVs 50” or less.

8. *3N92 Extension*: Extend road 3N92 by 0.1 miles to existing road terminus. The westernmost 0.1 miles of 3N92 as currently used follows the alignment of the decommissioned former 3N92A. The Proposed Action includes extending 3N92 to correspond with existing use, and the extension would be collocated with the existing Redonda Ridge Trail (1W17). 3N92 would be open for its whole length to street legal vehicles and authorized OHV.

9. *3N14 Mixed Use*: Add mixed use designation to 0.3 miles of Coxeys Road (3N14), from the junction with Holcomb Valley Road (3N16) to the junction with the Redonda Ridge Trail (1W17). This would provide access for all authorized vehicles (street legal and OHV) between 3N16 and 1W17. Implementation for this route designation would involve updating maps and signage.

10. *Big Pine Flat Campground Mixed Use*: Add mixed use designation to approximately 0.1 mile of the Big Pine Flat Campground Road (3N14F) and associated campground loops. This would provide access for all authorized vehicles (street legal and OHV) to Big Pine Flat Campground. The portion of 3N14F beyond the campground itself is not proposed for mixed use, nor is the equestrian group campground. Implementation for this route designation would involve updating maps and signage.

11. *Designate Parking/Trailer site at Big Pine Flat*: Designate an area (approximately 1 acre) on the north side of Holcomb Valley Road (3N16) between Coxeys Road (3N14) and Wright Mine Road (3N11) as a parking and trailering site. The site would be about 400 feet long, spanning the distance between 3N11 and 3N14, varying in width, and not extending north of an existing fence line that runs 100-200 feet roughly parallel to 3N16 between 3N11 and 3N14.

This site is currently used as a parking and trailering site but this use is not authorized or managed. Details would be subject to specific site design, but the preliminary concept is for a one-way pull through site that can accommodate long trailers, entering from 3N11 and exiting to 3N14. Parking and unloading areas would be defined. The layout would utilize the existing disturbed ground and protect groups of trees and other vegetation to the extent possible. Post and cable fencing, signage, and/or site restoration of existing disturbed surfaces would be used to clearly define the area, and amenities including picnic tables, an informational kiosk, and a portable or permanent restroom facility may be provided and maintained subject to available funding.

Table 3 and **Table 4** summarize the details of the proposed action. **Figure 2** shows the proposed action trail network on the landscape.

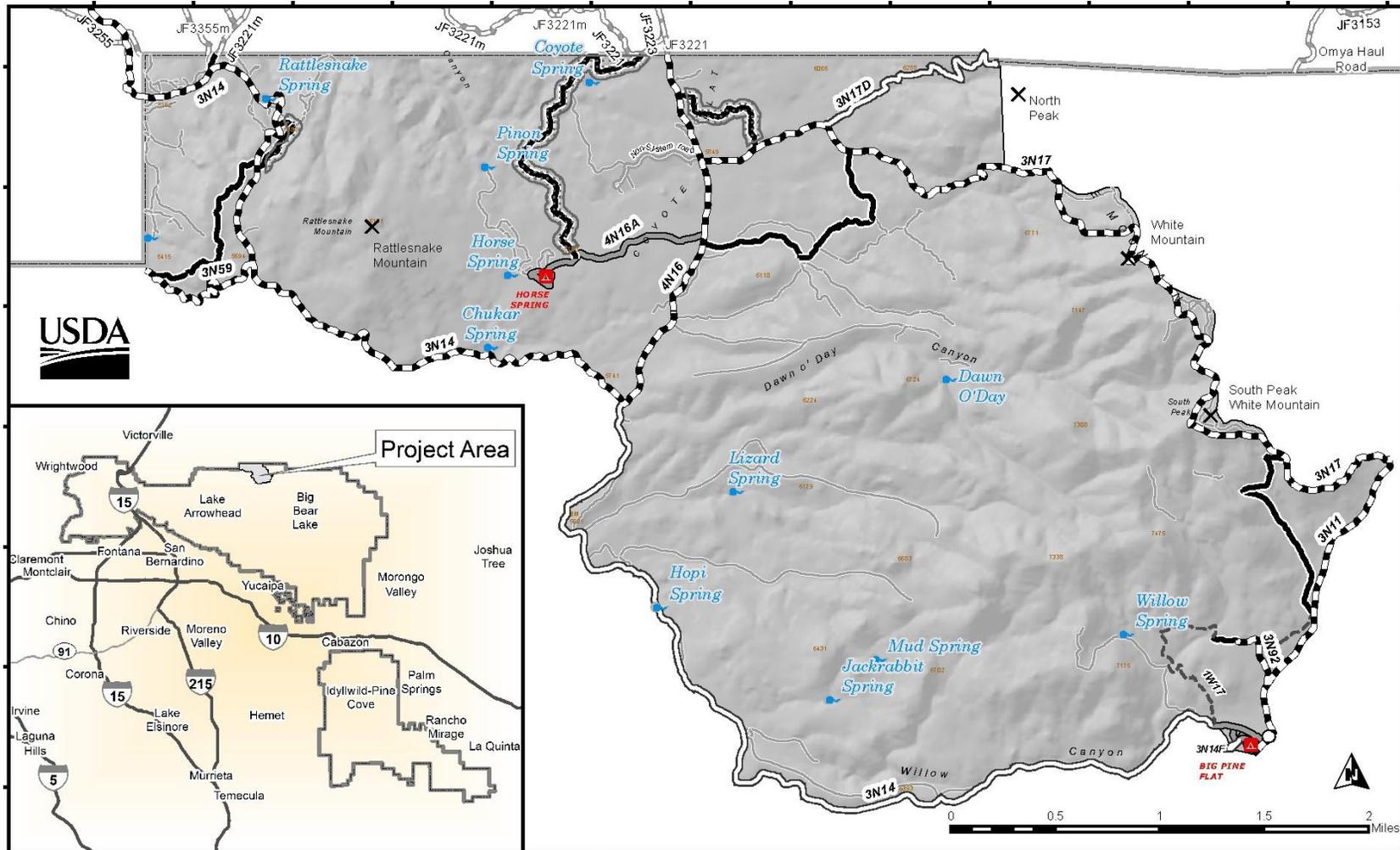
Table 3. Alternative 1 Designation – By Route				
Trail/Route	Proposal	Width (inches)	Length (miles)	Rezone (acres)
3N14 to JF3221M	Designate UR	24	0.1	0
3N14 to 3N54	Designate UR	24	1.4	9.1
HSCG to JF3221	New Constr.	24	0.1	75.9
	Designate UR	24	1.6	
4N16A Mixed Use	Designate Mixed Use	(road)	1.1	0
4N16 to 3N17	New Construction	24	0.4	26.3
	Designate UR		0.3	
3N17 to 4N16	New Construction	24	0.1	0
	Reconstruction		0.9	
3N11 to 3N17	Designate UR	50	0.5	0
	Designate UR		0.4	
3N92	Designate UR	(road)	0.7	0
3N14 Mixed Use	Designate Mixed Use	(road)	0.1	0
3N14F Mixed Use	Designate Mixed Use	(road)	0.3	0
Parking/Trailer site	Designate Parking Area	n/a	0.1	0
			n/a	0
		Total:	8.1	111.3

Table 4. Summary of Alternative 1 Designation - Totals	
Proposal	Total Miles
Designate UR	4.0
New Construction	1.0
Reconstruction	1.6
Add Mixed Use	1.5
Total	8.1

Alternative 2 – No Action

Under the No Action alternative, current management plans would continue to guide management of the Project Area (**Figure 3**). OHV travel would continue on designated routes within the Project Area. No new trail construction, designation of unauthorized routes, mixed use designation, or designation of a parking/trailer site would be implemented under this project. No rezoning from Back Country Non-Motorized to Back Country Motorized (and associated changes to ROS) would occur and the Forest Plan would not be amended as described. Under the No Action alternative, restoration of unauthorized routes may still occur based on site-specific review and other NEPA decisions, subject to available funding. However, it is unlikely that the scope of unauthorized route restoration included in the Proposed Action could be funded in the near-term without it being included in a comprehensive package of trail designation and travel management actions such as the Proposed Action or Alternative 3.

Figure 2. Map of Alternative 1 (Proposed Action)



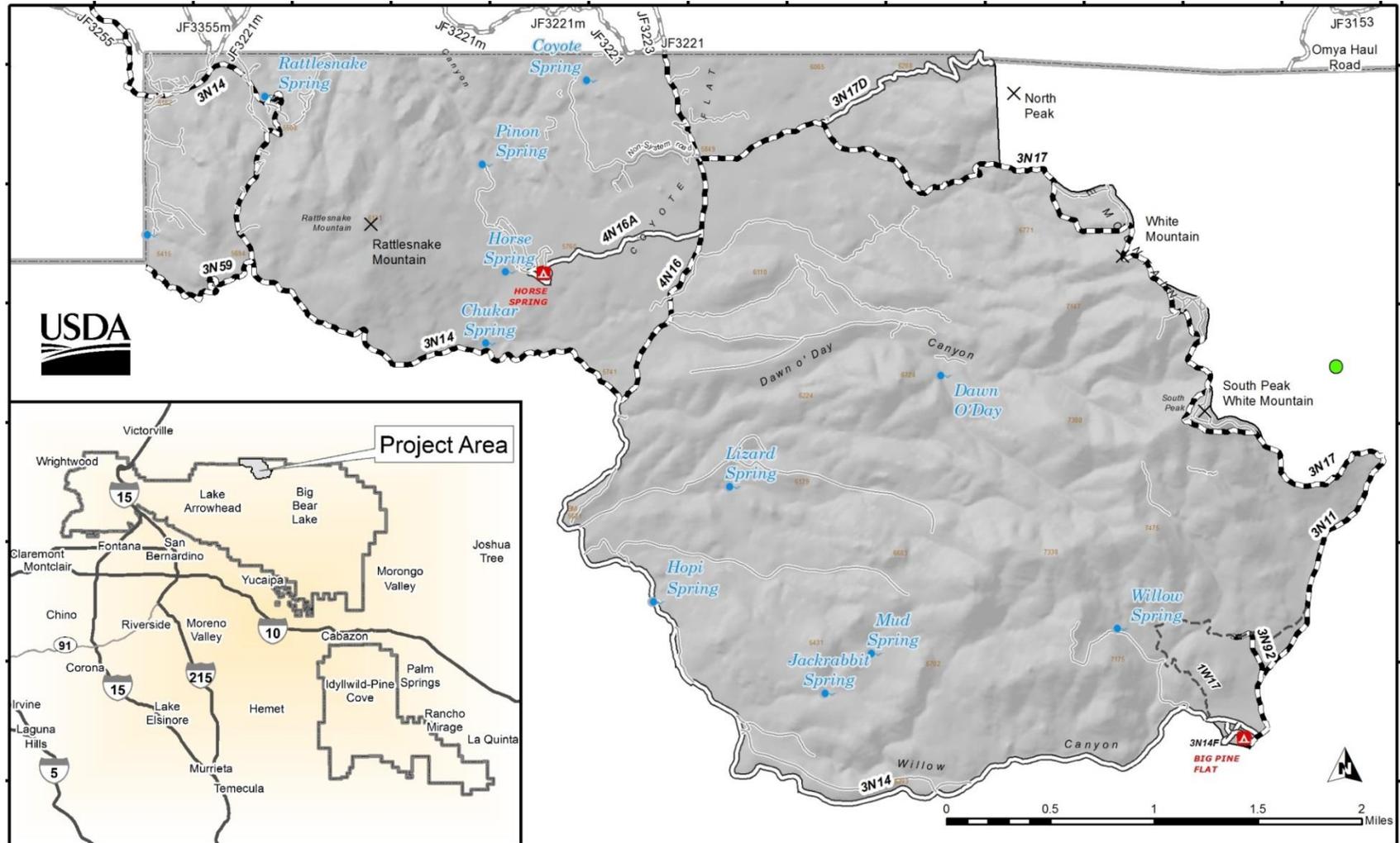
ALTERNATIVE 1 - PROPOSED ACTION
Rattlesnake OHV Trail Project
San Bernardino National Forest

Map Date: 6/15/2015
 Map Datum: NAD83, Map Projection: UTM Zone 11 North
 Author: San Bernardino National Forest, tt
 File: RecRattlesnakeOHV_EA_ALT1-PROPOSEDACTION8x11_20150615.pdf



Project Area	Administrative Forest Boundary
Proposed Actions	Existing Route (FS = Forest Service System Route)
New Trail	FS Road Open to Highway Legal Vehicles Only, Yearlong
Add Green Sticker to System Route	FS Road Open to All Vehicles, Yearlong
Rehabilitate Unauthorized Route	FS Motorized Trail Open to Vehicles 50" or Less in Width, Yearlong
Proposed Trailering Site	Non-System Route
Convert Land Use Zone to Back Country	BLM Proposed Motorized Route
	*6431" Spot Elevations (ft)

Figure 3. Map of Alternative 2 (No Action)



ALTERNATIVE 2 - NO ACTION
Rattlesnake OHV Trail Project
San Bernardino National Forest

Map Date: 6/15/2015
 Map Datum: NAD83, Map Projection: UTM Zone 11 North
 Author: San Bernardino National Forest, It
 File: RecRattlesnakeOHV_EA_ALT2-NOACTION8x11_20150615.pdf



	Project Area		Unauthorized Route
	Existing Route (FS = Forest Service System Route)		BLM Proposed Motorized Route
	FS Road Open to Highway Legal Vehicles Only, Yearlong		"6431" Spot Elevations (ft)
	FS Road Open to All Vehicles, Yearlong		
	FS Motorized Trail Open to Vehicles 50" or Less in Width, Yearlong		
	Non-System Route		

Alternative 3 – Mixed Use

This alternative incorporates all actions described in the Proposed Action, and also would add mixed use to 4.9 miles of Forest Road 3N14 (**Figure 4**). 3N14 is currently open only to highway-legal vehicles. Adding mixed use would allow authorized OHV (e.g. green sticker) travel, providing a non-technical OHV connection between the Horse Spring and Rattlesnake Mountain area, and Big Pine Flat. In addition, the approximately 9.0-mile extent of 3N14, from Big Pine Flat northwest to the forest boundary, would be reduced from Maintenance Level 3 to Level 2. Level 3 roads are maintained for travel by passenger vehicles. Level 2 roads are maintained for travel by high clearance vehicles.

2.2 Project Design Features

Design Features were developed to avoid and minimize some of the potential impacts of the Proposed Action and Alternative 3. These Design Features are an integral part of the proposed action, and would apply to either of the action alternatives. These design features also serve as Mitigation Measures to reduce impacts to below significance, pursuant to CEQA.

Soils and Hydrology Design Features

Current Forest Service policy directs compliance with required Clean Water Act permits and State regulations and requires the use of Best Management Practices (BMP) to control nonpoint source pollution to meet applicable water quality standards and other Clean Water Act requirements. The Forest Service has a long history of working with States and other partners to carry out BMP programs, including agreements with the U.S. Environmental Protection Agency and State of California to use and monitor BMPs (USDA FS 2011).

The following BMPs are associated with this project:

National Best Management Practices for Water Quality Management on National Forest System Lands (USDA FS 2012).

- Rec-4 - Motorized and Non-Motorized Trails; and
- Road-9 - Parking and Staging Areas

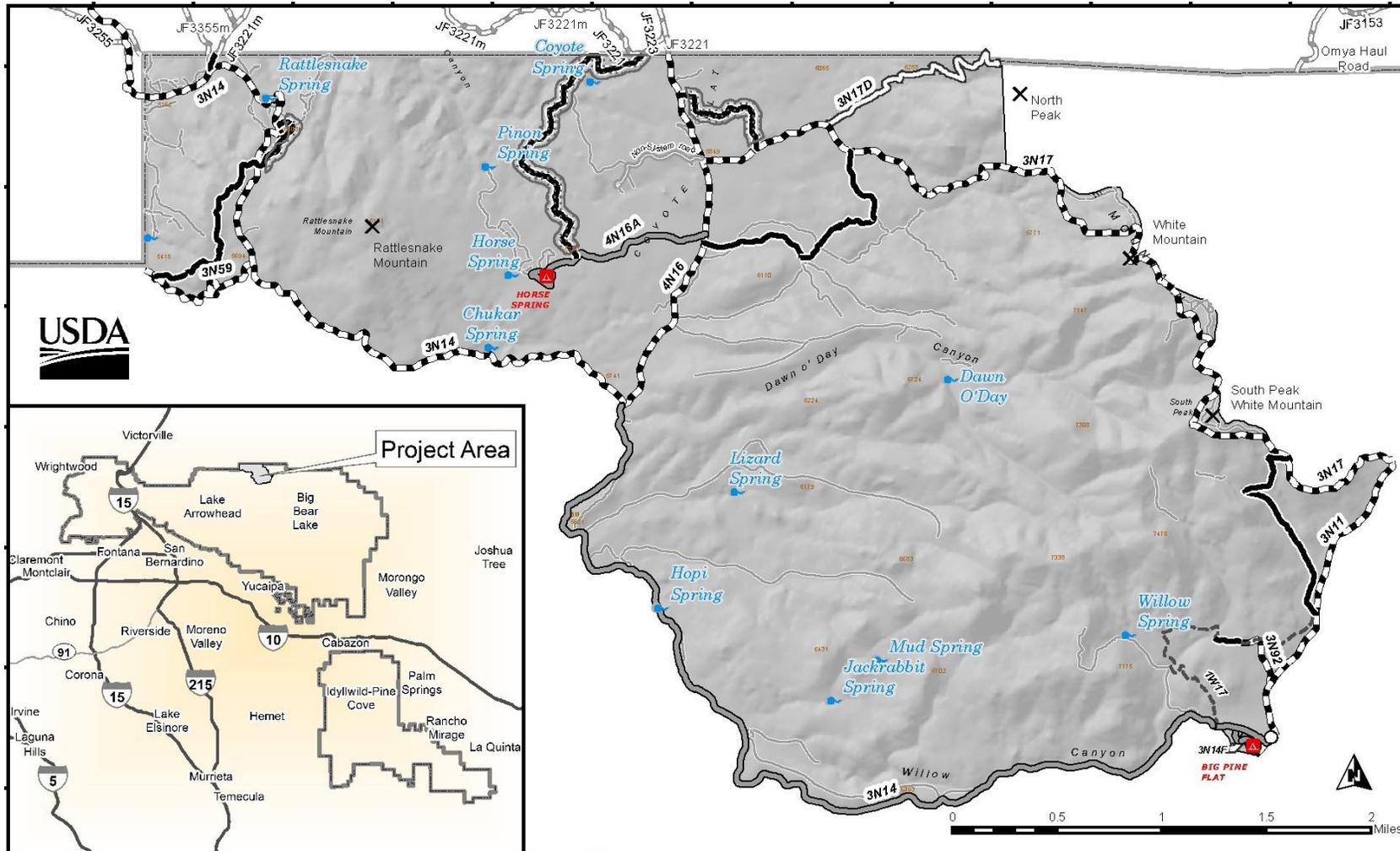
Southwest Region (Region 5) Soil and Water Conservation Handbook: Chapter 10 – Water Quality Management Handbook (USDA FS 2011).

- BMP 2.10 - Parking and Staging Areas;
- BMP 2.13- Erosion Control Plan;
- BMP 4.7 - BMPs for Off-Highway Vehicle Facilities and Use (BMPs 4.7.1 to 4.7.9);
- BMP 7.3 - Protection of Wetlands

San Bernardino National Forest (Region 5) Soil and Water Conservation Practices Handbook: Chapter 3 – Description of Management Techniques for Riparian Conservation Areas (USDA FS 2005d).

- Section 3.21 - Stream Protection Measures General to All Management Activities;
- Section 3.29 - Administration of Recreation Uses and Special Designation Areas

Figure 4. Map of Alternative 3 (Mixed Use)



ALTERNATIVE 3 - 3N14 MULTI-USE
Rattlesnake OHV Trail Project
San Bernardino National Forest

Map Date: 6/15/2015
 Map Datum: NAD83, Map Projection: UTM Zone 11 North
 Author: San Bernardino National Forest, tt
 File: RecRattlesnakeOHV_EA_ALT3-3N14MULTIUSE8x11_20150615.pdf



Project Area	Administrative Forest Boundary
Proposed Actions	Existing Route (FS = Forest Service System Route)
New Trail	FS Road Open to Highway Legal Vehicles Only, Yearlong
Add Green Sticker to System Route	FS Road Open to All Vehicles, Yearlong
Rehabilitate Unauthorized Route	FS Motorized Trail Open to Vehicles 50" or Less in Width, Yearlong
Proposed Trailering Site	Non-System Route
Convert Land Use Zone to Back Country	BLM Proposed Motorized Route

"6431" Spot Elevations (ft)

Additional mitigation measures that would reduce or eliminate effects of the proposed action include:

- Installation of latching trash receptacles at the parking area near Big Pine Flat campground;
- Application of appropriately sized ground cover, *e.g.*, gravel, chips, cobble, etc., over the parking area near Big Pine Flat campground at a depth sufficient to prevent soil and surface runoff from reaching FS 3N14;
- Installation of fence around the perimeter of Horse Spring and Chukar Spring capable of excluding off-road vehicles operating within these sensitive wetland and riparian areas; and
- Restoring hydrologic and soil function on unauthorized routes being rehabilitated utilizing erosion control and other methods including, but not limited to the following:
 - Waterbars at specified intervals beginning from the top of the contributing area to just prior to the stream crossing. Utilize energy dissipation, *e.g.*, cobble, etc., as needed at the waterbar outlet if inadequate vegetation buffer exists;
 - Recontouring and filling in rills and gullies with adjacent soil. Smooth the area, seed and/or plant, and cover with slash;
 - Install access barriers using material such as felled trees, logs, slash, fencing, vertical mulch, or other material making detection of and entrance to the unauthorized trail difficult.
 - Cover unauthorized trails with adequate sized ground cover over 70 percent of the area or that which matches natural background conditions. Adequate ground cover is described as material in contact with the soil that consists of living plants, slash, litter, duff mat and rock fragments that are of sufficient size ($\geq \frac{3}{4}$ inch in diameter) to break the impact of raindrops and serve as a filter media for overland flow.

An Erosion Control Plan would be developed separately that is site-specific to this project. The objective of an Erosion Control Plan (ECP) is to effectively limit and mitigate erosion and sedimentation from any ground-disturbing activity beginning with project pre-planning through implementation and completion. Short-term mitigation measures to prevent erosion and sedimentation are described in detail in the ECP and are based on site-specific surveys, conditions, and characteristics. Prior to the start of field operations, the ECP shall be reviewed and recommended by the Forest Hydrologist and approved by the District Ranger. The ECP is kept on site during project activity and made available for review upon request of a representative of the California State Water Resources Control Board or any local storm water management agency that may receive storm water discharge resulting from this project.

Heritage Resources Design Features

HER-1. Avoidance of non-linear historic properties during the construction of new trails and adoption of unauthorized routes.

HER-2. Retention of the character of linear historic properties that are adopted into the forest road system

- HER-3. Adherence to the Secretary of the Interior's standards for rehabilitation when performing future road maintenance on linear historic properties.
- HER-4. Restoration of non-system trails through the use of non-ground disturbing methods such as the placement of slash.
- HER-5. Block and disguise non-system trails using minimal ground disturbing methods such as gates, fences, and boulders when confined to the road prism.

Wildlife and Botanical Resources Design Features

General Design Features (GEN)

Coordination

- GEN-C-1. Project personnel will be provided training on rare animals, rare plants, and weeds within analysis areas and provided direction for what to do if those species are encountered (including notification of a Forest Service biologist).
- GEN-C-2. Observations of any sensitive species or their diagnostic signs during project activities will be conveyed to the project supervisor the day observed. The project supervisor will convey this information to the project biologist or designee within 24 hours of the observation.

Vegetation Removal/Trimming

- GEN-V-1. Trees marked with a wildlife tag or white paint will not be felled without prior approval from a FS Wildlife Biologist.

Protection of Trees

- GEN-TP-1. Trails will be laid out so as to protect existing trees as much as possible.
- GEN-TP-2. Trails will be laid out outside the dripline of trees as much as possible to minimize impacts of compaction and risk of damage to tree trunks.
- GEN-TP-3. Equipment, supplies, materials, and soil/gravel, etc. will not be stored up against living trees.

Non-Native Invasive Species

- GEN-ISP-1. Pursuant to FSM Section 2900 guidelines for weed control, all equipment will arrive to the SBNF clean and free of any mud and debris. If the equipment is operated within areas known to be infested with non-native invasive species, equipment should also be cleaned prior to moving to other areas without these species and/or demobilizing from the project area. In any project-related contracts, include provisions that require equipment cleaning.
- GEN-ISP-2. Where available, mulches will be from on-site sources (*e.g.*, chipped wood, etc.).
- GEN-ISP-3. All material from off-site sources (fill, base material, fill, rock and gravel, straw, mulch, etc.) used for erosion control, rehabilitation of temporary routes/landings, and/or route maintenance must be certified weed-free (S-6, LMP Part 3, p. 5). Fill material will be dry before transporting to the

- site to minimize the risk of introducing non-native aquatic plants, pathogens, and invertebrates (*e.g.*, snails, mussels, chytrid, etc.).
- GEN-ISP-4. Work sites and access routes (including foot traffic) will be surveyed for non-native invasive weeds prior to work. Locations on non-native invasive plants will be flagged and all occurrences will be avoided by personnel and equipment (in order to limit the spread of seeds, etc.). A botanist will determine whether monitoring during implementation is required.
- GEN-ISP-5. A handout will be prepared for the project administrator to identify target weed species and to educate contractors, adjacent landowners, etc.
- GEN-ISP-6. Personnel and equipment shall avoid contact with water in aquatic habitats as much as possible. Where complete avoidance is not possible, standard procedures shall be followed to avoid spread or introduction of invasive species, diseases, and plants into the aquatic habitat. See Appendix C (inserted at end of this document).

General Wildlife and Plants

- GEN-WP-1. Areas requiring special treatment (*e.g.*, avoidance, monitoring, limited operating periods, etc.) will be delineated on maps and kept within the project file. These maps will be used to guide project layout and implementation with coordination between the project administrator and project biologists/botanists to identify avoidance areas or special treatment areas on the ground.
- GEN-WP-2. Known occurrences of Threatened, Endangered, and Sensitive (TES) plants and animals and/or habitat criteria that support Sensitive animal species will be flagged and avoided. A qualified biologist/botanist will work with the project manager to avoid known occurrences (*e.g.*, access routes, equipment storage, etc.).
- GEN-WP-3. Whenever possible, construction/maintenance work will be scheduled during the fall or winter season to avoid disturbance during reproductive season for most wildlife species and blooming seasons for most plants.
- GEN-WP-4. Disturbance of soil, vegetation, and wildlife will be minimized to the greatest extent possible.
- GEN-WP-5. The area of disturbance shall be confined to the smallest area possible and all special habitat features of sensitive animals (*e.g.*, snags, burrows, etc.) should be avoided to the greatest extent feasible. During project activities, ingress/egress paths, staging areas, stockpiling, equipment storage sites, lay down areas, positioning of equipment, and any other potential habitat-disturbing activities shall be limited, to the greatest extent possible, to areas of permanent disturbance (*e.g.*, existing road beds, etc.) within the analysis area. Where this is not possible, previously-disturbed areas or areas with the lowest quality habitat will be used.
- GEN-WP-6. Equipment and materials (*e.g.*, logs, slash piles, and chip piles) will not be stacked against living trees, existing downed logs, and rock outcrops.
- GEN-WP-7. Implementation crews will be prohibited from collecting any wildlife or plants.

General Wildlife

- GEN-WG-1. Nighttime trail construction/maintenance work (and use of artificial lighting) will be avoided unless the Forest Service line officer determines it to be necessary to complete project implementation. Nighttime work must be approved in writing by the appropriate SBNF official before it begins. Nighttime is defined as the period between sunset and sunrise. If pre-dawn operations are necessary, coordination with a biologist will be done to ensure minimization of impacts.
- GEN-WG-2. Where the Forest Service determines that an exception to the nighttime restriction is necessary, nighttime work and use of artificial lighting will not occur in or within sight (where the artificial lighting or noise will be detectable within) of riparian zones, arroyo toad habitat, mountain yellow-legged frog habitat, California red-legged frog habitat, and nest sites of southwestern willow flycatchers, bald eagle night roosts, and within ¼-mile of spotted owl nests during the appropriate season(s) of occupancy. Appropriate buffers should be developed to ensure that those areas are not affected by night lighting.
- GEN-WG-3. Use of water sources from National Forest System (NFS) lands for dust abatement or other project operations will be evaluated on a site-specific basis. No water will be removed (for dust control, etc.) from the applicable known or suitable TES riparian habitat including: 1) during primary breeding season for arroyo toad; 2) year-round within suitable or known occupied habitat for mountain yellow-legged frog and California red-legged frogs.
- GEN-WG-4. If water use from National Forest sources (streams, springs, etc.) is approved by the Forest Service, approval will be limited to amounts such that flows/water levels will not be substantially altered.
- GEN-WG-5. To the greatest extent possible, destruction of active animal dens, shelters, burrows, and nests (including woodrat nests/middens will be avoided during final trail layout and construction. Appropriate buffers, as determined by a biologist, will be used to limit disturbance. Where destruction is unavoidable, a biologist will work with the project administrator to develop measures to reduce the loss/injury of individual animals (e.g., trapping and moving the animals, scaring them out of the site, etc.). It is recognized it will not be feasible to ensure complete protection of all of these sites, especially in dense shrub habitats.
- GEN-WG-6. Crew members, contractors, and volunteers building and maintaining trails will not bring pets to the work sites or feed wildlife.
- GEN-WG-7. Project personnel will not intentionally injure or kill wildlife species (including snakes). Instead, animals will be allowed to leave the work area before work resumes.
- GEN-WG-8. During project implementation, trash and food shall be contained in closed containers and removed from the job site daily to reduce attractiveness to opportunistic wildlife species. All construction debris will be removed at the end of the job.
- GEN-WG-9. All holes and trenches will be covered at the end of each day in order that wildlife will not become trapped. Where it is not possible to cover a trench or hole, it will be equipped with an "escape ramp" (e.g., a stick) that allows animals to climb out. Holes and trenches will be checked each

morning and any animals that have not escaped will be removed immediately.

Nesting Birds

- GEN-B-1. The Forest Service will conduct pre-work surveys for nesting birds along the final layout for new construction areas if construction is planned during the nesting season. Trail construction crews will be provided training on identifying and avoiding impacts to nests.
- GEN-B-2. If bird nests (including ground nests) are found during project implementation, activities will cease in the immediate area until the project biologist is notified. The biologist will determine whether activities may resume or whether to stop activities until young have fledged and the nest is vacant (as determined by the project biologist).
- GEN-B-3. Active and inactive raptor nest areas will be protected by using buffers and LOPs as needed (S-18, LMP Part 3, p7). Nest trees will be flagged for avoidance during implementation.

Snags, Logs, and Rock Outcrops

- GEN-SL-1. Final trail layout will minimize being close to large diameter trees and snags in order to reduce future needs to fell hazard trees.
- GEN-SL-2. Final trail layout will be done in such a way as to protect animals that rely on log and rock outcrop habitats. Where possible, trails will be laid out with at least 100' buffers from those habitat features.
- GEN-SL-3. Project personnel will avoid moving or disturbing downed logs and rock outcrops in order to protect small animal habitats. If disturbance is unavoidable, a biologist may need to be present to monitor for sensitive species during disturbance of the habitat. Equipment, supplies, materials, and soil/gravel, etc. will not be stored on or against logs or rock outcrops.

Threatened, Endangered and Sensitive Species Design Features (TES)

- TES-1. All modeled habitat is considered suitable and avoided unless surveys have been performed to determine suitability.
- TES-2. All suitable habitats are considered occupied unless surveys have been performed satisfying the detection and determination protocol and a negative determination is made.
- TES-3. Activities in suitable habitat for listed species will be avoided unless: 1) protocol-level surveys indicate absence; or 2) the project would have determination of not likely to adversely affect assuming that the species is present.
- TES-4. Long-term changes/impacts to habitat structure within occupied and suitable TES habitat will be avoided. If unavoidable, project administrator will work with district biologist/botanist to avoid adverse effects for TES species.
- TES-5. Equipment storage, hazardous materials, fueling, parking, and staging areas will be located outside of appropriate habitat buffer (see below for wildlife; 100' from T/E plant occurrences) or in Biologist/Botanist pre-approved/designed sites with minimal risk of drainage into riparian areas and aquatic systems. In some cases, containment systems could be used where storage/use of chemicals was necessary within that distance.

Aquatic/Riparian Habitat Design Features (AQR)

- AQR-1. The five-step project screening process will be used to identify riparian conservation areas (RCAs) (S-47, LMP Part 3, p. 11).
- AQR-2. RCAs will be 100 meters (328 feet) on perennial streams, or 30 meters (98 feet) on intermittent streams, measured as the slope distance from either bank of the channel. Other special aquatic criteria, such as wetlands, seeps and springs, also have 100-meter RCAs.
- AQR-3. Trails will be laid out so as to minimize distance in and effects to RCAs. Where crossings are unavoidable, they will be perpendicular crossings that minimize the distance within the RCA.
- AQR-4. RCA crossings will be planned so as to minimize the need for removal of riparian vegetation during construction and over the long-term (*e.g.*, using natural openings, etc.)
- AQR-5. Refueling of equipment and storage of fuel and other hazardous materials will not occur within 250' of RCAs (perennial and seasonal streams, seeps, springs, ponds, lakes, and meadows). No storage/staging of fuel and other hazardous materials will be allowed in RCAs. Storage of any quantity of fuel greater than 100 gallons will require a California Engineer Spill Plan.
- AQR-6. A biological monitor will be on-site during ground-disturbing work in all aquatic and riparian habitat (including springs and meadows).
- AQR-7. Project personnel are not permitted to loiter within riparian zones.
- AQR-8. Project-related materials (including cut vegetation) will not be left in riparian/aquatic areas.
- AQR-9. The Forest Service and/or contractor(s) will develop a Water Pollution Control Plan for projects occurring within RCAs. This plan will specify details related to sediment and hazardous materials control, dewatering or diversion structures, fueling and equipment management practices, and other factors determined by the forest project engineer and earth scientist or biologist.

Rare Terrestrial Reptiles and Amphibians Design Features (HERP)

- HERP-1. High quality habitat features (logs, rocks, heavy litter, etc.) will be avoided during project activities. Where disturbance cannot be avoided, a biological monitor will survey for these animals and move (or temporarily hold) them out of harm's way.

Rare Butterflies (RBU)

- RBU-1. Prior to ground-disturbance for new trail construction, re-routing of existing trails, or restoration of trails to be closed, surveys will be conducted for the host plants of the rare butterflies. Where host plants are found, trails will be re-routed to avoid them with at least 300' buffer. A wildlife monitor will be present during any work around the host plants to ensure that crews avoid effects to the host plants and butterflies (of all life stages).

Rare Plants Design Features (PLANT)

- PLANT-1. Except as provided under PLANT-2, effects to Threatened, Endangered, and Sensitive (TES) plant species and designated Critical Habitat will be avoided. These areas may be buffered to prevent indirect impacts such as soil movement into the occurrences. A qualified botanist will work with the appropriate staff to avoid known occurrences.
- PLANT-2. In limited instances in coordination with the Forest or District botanist, and where essential to allow for operability or safety, individual plants of a Sensitive plant occurrence may be impacted; but only where the individuals impacted represent a small fraction of the occurrence. Where occurrences of TES plants cannot be avoided, the District or Forest botanist will work with appropriate staff to minimize impacts (*e.g.*, hand treatments, special prescriptions, etc.).
- PLANT-3. TES plant occurrences will be flagged for avoidance prior to the onset of work. A botanical monitor will be on site during work in these areas to ensure that impacts to known T/E occurrences are avoided. The project leader will coordinate with the District Botanist or Forest Botanist.
- PLANT-4. Suitable habitat for TES Plants within the footprint of disturbance will be surveyed before implementation where practical, with an emphasis on areas of high likelihood of species presence.
- PLANT-5. Designated Critical Habitat for plant species will be flagged prior to the onset of work. Maintenance in roadbed, trail tread, existing leadouts, and existing structures is allowable. New construction/disturbance is not allowed. A botanical monitor must be on site during work in these areas to ensure that impacts to Primary Constituent Elements of Critical Habitat are avoided.
- PLANT-6. Watch-list plant species and other plant species of interest may be flagged for avoidance where they co-occur with sensitive species, riparian conservation areas, or where objectives and operability are not compromised.

Monitoring Design Features (MON)

- MON-1. Botanical or biological monitoring will be conducted, as needed, during implementation to ensure that protection measures and objectives are met. Post-implementation monitoring of special treatment areas, as needed, will also be conducted.

CHAPTER 3 - ENVIRONMENTAL CONSEQUENCES

3.0 Introduction

This chapter describes the existing conditions of the project area that have the potential to be affected by implementing the Proposed Action and Alternatives. Descriptions of existing conditions are followed by a description of environmental effects (direct, indirect, and cumulative) that would be expected to result from implementing the proposed action or alternatives. Together, these descriptions form the basis for effects determinations and the comparison of effects between the Proposed Action and Alternatives.

3.0.1 Organization of Chapter 3

Chapter 3 combines information on the existing conditions and environmental effects of the alternatives for the various resources. The discussion of alternatives is organized by resource area, and each resource area is presented as follows:

- *Introduction.* The scope of the analysis briefly describes the resource potentially affected by implementation of the proposed action or alternative. The scope of the analysis varies according to individual resource area and may also vary for direct, indirect, and cumulative effects.
- *Existing Conditions.* The existing conditions section provides a description of the resource environment that is potentially affected based on current resource conditions, uses, and management decisions.
- *Direct, Indirect, and Cumulative Effects.* This section provides an analysis of direct, indirect, and cumulative environmental effects on the resource area by implementing each of the alternatives, according to the indicators and issues identified for that resource.

Direct effects are caused by implementation of the proposed action or alternative, and occur at the same time and place. Indirect effects are caused by the implementation but are later in time or separated by distance, but are still reasonably foreseeable (*i.e.*, likely to occur within the duration of the project).

A cumulative effect under NEPA is the incremental effect on the environment from the proposed action when added to the effects of other past, present, and reasonably-foreseeable future actions. An individual action when considered alone may not have a significant effect, but when its effects are considered in combination with the effects of other past, present, and reasonably foreseeable future actions, the effects may be significant. Significant cumulative effects can result from individually minor, but cumulatively substantial effects on environmental resources. A cumulative effects analysis essentially evaluates, for individual affected environmental resources, whether any of the elements of the proposed action or alternatives could be like the fabled 'straw that broke the camel's back'.

3.0.2 Resources Not Analyzed in Detail

Climate Change

Greenhouse gas (GHG) emissions were considered in proportion to the nature and scope of the Proposed Action including the potential to either affect emissions or be affected by

climate change impacts. The components of the Proposed Action are of such a minor scale in the context of global climate change that the quantification or qualification of direct, indirect, or cumulative effects would be meaningless to a reasoned choice among alternatives. A detailed analysis of GHG emissions and climate change was not deemed necessary.

Vegetation Management, Fire and Fuels

Impacts to vegetation management, fire and fuels were considered. The proposed action would have relatively minimal impact in respect to those resources. Requirements to ensure a Fire Plan is in place for any construction or maintenance activity would alleviate any increased risk of wildfire ignition during project implementation. The presence of patrols, including inspections of spark arrestors that are expected to accompany these designations, would minimize risk of fire starts caused by vehicles. Restoration of unauthorized trails would remove motorized use of unauthorized trails, and reduce ignition risk in those areas.

Growth Inducing Impact

Neither of the action alternatives would have growth inducing impacts. While the action alternatives promote an improved visitor experience and sustainable resource protection, the improvements would not attract the volume of visitors that would cause measurable growth in the local high desert or mountain communities.

Air Quality

Neither of the action alternatives would have substantial effects to air quality. Air pollutants regulated under the National Ambient Air Quality Standards are expected to be well below the de minimis emission levels for a project of this scope and scale, and the project is therefore not be subject to a conformity determination under the Clean Air Act.

3.1 Soil and Hydrology Resources

This section focuses on the effects of the Rattlesnake Mountain OHV Trails project to water quality and soil health caused by designating approximately 6.6 miles of off-highway vehicle trails, adding mixed use to NFTS roads, and the restoration of approximately 25 miles of unauthorized off-highway trails within an 8,000 acre project area on the San Bernardino National Forest.

Elements of the proposed action being analyzed include the location and size of created and restored off-highway vehicle routes, including the number of stream crossings, the acres of area disturbed, and the miles of routes within riparian conservation areas. This analysis will not consider administrative elements of the proposed action relating to Land Management Plan amendments, mixed use, or road maintenance level designations as they would have little effect if any to water quality and soil health.

Off-highway vehicle use in the San Bernardino National Forest and its impact on watershed function and management including, but not limited to water quality, water quantity, soil health and productivity, and riparian areas, directly relates to the project purpose and need to protect and restore these natural resources.

For additional detail on the soils and hydrology analysis for this project, including literature cited, please refer to the Rattlesnake Mountain OHV Trails Project Hydrology and Soils Report prepared (Wells 2015).

3.1.1 Affected Environment and Existing Conditions – Soils and Hydrology

The project is located across portions of the Deep Creek and the Silver Creek-Rabbit Lake watersheds. Contained within each of these watersheds are several smaller subwatersheds (**Table 5**). Analyses of the effects of this project will focus within these smaller subwatersheds with the exception of the Rabbit Lake subwatershed and the Silver Creek subwatershed, which will not be analyzed due to the small amount (less than 1 percent) of area affected.

Watershed	Subwatershed	Watershed (acres)	Project (acres)	Watershed (%)
Deep Creek		86,383		7
	Holcomb Creek	30,207	1,870	6
	Lower Deep Creek	25,617	3,949	15
Silver Creek – Rabbit Lake		48,640		4
	Arrastre Canyon	15,652	1,995	13
	Rabbit Lake	15,910	140	>1
	Silver Creek	12,652	11	>1

Climate: The Deep Creek watershed is characterized by warm dry summers and cool, dry winters. Average annual precipitation at the Big Bear Lake (#040741) weather station is 22 inches per year with the majority occurring between November and March as low intensity, long duration storms. Snowfall for the same period averaged 63 inches with the majority occurring between December and March (Western Regional Climate Center 2015). The predicted rainfall from a winter storm with a 50 percent chance of occurrence every year and lasting for 6 hours near Horse Spring Campground is 1.34 inches (USDC NWS 2015).

The Silver Creek – Rabbit Lake watershed is characterized by hot dry summers and cool, dry winters. Average annual precipitation at the Hesperia 2 E (#043937) weather station is 5 ½ inches per year with the majority occurring between November and March as low intensity, long duration storms and in July as high intensity, short duration thunderstorms. Snowfall for the same period is 3.4 inches with the majority occurring in January (Western Regional Climate Center 2015). The predicted rainfall from a winter storm with a 50 percent chance of occurrence every year and lasting for 6 hours is similar to the Deep Creek watershed and the predicted rainfall from a summer storm with a 50 percent chance of occurrence every year and lasting for 1 hour near Horse Spring Campground is 0.53 inches (USDC NWS 2015).

Surface Water: Streams within the Holcomb Creek subwatershed drain southwest into Cox Creek, a tributary of Holcomb Creek, which then drains into Deep Creek. Streams within the Lower Deep Creek subwatershed drain southwest into Coxey Creek, which is a

tributary of Deep Creek. The U.S. Geological Survey operated a streamflow gage on Deep Creek near the confluence with Mojave River between 1905 and 2013. Peak flood flows vary widely including a 2 year event (50 percent chance of occurrence in any given year) estimated at 2,650 cubic feet per second (cfs) up to a 100 year event (1 percent chance of occurrence in any given year) estimated at 62,700 cfs. The largest flood was 46,600 (estimated) in 1938 and 37,900 in 1910. Over the last 50 years, the largest flood was 24,800 cfs in 1978. Peak flows typically occur between December and March.

Located within the Holcomb Creek and Lower Deep Creek subwatersheds, the project area has 7.3 and 13.8 miles, respectively of intermittent streams. Runoff is typically rapid and the streams as indicated by their intermittent nature are dry in the summer. The section of Holcomb Creek where Cox Creek drains into it has been designated as eligible for protection under the Wild and Scenic Rivers Act to preserve its beauty and free-flowing nature as a “wild” river as it is free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. Deep Creek is also designated as eligible for protection under the Wild and Scenic Rivers Act as both a “wild” and “scenic” river. Holcomb Creek as a cold freshwater habitat contains pollutants at levels that exceed protective water quality criteria and standards for total dissolved solids and is listed as impaired per Section 303(d) of the Federal Clean Water Act.

Streams within the Arrastre Canyon subwatershed drain northwest into the desert valley where they infiltrate into the soil or dissipate across the land surface. Located within the Arrastre Canyon subwatershed, the project area has 5.6 miles of intermittent streams, which run dry in the summer and during periods of low precipitation.

Wetlands and Riparian Areas: Riparian conservation areas include all locations containing aquatic and terrestrial ecosystems including lands adjacent to perennial, intermittent, and ephemeral streams as well as in and around meadows, lakes, reservoirs, ponds, wetlands, vernal pools, seeps, springs, and other waterbodies. Within the Holcomb Creek and Lower Deep Creek subwatersheds there are 158 and 319 acres, respectively, of designated riparian conservation area. Within the Arrastre Canyon subwatershed there is 130 acres of designated riparian conservation area.

Wetlands have both aquatic and terrestrial characteristics. Wetlands form along the shallow margins of lakes, estuaries, and rivers, and in areas with high groundwater or shallow surface water, such as springs, wet meadows, ponds, and freshwater and tidal marshes. Wetlands receive protection from a number of Federal and State laws, regulations, and policies including the Clean Water Act, Executive Order 11990 and 11988, and the Porter-Cologne Water Quality Control Act. There are two designated wetlands present in each subwatershed totaling 0.13 acres (0.08 acres in Holcomb Creek and 0.05 acres in Lower Deep Creek). There is one designated wetland present in the Arrastre Canyon subwatershed totaling 0.02 acres.

Soils: The subwatersheds are primarily dominated by four soil families, Wapi-Pacifico, Olete-Goulding, Morical-Brader, and Pacifico-Preston along with several other smaller families (**Table 6**).

Table 6: Soil Types And Properties Within The Project Area					
Subwater-shed	Primary Soil Map Unit (Symbol)	Project Area (acres)	Area (Acres, %)	Drainage Class	Erosion Hazard Rating
Holcomb Creek		1,870			
	Wapi-Pacifico (DxF)		1,229 (66%)	Somewhat excessively drained	Severe
	Olete-Goulding (FaF)		437 (23%)	Well drained	Severe
	Pacifico-Preston (DdDE)		120 (6%)	Somewhat excessively drained	Severe
Lower Deep Creek		3,949			
	Olete-Goulding (FaF)		2,051 (52%)	Well drained	Severe
	Olete-Goulding (FaE)		1,282 (32%)	Well drained	Severe
	Wapi-Pacifico (DxF)		335 (8%)	Somewhat excessively drained	Severe
Arrastre Canyon		1,995			
	Wapi-Pacifico (DxF)		998 (50%)	Somewhat Excessively Drained	Severe
	Olete-Goulding (FaE)		539 (27%)	Well Drained	Severe
	Morical-Brader (DcDE)		287 (14%)	Well to Somewhat Excessively Drained	Severe

The Wapi-Pacifico families are found between 3,600 to 7,800 feet in elevation on slopes of 30 to 50 percent. They mainly consist of gravelly loamy sand. The drainage class for this soil is somewhat excessively drained meaning it's commonly very porous and rapidly permeable and has low water-holding capacity.

The Olete-Goulding families are found between 5,000 to 8,000 feet in elevation on slopes of 15 to 30 percent. They mainly consist of a very cobbly sandy loam or gravelly sandy loam or very gravelly loam. The drainage class for this soil is well drained.

The Morical-Brader families are found between 4,400 and 6,000 feet in elevation on slopes of 2 to 30 percent. They typically consist of consist of loam or gravelly loamy coarse sand. The drainage class for this soil is primarily well drained.

The Pacifico-Preston families are found between 4,800 and 7,500 feet in elevation on slopes also of 2 to 30 percent. They primarily consist of loamy sand or loamy coarse sand. The drainage class for this soil family is somewhat excessively drained and also has a severe erosion hazard rating and is considered somewhat limited for off-road motorcycle trails due to it being too sandy.

All 4 soil families have a severe erosion hazard rating and are very limited for off-road motorcycle trails due to their steep slopes, sandy texture, large stone content and/or water erosion (USDA NRCS 2013).

Vegetation: The Holcomb Creek and Lower Deep Creek subwatersheds support forest, brush, and shrub-grass mixtures. Open stands of Jeffrey pine, Coulter pine, sugar pine, Douglas fir, incense-cedar, and oak are at elevations above 4,000 feet. The greater part of the area is covered with sparse to dense stands of brush. Scrub oak, juniper, chamise, ceanothus, and manzanita, are typical species. Riparian conservation areas may contain creeping wild rye, pine bluegrass, sedges, willows and native clovers.

The Arrastre Canyon subwatershed supports thin stands of desert vegetation including creosote bush, white bursage, Joshua-tree, juniper, yucca, cactus, and Mormon tea in addition to also supporting vegetation found within the Lower Deep Creek subwatershed. Riparian conservation areas may contain creeping wild rye, pine bluegrass, sedges, willows and native clovers (USDA NRCS 2006).

3.1.2 Effects of the Proposed Action and Alternatives– Soils and Hydrology

The following resource indicators and measures will be used to compare the alternatives and analyze the effects of the project on hydrology and soil resources.

The project purpose and need states that unauthorized motorcycle use has impacted sensitive areas including riparian areas and soils. It then recognizes the need to protect and restore these natural resources along both authorized and unauthorized trails. Sediment delivery and soil erosion can impact water quality, riparian areas (function and channel stability), and soil stability. **Table 7** provides information on the resource elements, indicators, and measures that are used to highlight change from the existing condition for each of the alternatives.

Table 7: Resource Indicators and Measures for Assessing Effects				
Resource Element	Resource Indicator	Measure	Addresses P&N or key issue?	Source
Water quality	Sediment delivery	Number of trail stream crossings	Yes	SBNF LMP: - Standard S50; - Goal 5.1; - Big Bear Back Country Program Emphasis; - Program strategy and tactic WAT 2
Riparian Function, and Channel Stability	Sediment delivery and streamside cover	Trail in riparian conservation areas (miles)	Yes	SBNF LMP: - Standard S47 and S50; - Goal 5.2; - Program Strategy and Tactic WAT 1

Soil Stability	Soil Erosion	Trail density (mi/mi ²)	Yes	SBNF LMP: - Standard S50; - Program Strategy and Tactic WAT 1
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Resource Indicator or Measure 1

OHV trails can be significant sediment sources for streams and other hydrologic features resulting in negative impacts on watershed and riparian function. Excessive sedimentation can degrade water quality, harm aquatic life, and increase downstream flooding.

Existing OHV stream crossings have removed riparian vegetation, destabilized channels, *e.g.*, headcuts, scour, down-cutting and widening, etc., and affected water quality and habitat for aquatic riparian dependent species.

Sediment originating from soil erosion has physical, chemical, and biological effects on water resource use. Sediment particles pollute water to the extent that their presence reduces water quality for a particular use. The physical presence of sediment produces turbidity. Turbid water has impaired water quality for most uses. Reduction in light penetration due to suspended sediment may alter oxygen relationships in surface water. Production of fish and other aquatic life is reduced by excess turbidity.

Resource Indicator and Measure 2

Riparian conservation areas are managed to maintain or improve conditions for riparian dependent resources including aquatic and terrestrial ecosystems and lands adjacent to perennial and intermittent streams, as well as around meadows, lakes, reservoirs, ponds, wetlands, seeps, and springs and other water bodies.

Existing OHV trails have removed riparian vegetation, destabilized stream channels, *e.g.*, headcuts, scour, incised, etc., and negatively affected habitat for aquatic riparian dependent species such that the riparian conservation area and stream may no longer be resilient and able to recover after natural events, such as floods and wildland fires.

Unmanaged OHV use destroys vegetation, causes soil compaction, and destabilizes streambanks and shorelines. Riparian ecosystems are disrupted and fragmented when portions of vegetation are removed.

Resource Indicator and Measure 3

The San Bernardino National Forest strategy for watershed function is to “*protect, maintain and restore natural watershed functions including slope processes, surface water and groundwater flow and retention, and riparian area sustainability.*” In support of this strategy, several specific tactics have been developed to help in implementing the strategy. One tactic is to “*maintain or restore soil properties and productivity to ensure ecosystem health (soil microbiota and vegetation growth), soil hydrologic function, and biological buffering capacity*” (USDA FS 2005b).

Soil is the supporting function for all terrestrial life. Unmanaged OHV use disturbs this function by compacting soil, creating depressions for puddling, and kicking up dust. Unmanaged OHV use results in the loss of vegetation, compaction, reduced infiltration, increased surface runoff, and wind and water erosion. As a result, erosion occurs, overland flow accelerates, and rills and gullies form.

Compaction can occur in all soil types except sand; very rocky soils also are less able to compact. Compaction disturbs the natural function of the physical, biological, and chemical characteristics of the soil resulting in lower productivity and lower water infiltration rates. This leaves poor soil quality that supports little or no native plant growth.

The key functions in the hydrologic cycle most affected by unmanaged OHV use are interception, infiltration, soil moisture, and runoff. Hydrologic function is changed not only by loss of vegetation, the depth of litter layers, and soil compaction, it also is changed on cross slopes, ridge tops, and hills as unmanaged OHV use cuts trails, interrupting surface and subsurface flows patterns. At OHV test areas on the trails, vegetation was reduced by a minimum of 40 percent and was more often completely eliminated as a result of OHV traffic (USDA FS 2008). Sediment generated as a result of through cuts and hill climbs is carried into streams and wetlands and/or deposited at the bottom slopes, further changing the hydrologic functions in the area.

Methodology

Analyses of the effects of the project are based upon field visits and the geographic information system (GIS) database. The GIS database provided information in quantifying the measures used to assess effects, which was then verified during several field visits.

Riparian conservation areas widths were determined in accordance with Appendix E of the San Bernardino National Forest Land Management Plan (LMP). The project area does not contain any perennial streams and is limited to ephemeral and intermittent streams, along with several springs that have all been delineated with a 98 feet (30 meters) buffer width on each side of the waterbody.

Information Sources

Additional sources of information used to support the analysis included soil survey provided by the Natural Resources Conservation Service (USDA NRCS 2013) and area climate information obtained online from National Weather Service monitoring data (Western Regional Climate Center 2015).

3.1.3 Effects – Soils and Hydrology

Alternative 1 – Proposed Action

The proposed action would result in a number of direct and indirect effects including the following:

- Soil disturbance and vegetation removal associated with new trail construction (direct);
- Soil disturbance during waterbar construction associated with trail construction, repair, and restoration (direct);
- Reduction in sediment delivery to RCAs and stream channels from installation of erosion control features, *e.g.*, waterbars, groundcover, recontouring, seeding/planting, etc., associated with trail construction, repair, and restoration (indirect); and
- Decrease in trash from installation of latching trash cans at designated parking area near Big Pine Flats campground (indirect).

Direct effects would be limited in time and area, *i.e.*, short duration and immediate area, with little or no negative impacts upon water quality, quantity, soil health, or riparian function. Indirect effects are positive in nature and provide longer term benefits to riparian, soil, and water resources.

Under the Proposed Action Alternative, all three resource indicators and measures (**Table 8**) would be reduced. Sediment delivery via stream crossings would be reduced approximately 32 percent. Trails in the riparian conservation area would be reduced approximately 60 percent and provide an opportunity for increases in ground cover and riparian vegetation. A decrease in trail density by almost 38 percent would help maintain or repair soil health resulting in less soil erosion, compaction, and dust.

Table 8. Resource Indicators And Measures For Alternative 1			
Resource Element	Resource Indicator	Measure	Alternative 1
Water quality	Sediment delivery	Number of trail stream crossings	29
Riparian Function, and Channel Stability	Sediment delivery and streamside cover	Trail in riparian Corridor (miles)	3.3
Soil Stability	Soil Erosion	Trail density (mi/mi ²)	2.5

Resource Indicator and Measure 1

Under this alternative the number of trail stream crossings would be reduced by approximately 32 percent from 43 to 29 trail stream crossings. Decreasing the number of trail stream crossings and hydrologically disconnecting the stream channel from the trail would reduce the amount of sediment delivery entering the stream channel and adjacent RCA meeting the purpose and need of the project to protect and restore natural resources.

Resource Indicator and Measure 2

Trails in the riparian conservation area would be reduced approximately 60 percent from 8.2 miles of trail to 3.3. Vegetation recovery within the RCA and along the stream channel would increase due to fewer disturbances by motorized vehicles, increases in available ground cover, and improving soil health. Channel stability would increase due to increases in riparian vegetation in and along the waterbody.

Resource Indicator and Measure 3

Trail density as measured in miles per square mile would decrease almost 38 percent from 4.0 mi/mi² to 2.5 mi/mi². A reduction in trail density would result in decreases in soil compaction, erosion, and surface runoff. In addition, improvements in soil infiltration, ground cover, dust management, and vegetation reestablishment are expected.

Cumulative Effects – Soils and Hydrology

Spatial and Temporal Context for Effects Analysis

The spatial boundaries for analyzing the cumulative effects to riparian function, soil health, and water quality are Holcomb Creek, Lower Deep Creek, and Arrastre Canyon subwatersheds contained within the project area. The similarity in size, soil conditions, climate, vegetation, and hydrology of these three subwatersheds are reflective in the cumulative watershed effects analysis.

The temporal boundaries vary depending on the activity. The analysis area is not heavily used due to its relatively remote location, limited access, and few developed recreation facilities. When considering the past, present, and future actions within the spatial boundaries, actions or activities are limited to roads and trails, camping and day-use facilities, and personal mining, which are all considered as ongoing activities having the same level of cumulative impact throughout the analysis period and past fire activity (Butler2 and Slide wildfires in 2007), which depending on soil burn severity has a watershed recovery time of 5 to 10 years.

Past, Present, and Reasonably Foreseeable Activities Relevant to Cumulative Effects Analysis

Past, present, and reasonably foreseeable activities relevant to the cumulative effects analysis include roads and trails, camping and day-use, personal mining, and previous fire activity.

The Butler 2 and Slide fires occurred in 2007 and have an estimated 10 year recovery period before their effects on the watershed are no longer distinguishable therefore apart from the ongoing activities the past fire activity will no longer have a cumulative watershed effect after 3 years.

Within the boundaries of the affected subwatersheds there are no past, present, and reasonably foreseeable activities relevant to the cumulative effects analysis that have an effect on riparian function, soil health, and water quality using the resource indicators and measures in **Table 9**.

Table 9. Resource Indicators and Measures for Cumulative Effects					
Resource Element	Resource Indicator	Measure	Alternative 1	Past, Present, and Future Actions	Cumulative Impacts
Water quality	Sediment delivery	Number of trail stream crossings (each)	29	0	29
Riparian Function, and Channel Stability	Sediment delivery and streamside cover	Trail in riparian Corridor (miles)	3.3	0	3.3
Soil Stability	Soil Erosion	Trail density (mi/mi ²)	2.5	0	2.5

Alternative 2 – No Action

Under the No Action Alternative, the Rattlesnake Mountain OHV trails project would not be implemented and the existing conditions would continue (**Table 10**). The existing water and soils conditions would continue to be negatively affected as a result of continued OHV use on existing and potentially new unauthorized trails. Stream crossings would remain connected to the trail network degrading water quality, harming aquatic life, and destabilizing stream channel morphology and function.

Unauthorized OHV trails within the riparian conservation area would remove and inhibit future riparian vegetation affecting water quality, quantity, and wildlife habitat, and disrupt and fragment riparian conservation areas. Unmanaged OHV use would result in soil compaction, reduced infiltration, increased surface runoff, and wind and water erosion. Unmanaged OHV use would continue cutting trails, interrupting surface and subsurface flows patterns. Changes in flow patterns affect soil moisture by causing soil to be wetter or drier than normal, which can affect soil health and plant life, and over the long terms can lead to vegetation conversion or a change in vegetation type. Changes can redirect flow causing gullies to form.

Table 10. Resource Indicators And Measures For The Existing Condition

Resource Element	Resource Indicator	Measure	Existing Condition (No Action)
Water quality	Sediment delivery	Number of trail stream crossings	43
Riparian Function, and Channel Stability	Sediment delivery and streamside cover	Trail in riparian Corridor (miles)	8.2
Soil Stability	Soil Erosion	Trail density (mi/mi ²)	4.0

Alternative 3 – 3N14 Mixed Use

This alternative is similar to the Proposed Action (Alternative 1) with the differences in this alternative limited to administrative actions. Effects of this alternative to soils and hydrology resources would be identical as those discussed above in Alternative 1 – Proposed Action.

Comparison of the Alternatives – Soils and Hydrology

As shown in **Table 11**, the restoration of unauthorized motorized trails as part of the proposal in alternatives 1 and 3 would meet the purpose and need statement to protect and restore natural resources by decreasing the number of trail stream crossings and hydrologically disconnecting the stream channel from the trail reducing the amount of sediment delivery entering the stream channel and adjacent RCA. Vegetation recovery within the RCA and along the stream channel would increase due to fewer disturbances by motorized vehicles, increases in available ground cover, and improving soil health.

Table 11: Summary comparison of how the alternatives address the Purpose and Need

Purpose and Need	Indicator/Measure	Alternative 2 (No Action)	Alternative 1 (Proposed Action)	Alternative 3 (Mixed Use)
Protect and restore natural resources	Number of trail stream crossings	43	29	29
	Trail in riparian conservation areas (miles)	8.2	3.3	3.3

Purpose and Need	Indicator/Measure	Alternative 2 (No Action)	Alternative 1 (Proposed Action)	Alternative 3 (Mixed Use)
	Trail density (mi/mi ²)	4.0	2.5	2.5

A concise summary comparison of the effects of the alternatives is described below in **Table 12**. Both the Proposed Action (Alternative 1) and Mixed Use (Alternative 3) would result in improvements of water quality, riparian function and channel stability, and soil health by restoring several miles of unauthorized motorized trails.

Sediment delivery and soil erosion can impact water quality, riparian areas (function and channel stability), and soil stability. Existing OHV trails and stream crossings have destroyed riparian vegetation, destabilized stream channels, *e.g.*, headcuts, scour, down-cutting and widening, etc., compacted soils, and negatively affected water quality and habitat for aquatic riparian dependent species such that the riparian conservation area and stream may no longer be resilient and able to recover after natural events, such as floods and wildland fires.

Hydrologic function is changed by loss of vegetation, the depth of litter layers, and soil compaction, it also is changed on cross slopes, ridge tops, and hills as unmanaged OHV use cuts trails, interrupting surface and subsurface flows patterns. Sediment generated as a result of through cuts and hill climbs is carried into streams and wetlands and/or deposited at the bottom slopes, further changing the hydrologic functions in the area.

Resource Element	Indicator/Measure	Alt 2 (No Action)	Alt 1 (Proposed Action)	Alt 3 (Mixed Use)
Water quality	Number of trail stream crossings	No new trail construction or stream crossings would be implemented, therefore sediment increases would be limited to existing trail condition and usage. 43 existing trail stream crossings would not be improved to required design standards, having a continued adverse effect on water quality.	Restoration of unauthorized trails would eliminate 14 trail stream crossings therefore reducing sedimentation. Overall net positive effect on water quality when compared to alternative 1.	Same as Alt 1.
Riparian Function, and Channel Stability	Trail in riparian Corridor (miles)	8.2 miles of mostly degraded trails within the riparian corridor would continue to promote expansion of trail work-around, denuded vegetation, and adverse effects to riparian function.	No new trails are proposed within riparian areas. Restoration of 4.9 miles of trail within the RCA would have an overall positive effect on riparian function.	Same as Alt 1.
Soil Stability	Trail Density (mi/mi ²)	4.0 mi/mi ² of trail would continue to degrade soil resources, compacting and displacing the organic surface layers.	Trail density would decrease by 1.5 mi/mi ² resulting in less soil compaction, increased vegetation and ground cover, increased	Same as Alt 1.

Table 12: Summary comparison of environmental effects to soil and water resources				
Resource Element	Indicator/Measure	Alt 2 (No Action)	Alt 1 (Proposed Action)	Alt 3 (Mixed Use)
			infiltration, and less sedimentation.	

3.2 Recreation Resources

3.2.1 Affected Environment and Existing Conditions – Recreation Resources

The recreation environment potentially affected by the proposed action consists of motorized uses of NFTS roads and trails, dispersed recreation, and use of developed campgrounds.

Existing Recreation Types and Patterns

General Recreation Opportunities: The Project Area includes two developed campgrounds (Horse Spring and Big Pine Flat) and NFTS roads and motorized use trails. There are no developed system non-motorized (hiking or equestrian) trails in the project area. Large parts of the project area are roadless, and it is a popular area for deer and quail hunting, hiking, birdwatching, and seeking solitude. The whole project area is open to dispersed camping, except within ¼ mile of developed campgrounds or private property, or within 200 feet of springs, water, trails or roads. Big Pine Flat campground includes a separate smaller group campground for equestrian visitors, and Horse Spring campground is occasionally used by equestrians.

Currently, the Project Area includes 22.25 miles of NFTS roads open to highway-legal vehicles, of which 14 miles are open to all vehicles (*i.e.* highway-legal and green-sticker), 1.6 miles of OHV trail (for vehicles 50” or less), no 24” motorcycle trail, and approximately 25 miles of unauthorized routes (**Figure 1**). There is a popular OHV trail network on BLM land to the north in the Juniper Flat area that connects to the Project Area via Forest Roads 3N14 and 4N16.

The NFTS roads within the Project Area include 3N14 (Coxey), 3N14F (Big Pine Flats Campground), 4N16 (Grapevine Canyon), 4N16A (Horse Springs Campground), 3N59 (Carbine Flat), 3N17 (White Mountain), 3N17D (North Peak), 3N11 (Wright Mine) and 3N92. A portion of the Redonda Ridge Trail (1W17) is also within the Project Area. Technical difficulty of these roads and trails range from easy to most difficult

The trail/road network within the Project Area provides fewer connections and loop opportunities for OHVs and the desired condition (Forest Plan). An extensive network of unauthorized routes exists within the project area, which causes ongoing adverse effects to environmental resources.

3.2.2 Effects of the Proposed Action and Alternatives – Recreation Resources

The following analysis indicators will be used to compare the alternatives and analyze the effects of the project on recreation resources.

- Recreation opportunity and access – measures include visitor access to trails, trail loop options, and also measures desirable recreation opportunity features such as scenery, solitude, and quiet.

- Use conflict – measures include elements of each alternative that would increase, reduce, or mitigate the potential for conflict and associated risks, including between motorized and non-motorized and also among motorized uses (mixed use).

3.2.3 Effects – Recreation Resources

Alternative 1 – Proposed Action

Table 13 displays the indicators, effects and measures for recreation resources for the Proposed Action.

Table 13. Recreation Effects from Alternative 1 – Proposed Action		
Indicator	Effect	Measure
Motorized Access	Increased	8.1 miles of new OHV riding opportunities and associated connections and loop opportunities.
Scenery	Improved	Adverse effects of 1 mile of new construction and 1.6 miles of reconstruction of former routes, visible from vantage points throughout the project area, would be offset by approximately 25 miles of unauthorized route restoration.
Solitude and Quiet	Mixed	Solitude and quiet seeking opportunities would be reduced in areas where new construction and reconstruction of trails are proposed (2.6 miles). Designation of unauthorized routes (4 miles) would have the effect of authorizing routes where solitude and quiet has already been lost to varying extents to increasing unauthorized motorized travel. Restoration of approximately 25 miles of unauthorized routes will improve opportunity for solitude and quiet in those areas by deterring motorized travel. This restoration element may also reduce the ease of hiking and equestrian access into primitive non-motorized areas within the Project Area, to the extent that unauthorized routes could otherwise be used as informal non-motorized trails. The underlying trend for solitude and quiet is down throughout the motorized portion of the Project Area, with ongoing and expected increases in motorized recreation use on the SBNF. The proposed project specific Forest Plan amendment to rezone 111.3 acres from non-motorized to motorized use would expand this ongoing and expected trend to those acres, constituting about 1.4% of the Project Area.
Conflict between motorized and non-motorized use	Mixed	Public NFTS roads and motorized trails are open to specified types of motorized uses as designated, and all non-motorized uses (<i>e.g.</i> mountain bike, hiking, equestrian). The proposed designation of 8.1 miles of OHV routes, and the associated increased motorized use over the existing conditions, would increase the probability of conflicts between users, ranging from annoyance to collision. Trails would be constructed and maintained to standards that include adequate sight distance to reduce the risk of collision. Trail etiquette would be encouraged through signage and public contact to further reduce conflict, but effectiveness would be expected to vary between visitors. The restoration element would lower the risk of conflict between motorized vehicle use on

Table 13. Recreation Effects from Alternative 1 – Proposed Action		
Indicator	Effect	Measure
		unauthorized routes and hikers and equestrians throughout the Project Area.
Mixed Use	Increased	The proposed action would add 1.5 miles of mixed use to the existing NFTS within the Project Area by authorizing use by legal OHV (e.g. green sticker) on roads that are currently open only to highway-legal vehicles. These roads include a 0.2 mile section of Coxey Road (3N14) at Big Pine Flat, the campground access and loops at Big Pine Flat (3N14F), and the access and loops of Horse Spring Campground (4N16A). These designations would allow OHV access to and within the campgrounds, which are currently open only to highway-legal vehicles. Mixed use analysis performed for this project concluded that allowing mixed use on the specified roads would have a moderate probability and severity of traffic collisions. Mitigation measures requiring minimal investment would reduce the probability and severity of traffic collisions to a low-moderate risk level.

Cumulative Effects – Recreation

Spatial and Temporal Context for Cumulative Effects

The spatial boundaries for analyzing the cumulative effects to recreation values include the project area and adjacent areas that contribute to and receive visitation from the project area. This area includes the Holcomb Valley Road (3N16) corridor and Redonda Ridge Trail (1W17) in parts of the Big Pine Flat area beyond the project area, the 3N59A corridor on the SBNF, and the adjacent connected parts of the Juniper Flat area on BLM land.

The temporal boundaries of this analysis are narrow, as all past activities are incorporated into the baseline conditions (effected environment), which encompasses the existing transportation system, past and present unauthorized uses, grazing history, and fire history.

Cumulative Effects Analysis

There are three current or reasonably foreseeable future projects, which effects of this project may be cumulative to. Two current restoration projects, Deep Creek IRA and Coxey, involve barriers and restoration of unauthorized routes adjacent to the west of the project area. Both of these have/will have similar effects to the restoration component of the Proposed Action. The beneficial effects the Proposed Action will have on scenery, solitude and quiet are additive to similar effects of these two restoration projects. Any reduction in ease of access to for hikers and equestrians who might have use unauthorized routes to access areas away from roads and trails, would be cumulatively reduced by the Proposed Action.

The third project that the Proposed Action may have effects that are cumulative to is the Juniper Flat part of BLMs West Mojave Route Network Project. This project is still under review, and going through the public process under NEPA. Effects of the trail network under any of the alternatives under consideration will have reasonably

foreseeable effects that the effects of the Proposed Action will be cumulative to. However, the scope and scale of the Rattlesnake OHV Trails Proposed Action is very small compared with the BLM project, and any adverse effects of trail construction, designation, use, and maintenance would be well-offset by the restoration component.

Alternative 2 – No Action

Table 14 displays the indicators, effects and measures for recreation resources for the No Action alternative.

Table 14. Recreation Effects from Alternative 2 – No Action		
Indicator	Effect	Measure
Motorized Access	No Change	No new OHV riding opportunities and associated connections and loop opportunities would be provided.
Scenery	No Change	There would be no effects to scenery from new trails. Unauthorized trails would continue to be visible throughout the Project Area.
Solitude and Quiet	No Change	Solitude and quiet seeking opportunities would not be reduced by trail construction and designation. Designation of unauthorized routes would not occur under this project and unauthorized use would continue to occur and likely would increase over time. Restoration of unauthorized routes would not occur under this project, but may occur within the project area under other current and future projects, subject to site-specific analysis and available funding. The underlying trend for solitude and quiet would be down throughout the motorized portion of the Project Area, with ongoing and expected increases in motorized recreation use on the SBNF. The proposed project specific Forest Plan amendment to rezone 111.3 acres from non-motorized to motorized would not occur.
Conflict between motorized and non-motorized use	No Change	The proposed designation of 8.1 miles of OHV routes, and the associated increased motorized use over the existing conditions, would not occur. The restoration element of the proposed action would not lower the risk of conflict between motorized vehicle use on unauthorized routes and hikers and equestrians throughout the Project Area, though restoration of unauthorized routes under other projects may have this effect at some locations.
Mixed Use	No Change	The proposed mixed use designations would not occur.

Alternative 3 – 3N14 Mixed Use

Table 15 displays the indicators, effects and measures for recreation resources for the Proposed Action.

Table 15. Recreation Effects from Alternative 3 – Mixed Use		
Indicator	Effect	Measure
Motorized Access	Mixed	Same as Alternative 1, with additional mixed use designation of 3N14 between the Horse Spring area and Big Pine Flat. Alternative 3 would include 4.9 additional miles of mixed use designation, increasing OHV access and providing a non-technical connection between these two areas. This designation would require a reduction in road maintenance level from level 3 to level 2 for the 8.7 mile length of 3N14 between Big Pine Flat and the northern National Forest boundary. Level 3 roads are maintained for standard passenger vehicles, while level 2 roads are maintained for high-clearance vehicles. This reduction in maintenance level may reduce access by standard passenger vehicles.
Scenery	Improved	Same as Alternative 1.
Solitude and Quiet	Mixed	Same as Alternative 1.
Conflict between motorized and non-motorized use	Mixed	Same as Alternative 1.
Mixed Use	Increased	Increased by 4.9 miles. (See description above for Alternative 3 Motorized Access). Mixed use analysis performed for this project concluded that allowing mixed use on this section of 3N14 could result in a high probability and severity of traffic collisions. Mitigation measures requiring substantial investment would reduce the probability and severity of traffic collisions to a moderate risk level.

3.3 Heritage Resources

Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended, requires that “the head of any Federal agency having direct or indirect jurisdiction over a proposed Federal or federally assisted undertaking in any State and the head of any Federal department or independent agency having authority to license any undertaking shall, prior to the approval of the expenditure of any Federal funds on the undertaking or prior to the issuance of any license, as the case may be, take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register. The head of any such Federal agency shall afford the Advisory Council on Historic Preservation established under Title II of this Act a reasonable opportunity to comment with regard to such undertaking.” The regulations that govern the implementation of section 106 are documented in 36 CFR 800.

In Region 5 of the US Forest Service, the section 106 process is delegated to individual national forests through the *Programmatic Agreement Among The U.S.D.A. Forest Service, Pacific Southwest Region (Region 5), California State Historic Preservation Officer, Nevada State Historic Preservation Officer, And The Advisory Council On Historic Preservation Regarding The Processes For Compliance With Section 106 Of The National Historic Preservation Act For Management Of Historic Properties By The National Forests Of The Pacific Southwest Region* (Regional PA), providing that a finding of no adverse effect, pursuant to 36 CFR 800.5(b), can be achieved, whether through a determination that no historic properties potentially eligible for the National Register of Historic Properties (NRHP) are found in the project's area of potential effect (APE) or through the implementation of standard resource protection measures described in Appendix E of the Regional PA.

Consultation with the appropriate Indian tribes (36 CFR 800.2[c][2][ii]) and other parties with a demonstrated interest (36 CFR 800.2[c][5]) in the historic properties found in the APE is required. If a finding of no adverse effect cannot be achieved, then consultation with the State Historic Preservation Officer is also required (36 CFR 800.2[c][1][i]), in addition to consultation with the appropriate Indian tribes (36 CFR 800.2[c][2][ii]) and other parties with a demonstrated interest (36 CFR 800.2[c][5]).

The SBNF has complied with the section 106 process by conducting a pedestrian survey, documented in an Archaeological Reconnaissance Report 05-12-SB-23D (Griffith 2015) and the recommendation of project redesign to avoid archaeological sites, the implementation of standard resource protection measures for at risk sites, and ongoing consultation with the San Manuel Band of Mission Indians.

3.3.1 Affected Environment and Existing Condition - Heritage Resources

For the purpose of analysis the environment includes all areas within the proposed project area that may be affected by implementation of the project and subsequent use of the proposed transportation corridors, otherwise known as the Area of Potential Effect (APE). The APE is a project study area that ensures direct, indirect, and cumulative effects to cultural resources are considered for the proposed action and alternatives.

There are currently prehistoric sites in the APE that are related to Native American use of the area prior to contact with European-Americans as well historic archaeological sites related to ranching, grazing, and mining activities that took place between the 1860s and the 1950s.

3.3.2 Effects of the Proposed Action and Alternatives- Heritage Resources

The following analysis indicators will be used to compare the alternatives and analyze the effects of the project on heritage resources.

The regulations found in 36 CFR 800 govern the section 106 process related to the implementation of any project undertaken by a federal agency. The agency must be able to demonstrate a finding of no effect or no adverse effect to historic properties in order for a project to proceed without mitigation measures. Mitigation measures would be

necessary if the project was found to create adverse effects to historic properties. The regulations found in 36 CFR 800.5 require that a determination of effects is conducted using the following criteria:

1. *Apply criteria of adverse effect.* In consultation with the State Historic Preservation Officer and any Indian tribe or Native Hawaiian organization that attaches religious and cultural significance to identified historic properties, the agency official shall apply the criteria of adverse effect to historic properties within the area of potential effects. The agency official shall consider any views concerning such effects which have been provided by consulting parties and the public.
 - a. *Criteria of adverse effect.* An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative.
 - b. *Examples of adverse effects.* Adverse effects on historic properties include, but are not limited to:
 - (i) Physical destruction of or damage to all or part of the property;
 - (ii) Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation and provision of handicapped access, that is not consistent with the Secretary's Standards for the Treatment of Historic Properties (36 CFR part 68) and applicable guidelines;
 - (iii) Removal of the property from its historic location;
 - (iv) Change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance;
 - (v) Introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features;
 - (vi) Neglect of a property which causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization;
 - (vii) Transfer, lease, or sale of property out of Federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property's historic significance.

National Forests in Region 5 do not need to consult with the State Historic Preservation Officer if a finding of no effect or no adverse effect can be achieved through redesign or the application of standard resource protection measures spelled out in Appendix E of the Regional PA.

3.3.3 Direct, Indirect and Cumulative Effects- Heritage Resources

Direct and indirect effects to cultural resources can occur as a result of both natural processes and human activities. Adverse cumulative affects result from natural processes occurring over time, inadequate or inappropriate maintenance or management, outright destruction, and the steady loss of cultural resources through repeated mitigation of adverse effects rather than intact preservation. These effects may lead to loss of certain types of cultural sites prior to comprehensive scientific studies and could further lead to misinterpretation of past use of this area.

Alternative 1 – Proposed Action

Alternative 1 will include the adoption of 4.0 of unauthorized routes into the trail system, the construction of 2.6 miles of new trails, the addition of mixed use to 1.5 miles of existing routes, and restoration of approximately 25 miles of unauthorized routes.

Direct Effects: The SBNF will use standard resource protection measures including the avoidance of prehistoric and historic archaeological sites, the use of interpretive literature and signs, ongoing maintenance and repair of linear resources confined to existing road prisms such that historic characteristics are retained, and the restoration of unauthorized routes using gates and boulders installed in the road prism and non-ground disturbing methods to disguise these routes until vegetation reclaims them through natural processes. The direct effects will be negligible.

Indirect Effects: The implementation of this alternative has the potential to draw more visitors and OHV enthusiasts to the area and as a consequence, increased use of designated roads and trails may result. It is anticipated that the danger to archaeological sites is limited to surface disturbances.

Cumulative Effects: Minor impacts to historic sites caused by creation and use of unauthorized routes have the potential to become moderate or major impacts over time if unauthorized routes are not restored in a timely fashion. These impacts may be minimized to a level of negligible by increased law enforcement presence and user education through the use of interpretive material and signage.

Alternative 2 – No Action

Direct Effects: If the no action alternative is selected, an increase in the creation of unauthorized routes has the potential to directly impact historic properties. It is anticipated that more unauthorized routes will develop in the absence of the route designations included in the proposed action. The level of impact may range from negligible to major depending on the resources devoted to patrolling and blocking/disguising new unauthorized routes.

Indirect Effects: If the no action alternative is selected, visual integrity of the landscape may be adversely affected through an increase in unauthorized routes. Impacts to historical properties may range from negligible to major depending on the resources devoted to patrolling and blocking/disguising new unauthorized routes.

Cumulative Effects: If the no action alternative is selected, the cumulative effects to historic properties, both direct and indirect, will result in degradation of historic properties and landscapes. The impacts will range from moderate to major over time.

Alternative 3 – 3N14 Mixed Use

Alternative 3 will include the adoption of 4.0 of unauthorized routes into the trail system, the construction of 2.6 miles of new trails, the addition of mixed use to 6.4 miles of existing routes, and restoration of approximately 25 miles of unauthorized routes.

Direct Effects: The SBNF will use standard resource protection measures including the avoidance of prehistoric and historic archaeological sites, the use of interpretive literature and signs, ongoing maintenance and repair of linear resources confined to existing road prisms such that historic characteristics are retained, and the blocking of unauthorized routes using gates and boulders installed in the road prism and non-ground disturbing methods to disguise these routes until vegetation reclaims these areas through natural processes. The direct effects will be negligible.

Indirect Effects: If the no action alternative is selected, visual integrity of the landscape may be adversely affected through an increase in unauthorized routes. Impacts to historical properties may range from negligible to major depending on the resources devoted to patrolling and blocking/disguising new unauthorized routes.

Cumulative Effects: If the no action alternative is selected, the cumulative effects to historic properties, both direct and indirect, will result in degradation of historic properties and landscapes. The impacts will range from moderate to major over time.

Comparison of the Alternatives– Heritage Resources

Both alternatives 1 and 3 provide for the protection of historic properties through the designation of some unauthorized routes and the restoration of other unauthorized routes. Either of these alternatives provides for the ongoing protection and public enjoyment of historic properties through monitoring, interpretive opportunities, and ongoing maintenance that will allow the character of linear resources to be retained.

Alternative 2, the no action alternative, will encourage the proliferation of more unauthorized routes and result in cumulative effects over time to the level of moderate to major.

3.4 Botanical Resources

The project area encompasses a rich and interesting flora typical of the montane to desert transition zones found in the San Bernardino Mountains. These zones include montane conifer forest dominated by Jeffrey pine, through pinyon and juniper woodlands, and desert transition chaparral with a Joshua tree component. There are riparian zones along intermittent creeks that provide habitat for willows and associated streamside vegetation.

There are numerous rare plants associated with pebble plain, carbonate, and other narrowly distributed soil-dependent habitats. There is a long history of impacts to these habitats including livestock grazing, mining, unauthorized road and trail proliferation, too-frequent wildfire, and the introduction and spread of weeds. These past and present

impacts provide both incentive and opportunity to improve the resource conditions for rare plants and general vegetation in the project area.

For more detail on the botanical resources within the project area, and associated effects analyses, please refer to the biological report (Eliason *et al.* 2015) for this project.

3.4.1 Affected Environment and Existing Conditions

Methods: A pre-field review was conducted for the project area and considered the entire list of Threatened, Endangered, Sensitive and Watchlist (TESW) plants for the SBNF. Threatened and Endangered species are listed under the Endangered Species Act. Sensitive species are listed by the Regional Forester and are managed under the National Forest Management Act and supporting regulations. Watchlist species are other rare species with potential viability concerns for which status information is collected to determine whether future addition to the Sensitive list may be warranted, but that are currently afforded no special management. The species that were considered in the evaluation included species on the California Native Plant Society lists and CDFW lists. See the biological report (Eliason *et al.* 2015) for complete lists of species considered.

Recorded occurrences of rare plants were compiled from the Forest Service rare plant corporate database (NRIS-TESP), the California Natural Diversity Database, and the Consortium of California Herbaria. Targeted field surveys were completed by SBNF botanists that focused on detection of rare plants along proposed trail designations, and recorded occurrences that needed updated status information. All species observed (including weeds) were recorded during these surveys. This was not a complete floristic survey of the entire 8,000 acre project area, but gathered the information necessary to evaluate the effects of the proposed action and alternatives.

Table 16 displays the special-status plant species that are known to be present in the project area. The biological report contains lists of all species that were considered during the analysis as well as a compendium of all plants observed in the project area.

Table 16. Rare Plants in the Project Area			
Common Name	Scientific Name	Listing	Associated Habitat
Cushenbury puncturebract	<i>Acanthoscyphus parishii</i> var. <i>goodmaniana</i>	Endangered	carbonate soils
Cushenbury buckwheat	<i>Eriogonum ovalifolium</i> var. <i>vineum</i>	Endangered	carbonate soils
Coville's dwarf sand verben	<i>Abronia nana</i> var. <i>covillei</i>	Sensitive	carbonate soils
crested milkvetch	<i>Astragalus bicristatus</i>	Sensitive	carbonate soils
San Bernardino Mountains milkvetch	<i>Astragalus lentiginosus</i> var. <i>sierrae</i>	Sensitive	various
Parish's rock cress	<i>Boechera parishii</i>	Sensitive	pebble plains
Shockley's rock cress	<i>Boechera shockleyi</i>	Sensitive	carbonate soils

Palmer's mariposa lily	<i>Calochortus palmeri</i> var. <i>palmeri</i>	Sensitive	vernal wetlands
Mojave paintbrush	<i>Castilleja plagiotoma</i>	Sensitive	sagebrush
San Bernardino Mountains dudleya	<i>Dudleya abramsii</i> subsp. <i>affinis</i>	Sensitive	pebble plains, outcrops
Bear Valley phlox	<i>Phlox dolichantha</i>	Sensitive	clay soils
pinyon rock-cress	<i>Boechea dispar</i>	SBNF Watch	quartzite scree
San Bernardino Mountains buckwheat	<i>Eriogonum microthecum</i> var. <i>corymbosoides</i>	SBNF Watch	carbonate soils
Parish's California tea	<i>Rupertia rigida</i>	SBNF Watch	clay soils
Lemmon's syntrichopappus	<i>Syntrichopappus lemmonii</i>	SBNF Watch	chaparral, sandy openings

All of these species are experiencing ongoing adverse effects of unauthorized motorized travel off of NFTS roads and trails within the project area, and associated proliferation of unauthorized routes.

General Vegetation: The project area encompasses montane conifer forest, pinyon and juniper woodland, desert transition chaparral, and willow riparian woodland. All of these vegetation types have been negatively affected by the effects of too-frequent wildfire and associated increase in cheatgrass. The cheatgrass creates a light flashy fuelbed that increases the likelihood of wildfire, creating a vicious cycle that puts the native vegetation at risk of continued loss. The resulting open vegetation structure is also more prone to unauthorized travel off of NFTS roads and trails and associated route proliferation.

Non-native invasive plants: The following weeds are present in the project area: tumble mustard, Russian thistle, red-stem filaree, and cheatgrass. All of these invasive plants have increased in dominance within the project area over time as a result of a long history of livestock grazing, too-frequent fire, and route proliferation.

3.4.2 Effects of the Proposed Action and Alternatives – Botanical Resources

The following analysis indicators will be used to compare the alternatives and analyze the effects of the project on botanical resources:

- Effects to TESW plant species
- Effects to general vegetation
- Introduction and spread of invasive plant species

Project Elements with Potential to Affect Botanical Resources

3.4.3 Effects – Botanical Resources

Alternative 1 - Proposed Action

Habitat loss from trail construction would result in the permanent loss of individuals of multiple individual rare plants and seed bank through removal or burial. These effects would be minimized through application of design features. While it is expected that restoration of unauthorized routes would offset these losses, the habitat effects of new trail construction are considered to be permanent.

Plants near designated OHV trails may be affected by erosion and deposition of soil and dust, with effects ranging from reduced seed set to individual plant mortality. Erosion and deposition lead to loss of topsoil, including nutrients, native seedbanks, and beneficial microflora and microfauna. Erosion and deposition can also lead to loss of whole plants through undermining or burial. Design Features for engineering, maintenance, soils and hydrology would minimize these indirect effects to plants and vegetation adjacent to OHV trails/roads.

Ground disturbance associated with OHV trail construction and use may also increase the prevalence of cheatgrass and red brome, which can form a flashy and continuous fuelbed, and thereby increase the likelihood of ignition and frequency of wildfire. Too-frequent fire can ultimately lead to type conversion of pinyon-juniper woodlands and desert transition chaparral. Application of design Features are expected to minimize weed risk.

An inventory for noxious and other invasive plant species was performed concurrently with focused rare plant surveys and floristic inventories for this project, as well as for previous projects. The risk of transporting new weed infestations into the analysis area or spreading existing occurrences of weeds is considered high. Connectivity of linear ground disturbing features increases the likelihood of introduction and the rate and distance of spread of invasive species. The incremental increase in connectivity that would result in trail construction (or reconstruction on historic or decommissioned route alignments) would increase weed risk. Mechanized equipment would be used in the project area for trail construction and maintenance, and some restoration work. Areas of ground disturbance caused by ground-based heavy equipment operations and linear chronic disturbance as is typical along roads and trails are especially vulnerable to establishment and rapid spread of weeds.

The Design Features and incorporation of restoration elements of the Proposed Action would reduce the risk of weed introduction and spread as a result of project implementation. These measures are all fully incorporated into the project description. The overall risk of weed introduction is considered moderate with the incorporation of the above measures.

Cumulative Effects: The effects of the Proposed Action rare plants, vegetation, and weeds would be cumulative to the effects of the BLM West Mojave Route Network Project. For rare plants and general vegetation effects, the scope and scale of the Proposed Action is very small compared with the BLM project. The restoration component of the proposed action would offset these effects to the extent that the cumulative effects of the Proposed Action would not be significant.

Alternative 2 - No Action

Under the No Action alternative, the baseline condition would persist. The effects to vegetation and rare plants (including that of TES and Watchlist) would continue and may increase. Unauthorized routes would continue to be utilized by motorized vehicles throughout the project area. It is likely that effects would increase over time as the result of continued use of unauthorized routes that are not engineered or maintained properly

and the creation of new routes. Habitats along existing and new unauthorized routes would be degraded and lost.

Individual plants, plant communities, and special soil types that support rare plant habitats would continue to be impacted by motorized vehicle travel off of designated roads and trails.

Under the No Action alternative, restoration of unauthorized routes may still occur based on site-specific review and other NEPA decisions, subject to available funding. However, it is unlikely that the scope of unauthorized route restoration included in the Proposed Action could be funded in the near-term without it being included in a comprehensive package of trail designation and travel management actions such as the Proposed Action or Alternative 3.

Alternative 3 – 3N14 Mixed Use

Alternative 3 is the same as the Proposed Action with the addition of mixed use of vehicle types (street legal and OHV) on 3N14 between Big Pine Flats and 4N16.

The general effects to vegetation and rare plants from Alternative 3 would be the same as those described above for the Proposed Action. In a few locations, there may be road maintenance and brush trimming to enhance visibility along the roadway but this is expected to be along the road's edge and would not adversely affect the integrity of the roadside habitat. Alternative 3 would have the same beneficial effects as discussed above under Alternative 1 as a result of restoration of unauthorized routes, reducing overall route densities.

Comparison of the Alternatives– Botanical Resources

Because both action alternatives include restoration of about 25 miles of unauthorized routes, the effects of No Action to vegetation and rare plants would be greater overall than the effects expected under the Proposed Action or Alternative 3. For botanical resources, the effects of the Proposed Action and Alternative 3 are the same.

3.5 Wildlife Resources

The project area encompasses several wildlife habitat types typical of the montane to desert transition zones found in the San Bernardino Mountains. These zones include montane conifer forest dominated by Jeffrey pine, through pinyon and juniper woodlands, and desert transition chaparral with a Joshua tree component.

Methods: A pre-field review was conducted for the project area and considered the entire list of Threatened, Endangered, Sensitive and Watchlist (TESW) animals for the SBNF. Threatened and Endangered species are listed under the Endangered Species Act. Sensitive species are listed by the Regional Forester and are managed under the National Forest Management Act and supporting regulations. Watchlist species are other rare species with potential viability concerns for which status information is collected to determine whether future addition to the Sensitive list may be warranted, but that are currently afforded no special management. The species that were considered in the

evaluation also included species with status by CDFW. See the biological report (Eliason *et al.* 2015) for complete lists of species considered.

Sensitive biological resources present, or potentially present were identified through a literature review using CNDDDB and SBNF project and GIS records. Surveys for wildlife species and assessments of habitat suitability were conducted in and near the analysis area. Wildlife species detected during field surveys by sight, calls, tracks, scat, or other sign were recorded.

The following discussions summarize discussions from the biological reports prepared for this environmental analysis (Eliason *et al.* 2015). Only those species known from or likely to occur in the analysis area are discussed here.

The following analysis indicators will be used to compare the alternatives and analyze the effects of the project on wildlife resources:

- Effects to wildlife habitat
- Effects to TES wildlife species
- Effects to Management Indicator Species

3.5.1 Affected Environment and Existing Conditions – General Wildlife

There are riparian zones along intermittent creeks that provide habitat for willows and associated streamside vegetation. Generally, Willow Creek and other watercourses in the project area only flow in response to storm events. Some of them (including the upper reaches of Dawn O’Day and Coxey Creeks) hold water for longer periods (probably due to presence of springs). Horse Spring holds water in wet years. Chukar Spring is perennial.

The area to the northeast of the analysis area is characterized by having an abundance of rocky outcrops and steep cliff faces. On the North Slope of the San Bernardino Mountains, this habitat type provides shelter, nest sites, escape terrain, and foraging sites for a number of species including golden eagles, ravens, Nelson’s bighorn sheep, numerous cliff-dwelling bats, ringtails, and reptiles, etc.

The analysis area supports a diversity of invertebrate species, including some rare endemic butterflies, associated with the vegetation types present. No native fish are known from in or near the project area. Several introduced fish (*e.g.*, goldfish, largemouth bass, blue gill, and partially-armored threespine stickleback) are found in Coxey Pond adjacent to the project area. Most of the analysis area is not high quality habitat for amphibians; however a few species (*e.g.*, treefrogs and western toads) do occur in/near riparian areas.

The diversity of reptile species is related to the diversity of plant communities found on the site. Typically, plant communities that have an abundant amount of leaf litter, rocks, and rotting logs have a higher diversity than those areas that have been highly modified or disturbed. Several species of lizards and snakes are common in the project area.

The pinyon-juniper woodlands and desert transition habitat in and adjacent to the analysis area provide habitat for many bird species. These areas support habitat for nesting as well as migration stopover sites. A number of common species are year-round residents. Rocky outcrop/cliff areas support additional nesting sites for some species (e.g., raptors, corvids, wrens, etc.).

The analysis area also contains foraging, breeding, cover, and movement corridor habitat for many mammal species. This includes small rodents, bats, and large animals (e.g., black bear, mountain lion, deer, badger, ringtail, coyote, etc.). The North Slope cliff habitat is home to a small isolated population of Nelson's bighorn sheep.

3.5.2 Effects – General Wildlife

The analysis indicators will be used to compare the alternatives and analyze the effects of the project on wildlife resources is effects to wildlife and their habitat.

Alternative 1 - Proposed Action

General Wildlife Habitat: As vegetation is a critical component of wildlife habitat in terms of foraging sites, food supplies, cover/shelter, and breeding sites, losses of or disturbance to native vegetation can affect habitat availability and quality for wildlife species. Vegetation communities would be disturbed by trail construction, use, and maintenance activities that remove existing vegetation. Under the Proposed Action, 2.6 miles of new trail would be constructed. With 1.1 miles of this new construction proposed to be 50" wide, and the remaining 1.5 miles proposed to be 24" wide, there would be a total of approximately 0.9 acres of vegetation lost for the long-term.

Changes to existing road and trail designations, and adding existing unauthorized trails to the system would not result in long-term loss of vegetation relative to the existing condition, though bringing these trails up to standard would have short-term impacts. Blocking and restoring unauthorized routes within the project area would eventually provide for the gradual revegetation of those areas.

The contiguity of habitat in the Rattlesnake Mountain OHV Trails project area has been compromised to some degree as a result of unauthorized route proliferation and use, and the existence of NFTS roads in the area. The proposed trails would be relatively narrow and not result in habitat fragmentation. Because the Proposed Action includes restoration of unauthorized trails along with the establishment of a trail system, there would be a net decrease in the area of disturbed land. The proposed trail system uses existing unauthorized trails as much as possible and minimizes the amount of new trail construction. The movement of animals may be affected minimally by restoration efforts but the overall affect to these populations would be beneficial. The proposed project is unlikely to affect habitat contiguity and movement on a small or landscape scale.

Riparian Habitat: Most of the drainages and streams in and adjacent to the analysis area only flow after storm events. There are a number of springs present in the analysis area. These areas provide important water sources and habitat for a number of wildlife species.

As described above in the Hydrology & Soils section, water quality, riparian condition, and soil stability (as measured by the number of stream crossings, trail miles in RCAs, and trail density, respectively) would improve under the Proposed Action as a result of removal of trails from RCAs. Stream crossings, trails in riparian areas, and trail densities would be reduced (**Table 12**). As trails are rerouted or removed, riparian vegetation and habitat would be expected to recover, increasing the amount and quality of available habitat for riparian-dependent species.

Wildlife Disturbance: Short-term disturbance effects would be associated with the construction of new trail while the disturbance associated with use and maintenance of the trail system would be long-term. Disturbance effects would vary depending on use levels. Because snow cover is limited in the analysis area, there is often year-round access from the desert side; thus, use-related disturbance would be expected year-round.

Disturbance effects on wildlife species have been well-documented. Most species exhibit a "flight" response to disturbance resulting in temporary, or if disturbance is constant, permanent displacement. Flight responses and/or disturbances can negatively affect animal health by requiring increased energy expenditures. Continuous stress may eventually cause illness or death. Stress combined with other factors such as severe winter conditions or constant disturbance may cause individuals to die or fail to reproduce. Disturbance may also cause short-term disturbance or long-term abandonment of an area. Displacement depends on several factors: quality of vegetative and topographic cover (line-of-sight from disturbance points); amount and type of disturbance; timing of disturbance (*e.g.* noise during the day may not affect a nocturnal species, and animals may be more or less tolerant of disturbance during breeding season); and tolerance for disturbance (*e.g.* hunted populations are generally more likely to flee from disturbance than nonhunted/protected populations).

Disturbances prior to nesting/breeding season may result in abandonment of breeding areas (*e.g.*, nests, fawning areas, lambing areas, etc.) and disruption of courtship behaviors resulting in failure to reproduce or moving to adjacent areas and competing with other individuals for resources. Disturbance after breeding has started may result in losses of the season's reproduction if the animals abandon existing nests, eggs, or offspring. It is likely that, if suitable habitat remains after treatment for the individual species, they would re-colonize the site after the disturbance has ceased.

Use of the trail system is expected to result in disturbance of animals and possible abandonment of areas close to the trail system by some species. However, the restoration of unauthorized routes is expected to result in lower trail densities and should reduce the degree of wildlife disturbance in some parts of the analysis area.

Death/Injury of Animals: Some losses of individual animals are likely due to the use of trails by impact by fast-moving OHVs. The potential for death or injury of large animals would be considered to be low. Smaller, slow-moving terrestrial or aquatic species (amphibians, reptiles, small rodents) are at higher risk. The potential for death and injury depends on time of year, activity patterns of the individual species, and the activity taking

place on the ground. Because OHVs often travel fast and quietly and riders focus on the trail tread, they have limited reaction time. Some burrowing animals, such as salamanders, lizards, snakes, rodents, and badgers may be affected by the reroutes of some trails during ground-clearing phases.

There is also some limited potential for death/injury of individuals during trail maintenance activities. However, the Design Features include measures to train trail maintenance personnel on minimizing impacts (*e.g.*, what to do if animals are seen; avoiding impacts to nests, logs, rocky outcrops, and woodrat nests/middens).

Snakes, other reptiles, and amphibians are also at risk due to vandalism and collecting. Because of fear or dislike of snakes, they are often intentionally run over or killed by visitors to the National Forest. Members of the public often collect snakes, toads, treefrogs, coast horned lizards, and other small animals as pets.

It is likely that dead trees occurring along the trails would be felled to provide for safety of the trail users. As such, there is the possibility of impacts to birds and other animals using those trees for nesting or denning. The Design Features call for trees to be evaluated for nests/dens prior to felling and to avoid doing the felling during breeding season. Nests in trees and bushes may be destroyed during tree felling operations. Additionally, nests on the ground are also susceptible to destruction by trail riders going off-trail (intentionally or accidentally) and during trail maintenance activities.

Potential Beneficial Effects: Under the Proposed Action, a number of unauthorized routes would be restored. These existing trails were not engineered according to Forest Service trails standards and, as such, they result in erosion and habitat degradation and exist in places with resource conflicts. Restoration of those trails would benefit animals and their habitats. Newly-constructed trails would be built according to standards and in places that are easier to maintain and have fewer resource conflicts. Existing trails that would be adopted into the NFTS network would be re-designed and maintained to standard; some would be re-routed out of riparian areas or re-designed with proper riparian crossings. Overall, trail density would be reduced.

Under the Proposed Action, direct and indirect effects to animals and wildlife habitat would be expected to be lower than under the existing conditions. Habitat quality and availability should improve over time. Disturbance to animals would also be expected to improve as trail density is reduced and high quality habitats (*e.g.*, large unroaded areas, riparian areas, springs, etc.) are avoided.

Alternative 2 - No Action

Under the No Action alternative, the baseline condition would persist. The effects to animals and wildlife habitat (including that of TES, Watchlist, and common species) would continue and may increase. Unauthorized routes would continue to be utilized by motorized vehicles throughout the project area. It is likely that effects would increase over time as the result of continued use of unauthorized routes that are not engineered or maintained properly and the creation of new routes. Habitats, including riparian, along existing and new unauthorized routes would be degraded and lost.

Disturbance from OHV and motorized travel on unauthorized trails would affect wildlife in those areas. Trail density (miles of trail/square mile) would remain high and may increase over time. As such, animals may have less habitat area in which to escape disturbance. Animals, especially small terrestrial species may be injured or killed on the trails.

Under the No Action alternative, restoration of unauthorized routes may still occur based on site-specific review and other NEPA decisions, subject to available funding. However, it is unlikely that the scope of unauthorized route restoration included in the Proposed Action could be funded in the near-term without it being included in a comprehensive package of trail designation and travel management actions such as the Proposed Action or Alternative 3.

Alternative 3 – 3N14 Mixed Use

Alternative 3 is the same as the Proposed Action with the addition of mixed use of vehicle types (street legal and OHV) on 3N14 between Big Pine Flats and 4N16. The general effects to wildlife and botany resources from Alternative 3 would be the same as those described above for the Proposed Action. In addition, there is potential for increased OHV traffic on 3N14 which may have an impact on birds and other animals using the riparian areas along this stretch of road. The potential for noise disturbance would be slightly higher but this is not expected to be substantially greater than the existing condition. In a few locations, there may be road maintenance and brush trimming to enhance visibility along the roadway but this is expected to be along the road's edge and would not adversely affect the integrity of the roadside habitat.

Alternative 3 would have the same beneficial effects as the proposed action as discussed above as a result of restoration of unauthorized routes, reducing overall road/trail densities.

Comparison of the Alternatives – General Wildlife

The effects of No Action to animals and wildlife habitat may be greater overall than the effects expected under the Proposed Action or Alternative 3.

3.5.3 Affected Environment and Existing Conditions –Threatened and Endangered Animals

A Biological Assessment (Eliason *et al.* 2015) was prepared for this project, as required under the Endangered Species Act. Table 17 displays animals that are listed as Threatened or Endangered under the Federal Endangered Species Act that are known or likely to occur in the project area. No other T/E species are expected in the project area. There are currently no animals proposed for federal listing on the SBNF. No designated or proposed Critical Habitat for T/E animals occurs in the project area.

Table 17. Threatened and Endangered Wildlife Species For The Rattlesnake Mountain OHV Analysis Area			
Common Name	Latin Name	Status	Occurrence In Analysis Area
California condor	<i>Gymnogyps californianus</i>	Endangered	Possible
southwestern willow flycatcher	<i>Empidonax trailii extimus</i>	Endangered	No suitable habitat
desert tortoise	<i>Gopherus agassizii</i>	Threatened	Possible

California Condor (*Gymnogyps californianus*): The California condor is both federally- and state-listed as an Endangered species. Critical Habitat was designated in 1976 but none is present in the analysis area. A Recovery Plan exists for this species. California condors have been observed at several locations in the San Bernardino Mountains since 2002, including the sighting of two condors in the White Mountain area near the analysis area. USFWS records of radio-tagged condors suggest that as S. California's condor population continues to grow, the areas they cover is expanding. Condors appear to be traveling long distances from the main population sites on the coast on a more frequent basis.

While regular use nesting is not currently known from the North Slope, it may occur in the future. No suitable nesting sites occur in the analysis area but there may be some suitable sites on the rugged North Slope terrain in close proximity. Foraging may occur within the analysis areas on an infrequent basis, and may increase in frequency as the population expands or if closer nest sites are established. At this time, occurrences in and near the analysis area are considered very infrequent. This may change over time as the population expands.

Desert Tortoise (*Gopherus agassizii*): The desert tortoise was federally-listed as threatened in 1990 (55 FR 12178) and listed as threatened under the California Endangered Species Act in 1989. The desert tortoise has a revised Recovery Plan. Critical habitat for the desert tortoise was designated on February 8, 1994 (59 FR 5820). No designated or proposed Critical Habitat for desert tortoise occurs on or near the SBNF.

Because of the transition to unsuitable habitat and being on the periphery of the species distribution, tortoise populations on the SBNF are likely at very low densities. Much of the Mountaintop District's northern and eastern edges between Silverwood Lake on the west and Rattlesnake Canyon on the east are also presumed to be occupied in low densities. Tortoises are known from desert habitat adjacent to the Forest boundary and similar habitat occurs on the adjacent NFS lands. The densities are likely low and it is considered the periphery of the desert tortoise distribution.

A small portion of the analysis area in the Arrastre Canyon vicinity near the SBNF boundary has been delineated as possibly suitable for this species. Desert tortoises are

not currently known from the analysis area and the areas around the proposed trails are not suitable.

3.5.4 Effects – Threatened and Endangered Animals

Alternative 1 - Proposed Action

California Condor: If California condors were present in the project area, construction or use of the trail system could result in disturbance. The entire analysis area could be used for foraging. The proposed project would result in net gains of foraging habitat through the restoration of unauthorized routes. With reduced trail densities, the likelihood of disturbance to foraging condors may be lower. See above for discussions of effects common to wildlife species. Cliff/rock outcrop habitat that is suitable for nesting would not be affected by the Rattlesnake OHV project. Death or injury of condors would not be expected as a result of the proposed project.

Because of the rarity of this species in the analysis area and because of the lack of suitable nesting habitat in close vicinity (and, thus, the low likelihood of foraging becoming a regular event in the analysis area), the effects would be expected to be negligible for this species. Since this project is unlikely to result in effects to condors, there are no cumulative effects.

Desert Tortoise: No direct or indirect effects to tortoises or their habitat would be expected within the analysis area. The proposed project would not be expected to affect habitat quality or availability. Because the proposed project is not expected to affect desert tortoises or their habitat, there are no cumulative effects.

Alternative 2 - No Action

California Condor: Because condors are only uncommon visitors to the San Bernardino Mountains, the current level of effects is considered extremely low. Under the No Action alternative, that is unlikely to change.

Desert Tortoise: Because the project area only supports marginally suitable habitat at the periphery of the desert tortoise distribution, the current level of effects is considered extremely low. Under the No Action alternative, that is unlikely to change.

Alternative 3 – 3N14 Mixed Use

California Condor: The effects for Alternative 3 are the same as those described above for the Proposed Action.

Desert Tortoise: The effects for Alternative 3 are the same as those described above for the Proposed Action.

Determinations of Effects – Threatened and Endangered Animals

A “No Effect” determination has been made for desert tortoise and California condor for the Proposed Action and the alternatives.

3.5.5 Affected Environment and Existing Conditions – Forest Service Sensitive Animals

A number of Region 5 Regional Forester’s Listed Sensitive wildlife species are known or expected to occur in the analysis area. **Table 18** contains the current Sensitive animals that are known or have a likelihood of occurring in the analysis area. The potential direct and indirect effects to these species that are known to occur or having a high probability of occurring in the analysis area are discussed in detail. See the biological report (Eliason *et al.* 2015) for a complete list of species considered.

Table 18. Region 5 Forest Service/SBNF Sensitive Species – Rattlesnake Project Area				
Common Name	Latin Name	District Record	Habitat	Occurrence In The Analysis Area
San Emigdio blue butterfly	<i>Plebulina emigdionis</i>	P	r, dry riverbeds; Host=Atriplex is host plant	P
Arrowhead Blue Butterfly	<i>Glaucopsyche piasus (sagittigera)</i>	Y	c, m; host= <i>Lupinus excubitus</i>	Y @ Coxey Meadow
Ehrlich’s checkerspot butterfly	<i>Euphydryas editha ehrlichi</i>	Y	d, c, pebble plain; host= <i>Castilleja plagiotoma</i>	Y @ Coxey Meadow, Ord Mountains
vernal blue butterfly (Coxey Meadow)	<i>Euphilotes baueri (battoides) vernalis</i>	Y	Pebble plain; host= <i>Eriogonum kennedyi var. kennedyi</i>	Y@ within 1 mile of Coxey Meadow; Little Pine Flat
large-blotched ensatina	<i>Ensatina klauberi</i>	Y	r, mc	P – records from Marble Canyon and Arctic Cyn
yellow-blotched ensatina	<i>Ensatina eschscholtzii croceater</i>	Y	r, mc	P – records from Marble Canyon and Arctic Cyn
California legless lizard	<i>Anniella pulchra</i>	P	c, d, alluvial fan	P
southern rubber boa	<i>Charina umbratica</i>	Y	mc, c, r	P
three-lined boa	<i>Lichanura orcutti</i>	Y	c, g, rk, r	P
San Bernardino ringneck snake	<i>Diadophis punctatus modestus</i>	Y	c, g, rk, r	P
San Bernardino mountain kingsnake	<i>Lampropeltis zonata parvirubra</i>	Y	mc, c, pj, r	Y (little pine and 3N14 N West of rattlesnake mountain)
Two-striped garter snake	<i>Thamnophis hammondi</i>	Y	r, aq	Y (Coxey Pond, Coxey Creek)
bald eagle	<i>Haliaeetus leucocephalus</i>	Y	aq,r,m	Y (occasional at Coxey Pond)
Willow flycatcher (migrant)	<i>Empidonax traillii</i>	Y	r	Y @ Coxey Pond; P @ Coxey Creek
gray vireo	<i>Vireo vicinior</i>	Y	wo (pj),ch	Y (3N16x3N17 area)
Townsend’s big-eared bat	<i>Corynorhinus townsendii</i>	Y	mc, r, aq, wo, c, mines	Y (4N16 and forest boundary)
fringed myotis	<i>Myotis thysanodes</i>	Y	R, wo, m, g, mc	Y (4N16 and forest boundary)
pallid bat	<i>Antrozous pallidus</i>	Y	c, wo, mc, d, rk	Y (4N16 and forest boundary)

Table 18. Region 5 Forest Service/SBNF Sensitive Species – Rattlesnake Project Area				
Common Name	Latin Name	District Record	Habitat	Occurrence In The Analysis Area
¹ Occurrence Information: Y = Species is known to occur. P = Occurrence of the species is possible; suitable habitat exists, and/or the species is known from nearby locations. B = Species is known or likely to nest in the area. M = The species uses the area during migration as a stopover. H = Part of the historical range but the species has been extirpated. U = Occurrence of the species is unlikely based on habitat present. N = Outside known distribution/range of the species.		² HABITAT TYPES/HABITAT COMPONENTS a = aerial; usually seen in flight, often over several habitat types r = riparian (streamside thickets and woodlands) g = grasslands, fields, and agricultural areas m = marshes, meadows; both freshwater areas and moist meadows c = chaparral and coastal sage scrub wo = woodlands; pinyon-juniper, oaks		mc = mixed conifer forests; Jeffrey pine, ponderosa pine, bigcone Douglas fir, coulter pine, sugar pine, white fir overstory d = desert; Joshua tree woodlands, creosote bush scrub, blackbrush scrub aq = aquatic; lakes, reservoirs, ponds, vernal pools/puddles u = urbanized areas w = washes and alluvial fans rk = cliffs and rocky outcrops s = snags and cavities

3.5.5.1 Affected Environment and Existing Conditions – Forest Service Sensitive Butterflies

San Emigdio Blue Butterfly: The San Emigdio blue butterfly is closely associated with the widespread saltbush *Atriplex canescens* in alkali sink areas. However, the San Emigdio blue butterfly's distribution is much more localized than that of the host plant, suggesting that other factors may determine habitat suitability. Scattered occurrences of the host plant are likely in the analysis area. San Emigdio blue butterfly larvae feed on the leaves of the host plant *Atriplex canescens*. They are tended by ants. The San Emigdio blue butterfly may occur in the analysis area where host plants are present.

Arrowhead Blue Butterfly: This species is known from the Coxey Meadow area and is likely to occur throughout the analysis area where host plants are present. *Lupinus excubitus*, the grape soda lupine, is the most common host at that site. Additionally, it relies on a mutualistic relationship with a specific ant species, *Formica pilicornis*.

Ehrlich's Checkerspot Butterfly: The Ehrlich's checkerspot occurs on pebble plains in/near the analysis area, a relatively rare and isolated habitat type. Mojave paintbrush (*Castilleja plagiotoma*) is the host plant for Ehrlich's checkerspot. The pebble plains complexes (Coxey Meadow, Little Pine Flat, Dawn O'Day, and Coyote Flats) and any other sites that have suitable host plants likely support this butterfly species.

Vernal Blue Butterfly: Vernal blue butterfly is associated with spring-blooming populations of wild buckwheat that occurs on pebble plain habitat in the Coxey Meadow area. The host plant is *Eriogonum kennedyi* var. *kennedyi*, an early-spring (mid-April to early May) blooming wild buckwheat found in pebble plain habitats. The vernal blue butterfly occurrences are at elevations of approximately 5,500 to 6,000 feet.

This subspecies is only known from an area that is a couple of square miles within and adjacent to the analysis area.

3.5.5.2 Direct, Indirect, and Cumulative Effects – Forest Service Sensitive Butterflies

Alternative 1 - Proposed Action

There would be permanent habitat losses for these butterflies wherever the host plants are removed. The acreage of habitat loss is unknown since the host plant occurrences have not been mapped. The Design Features include a measure that calls for surveys for host plants prior to any ground-disturbance (constructing/ rerouting new trails or restoring unauthorized routes). If host plants are present, the trail would be re-routed to avoid the host plants with an appropriate buffer. For restoration work, a monitor would work with the crew to ensure minimal disturbance to the host plants.

Trail use close to host plants could result in death or injury of individuals of these species (in any of the life phases). Because of the Design Features, this risk is considered relatively low. There are no other projects proposed in the foreseeable future that have the potential to affect this species.

Alternative 2 - No Action

Under the No Action alternative, the baseline condition would persist. The effects to butterflies (during all life forms), their host plants, and the habitat would continue and may increase. Unauthorized routes would continue to be utilized by motorized vehicles throughout the project area. It is likely that effects would increase over time as the result of continued use of unauthorized routes that are not engineered or maintained properly and the creation of new routes. Habitats along existing and new unauthorized routes would be degraded and lost.

Disturbance from OHV and use of unauthorized trails would affect butterflies in those areas. Eggs, larva, pupae, and adult butterflies may be killed by OHV traffic on the trails.

Under the No Action alternative, restoration of unauthorized routes may still occur based on site-specific review and other NEPA decisions, subject to available funding. However, it is unlikely that the scope of unauthorized route restoration included in the Proposed Action could be funded in the near-term without it being included in a comprehensive package of trail designation and travel management actions such as the Proposed Action or Alternative 3.

Alternative 3 – 3N14 Mixed Use

The potential effects to Forest Service Sensitive butterflies under Alternative 3 would be the same as those described for the Proposed Action.

Determinations of Effects – Forest Service Sensitive Butterflies

The Proposed Action and Alternative 3 may impact individuals or habitat, but are not likely to result in a trend toward Federal listing of the Forest Service Sensitive butterfly species addressed above. The project is not expected to interfere with maintaining viable well-distributed populations of these butterfly species.

3.5.5.3 Affected Environment and Existing Conditions – Forest Service Sensitive Reptiles and Amphibians

Large/Yellow-Blotched *Ensatina*: Large and yellow-blotched ensatina are Forest Service Sensitive species and CDFW Species of Special Concern. The yellow-blotched ensatina is also a BLM Sensitive species. In the San Bernardino Mountains, the yellow-blotched ensatina intergrades with the large-blotched ensatina. Recent treatments list *E. klauberi* as a species broken out from *E. eschscholtzii* (as previously treated). The genetics for these three species is yet to be resolved. For the purposes of this analysis, both yellow-blotched and large-blotched are considered to be present in the San Bernardino Mountains.

Large/yellow blotched ensatinas have been found in several drainages on the North Slope. They have the potential to occur in some of the springs and drainages in the analysis area.

Southern California Legless Lizard: The California legless lizard *Anniella pulchra* is a Forest Service Sensitive species and a CDFW Species of Special Concern. In September 2013 *A. pulchra* was broken out into five species of *Anneilla*, with four of the species being new. Based on this new description, the southern California species previously considered *Anniella pulchra* is now considered *Anniella stebbinsi* (Southern California legless lizard). The Forest Service Sensitive species list has not been revised to include this new information. For the purposes of this analysis, *A. stebbinsi* is being treated as a Sensitive species until the Regional Forester determines whether a revision of the list is warranted.

While this species is generally more of a coastal species, there is habitat on the North Slope that appears to be suitable in the lower parts of drainages and legless lizards in the genus *Anniella* have been documented in the Mojave Desert. The likelihood of occurrence in the analysis area is considered relatively low.

Northern Three-Lined Boa: The taxonomy for rosy boas in California has recently changed with two species being currently identified: the northern three-lined boa (*Lichanura orcutti*) and the rosy boa (*Lichanura trivirgata*). The northern three-lined boa is a Forest Service Sensitive species and a BLM Sensitive species. It inhabits arid scrublands, semi-arid shrublands, rocky shrublands, rocky deserts, canyons, and other rocky areas. It appears to be common in riparian areas, but does not require permanent water. There is suitable habitat for this species and it is likely to occur within the analysis area.

San Bernardino Ringneck Snake: The San Bernardino ringneck snake is a Forest Service Sensitive species and a Federal Species of Concern (formerly USFWS Candidate species). Ringneck snakes are rarely seen on the surface, but are usually found under rocks, logs, or leaf litter. Ringneck snakes can be found in a variety of open, relatively rocky habitats, including mixed montane chaparral and annual grasslands. They are most often located in somewhat moist microhabitats near intermittent streams. It is a very difficult species to detect during surveys. Suitable habitat occurs in the project area; this species may occur in the analysis area.

San Bernardino Mountain Kingsnake: The San Bernardino mountain kingsnake is a Forest Service Sensitive Species and a CDFW Species of Special Concern. The most favored habitats are yellow pine communities, but mountain kingsnakes are found in chaparral, woodland, and riparian habitats as well. The San Bernardino mountain kingsnake is typically found in sunlit canyons with rocky outcrops. Partially-shaded rock outcrops and large downed logs for refugia and basking sites appear to be important microhabitat elements. California mountain kingsnakes consume lizards, snakes, nestling birds, bird eggs, and small mammals. This species is known to occur in and near the analysis area. It is likely that it occurs throughout the analysis area wherever suitable habitat occurs.

Two-Striped Garter Snake: The two-striped garter snake is a Forest Service Sensitive Species and a CDFW Species of Special Concern. Two-striped garter snakes inhabit perennial and intermittent streams and ponds in chaparral, oak woodland, and forest habitats. The species is primarily associated with aquatic habitats that are bordered by riparian vegetation and provide open areas nearby for basking. Two-striped garter snakes also occupy adjacent grassland and coastal sage scrub in upland areas during the winter. Adult two-striped garter snakes feed primarily on tadpoles, toads, frogs, fish, fish eggs, and earthworms. Two-striped garter snakes are known in/near the project area.

3.5.5.4 Direct, Indirect and Cumulative Effects – Forest Service Sensitive Reptiles and Amphibians

Alternative 1 - Proposed Action

Large/Yellow-Blotched Ensatina: Mortality or injuries of ensatinas is not expected in the Rattlesnake Mountain OHV project because damp areas, springs, and riparian areas were avoided during final trail alignment, parking area designation, and road designation. The RCAs for the project would limit habitat degradation/losses for this species.

Most of the Forest Service and non-Forest Service fuels reduction activities that are in progress or in the foreseeable future have potential to affect ensatinas. The Forest Service fuels reduction projects have measures to limit effects to riparian habitats and other areas suitable for ensatina. While the Forest Service fuels reduction projects have the potential to affect individual ensatinas, the habitat effects are temporary. The level of habitat effects on private lands is unknown. These reasonably foreseeable cumulative effects, together with the potential effects of the Proposed Action, affect a small fraction of the range and habitat of large/yellow-blotched ensatina.

Southern California Legless Lizard, Southern Rubber Boa, Northern Three-Lined Boa, San Bernardino Mountain Kingsnake, San Bernardino Ringneck Snake, and Two-Striped Garter Snake: Under the Proposed Action, most of the new trail network would use existing unauthorized routes in which habitat has already been degraded. Minor reroutes of routes that are running in or adjacent to features such as riparian areas would occur as part of this project and newly designated mixed use roads may also result in ground disturbance and vegetation removal. Therefore, only a small amount of currently suitable habitat would be damaged as part of new construction and changes in road designation.

Restoration of unauthorized routes as proposed in this project would result in positive effects by restoring habitat for these species.

All of these species burrow in soft dirt, under litter, rocks, and logs. Individual reptiles would continue to be at risk as a result of human activities and vehicles/equipment on the trails, trailering sites, and access roads. The reduction of trail density may reduce the risk of death/injury.

Most of the Forest Service and non-Forest Service fuels reduction activities that are in progress or in the foreseeable future have potential to affect the same Sensitive reptiles and amphibians that may occur in analysis area. The Forest Service fuels reduction projects have measures to limit effects to any of the reptiles associated with riparian habitats. While the Forest Service fuels reduction projects have the potential to affect individual reptiles, the habitat effects are temporary. The level of habitat effects on private lands is unknown.

Since the rubber boa is a state-listed species, some of the agencies doing work on non-federal lands have incorporated monitors and avoidance measures for this species. The level of effects and habitat alteration/losses from hazard tree and downed log removal is unknown and likely varies by land ownership.

These reasonably foreseeable cumulative effects, together with the potential effects of the Proposed Action, affect a small fraction of the range and habitat of these species.

Alternative 2 - No Action

Under the No Action alternative, the baseline condition would persist. The effects to Sensitive amphibians and reptiles and their habitats would continue and may increase. Unauthorized routes would continue to be utilized by motorized vehicles throughout the project area. It is likely that effects would increase over time as the result of continued use of unauthorized routes that are not engineered or maintained properly and the creation of new routes. Habitats along existing and new unauthorized routes would be degraded and lost.

Disturbance from OHV and use of unauthorized trails would affect Sensitive amphibians and reptiles in those areas. Sensitive amphibians and snakes may be killed by OHV traffic on the trails.

Under the No Action alternative, restoration of unauthorized routes may still occur based on site-specific review and other NEPA decisions, subject to available funding. However, it is unlikely that the scope of unauthorized route restoration included in the Proposed Action could be funded in the near-term without it being included in a comprehensive package of trail designation and travel management actions such as the Proposed Action or Alternative 3.

Alternative 3 – 3N14 Mixed Use

The potential effects to Forest Service Sensitive reptiles and amphibians under Alternative 3 would be the same as those described for the Proposed Action.

3.5.5.5 Affected Environment and Existing Conditions – Forest Service Sensitive Birds

Bald Eagle: During the Forest Plan revision, bald eagles were federally-listed as Threatened; however, they have subsequently been de-listed and now considered a Forest Service Sensitive species. It remains protected under the California Endangered Species Act as a state-listed Endangered species. It is also protected by the federal Bald and Golden Eagle Protection Act.

A relatively large population of bald eagles overwinters in the San Bernardino Mountains, using lakes and rivers for foraging on fish and waterfowl. They are generally present in the San Bernardino Mountains between December and April with numbers sometimes reaching 25-30 during the months of January and February. In 2012, the first bald eagle nest in the San Bernardino Mountains was documented on Big Bear Lake. Since then another nest has successfully produced chicks near Lake Arrowhead.

There is a record of a bald eagle occurring at Coxey Pond. Suitable habitat for this species does not occur anywhere else in the project area. An individual bald eagle may occasionally forage for ducks and fish at Coxey pond but their occurrence is considered very infrequent and nesting in the project area is unlikely.

Migrant Willow Flycatcher: There are three subspecies of the willow flycatcher (*Empidonax traillii*) that occur in California. Two subspecies (*E.t. brewsteri* and *E.t. adastus*) are CDFW Endangered species and USFWS Bird of Conservation Concern. *E.t. extimus* (southwestern willow flycatcher) is federally-listed as Endangered. Suitable nesting habitat for the endangered subspecies (*E.t. extimus*) is not present in the project area. During migration, it is impossible to determine which subspecies of willow flycatcher is present. Migrant willow flycatchers are known to occur near the analysis area in spring and fall and likely occur in the analysis area. The analysis area contains ephemeral and intermittent streams which have suitable habitat for migrant willow flycatchers. The habitats used during migration is less specific than during breeding.

Gray Vireo: The gray vireo is a Forest Service Sensitive species and a CDFW Species of Special Concern. In southern California, gray vireos breed in two general habitat types: montane chaparral and pinyon-juniper woodland. Gray vireos are known from the analysis area and are likely to occur throughout. While breeding has not been documented, it likely occurs.

3.5.5.6 Effects – Forest Service Sensitive Birds

Alternative 1 - Proposed Action

Bald Eagle: No effects to habitat quality or availability would occur as a result of this project. There are no new trails proposed in the vicinity of Coxey pond; thus, no disturbance effects would be expected. Because no effects are expected from the Proposed Action, there are no cumulative effects.

Migrant Willow Flycatcher: Existing unauthorized routes currently occur in stream courses and riparian areas that have habitat for migrant willow flycatchers. These trails would be restored or rerouted out of the riparian habitat resulting in a potential gain of undisturbed suitable habitat. Because of the reroutes and restoration of some unauthorized routes, beneficial effects to willow flycatcher habitat would be expected. There are a few sections of proposed trails that cross small patches of riparian habitat. These patches are not considered very high quality habitat for this species but they may be occasionally used by migrant flycatchers. If flycatchers are present in those riparian areas, use and maintenance of the trail system could result in disturbance when vehicles and people are present. This would most likely result in flushing and displacement farther away from the activities.

Under the Proposed Action, the effects to this species and its habitat would be expected to be beneficial over the long-term because of the restoration of unauthorized routes in riparian areas.

Gray Vireo: The Design Features have measures to locate and avoid active nests during the establishment of reroute sections of trail. As such, the potential for direct losses of gray vireos is considered low. If gray vireos forage or nest near the OHV routes or trailering sites they would experience disturbance. The Proposed Action would restore unauthorized routes and reduce trail densities in the analysis area. This would have a positive effect on habitat quality in the area when compared to the existing condition.

Alternative 2 - No Action Effects to Sensitive Birds

Under the No Action alternative, the baseline condition would persist. The effects to Sensitive birds and their habitats, including riparian, would continue and may increase. Unauthorized routes would continue to be utilized by motorized vehicles throughout the project area. It is likely that effects would increase over time as the result of continued use of unauthorized routes that are not engineered or maintained properly and the creation of new routes. Habitats along existing and new unauthorized routes would be degraded and lost. Disturbance from OHV and use of unauthorized trails would affect birds in those areas.

Under the No Action alternative, restoration of unauthorized routes may still occur based on site-specific review and other NEPA decisions, subject to available funding. However, it is unlikely that the scope of unauthorized route restoration included in the Proposed Action could be funded in the near-term without it being included in a comprehensive package of trail designation and travel management actions such as the Proposed Action or Alternative 3.

Alternative 3 – 3N14 Mixed Use

Bald Eagle and Gray Vireo: The effects would be the same as those described for the Proposed Action.

Migrant Willow Flycatcher: Under Alternative 3, some road maintenance including trimming of willows on or near 3N14 would occur to improve visibility for vehicles traveling between 3N16 and 4N16. The riparian habitat along the roadway is not considered high quality willow flycatcher habitat. Trimming and maintenance of riparian vegetation is expected to be minimal and not adversely affect the integrity of the riparian habitat.

Under Alternative 3, the effects to this species and its habitat would be expected to be beneficial over the long-term because of restoration of unauthorized routes in riparian areas

3.5.5.7 Affected Environment and Existing Conditions – Forest Service Sensitive Mammals

Fringed Myotis: The fringed myotis is a Forest Service Sensitive species, a BLM Sensitive species, a Western Bat Working Group High Priority species (indicating that it is imperiled or at high risk of imperilment). Fringed myotis occupies a wide variety of habitats from low desert scrub to high-elevation coniferous forests. The fringed myotis roosts in crevices in a variety of situations such as caves, buildings, mineshafts, cliff faces, trees, and bridges for maternity and night roosts. Hibernation has only been documented in buildings and mines. Fringed bats have been detected in similar habitats near the analysis area; they are likely to occur in the analysis area.

Townsend's Big-Eared Bat: Townsend's big-eared bat is a Forest Service Sensitive species, a CDFW Species of Special Concern, a BLM Sensitive species, and a Western Bat Working Group High priority species (indicating that it is imperiled or at high risk of imperilment). In June 2013, CDFW passed a motion to designate this species as a Candidate for Threatened/Endangered species status but a formal Notice of Finding has yet to be posted (<http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/TEAnimals.pdf>; pg. 12).

The distribution of this species is strongly correlated with the availability of suitable caves and cave analogues (mines, rock shelters, tunnels, building) for roosting. Abandoned mines are particularly important as roost sites in areas where there are not suitable caves. Townsend's big-eared bat can be found in a variety of habitats throughout California, but are most commonly associated with desert scrub, mixed conifer, pinyon-juniper, and pine forest. This species is known from the analysis area and vicinity in similar pinyon/juniper and desert transition habitats to the analysis area. This species likely uses the analysis area for foraging and roosting.

Pallid Bat: The pallid bat is a Forest Service Sensitive species, a CDFW Species of Special Concern, a BLM Sensitive species, and a Western Bat Working Group High priority species (indicating that it is imperiled or at high risk of imperilment). Pallid bats are found in a variety of habitats, including rocky canyons, open farmland, scattered desert scrub, grassland, shrubland, woodland, and mixed conifer forest. Pallid bats appear to be more prevalent within edges, open stands, particularly hardwoods, and open areas without trees. Pallid bats roost in rock crevices, mines, caves, tree hollows, and a variety of anthropogenic structures. Pallid bats have been detected in similar habitat near the project area; it is likely to occur in the analysis area.

3.5.5.8 Effects – Forest Service Sensitive Bats

Alternative 1 - Proposed Action

The Proposed Action would not be expected to negatively affect the fringed myotis, Townsend's big-eared bat, or pallid bat. Rock outcrops and cliff areas with suitable roosting sites were avoided during trail selection and the restoration of unauthorized routes would offer more uninterrupted foraging habitat. If tree felling is required during construction, re-routes, or maintenance of the trail (e.g., removal of hazard trees), individual bats roosting in dead trees may be flushed. Flushing during daytime could increase the likelihood of predation. The risk of that occurring is considered low due to the vegetation type.

Because the majority of trail use occurs during daytime hours, disturbance during critical night-time foraging and breeding activities would be very low. The Proposed Action would be expected to be beneficial over the existing condition because of the habitat restoration efforts and reduced trail densities.

Riparian habitat, on and off-NFS lands, has been dramatically affected in California due to development, water extractions/diversions/impoundment, drought, grazing, and recreational use. The continued development of the North Slope for mining can be expected to affect roosting habitat for this bat species. Those pressures on riparian and foraging habitat are likely to continue and the effects may be magnified over the long project life due to climate change. Over the long life of this project, this proposed trail network would not likely add to the reasonably foreseeable effects to these species in the San Bernardino Mountains.

Alternative 2 - No Action

Sensitive Bats: Under the No Action alternative, the baseline condition would persist. The effects to Sensitive bats and their habitats, including riparian, would continue and may increase. Unauthorized routes would continue to be utilized by motorized vehicles throughout the project area. It is likely that effects would increase over time as the result of continued use of unauthorized routes that are not engineered or maintained properly and the creation of new routes. Habitats along existing and new unauthorized routes would be degraded and lost.

Under the No Action alternative, restoration of unauthorized routes may still occur based on site-specific review and other NEPA decisions, subject to available funding. However, it is unlikely that the scope of unauthorized route restoration included in the Proposed Action could be funded in the near-term without it being included in a comprehensive package of trail designation and travel management actions such as the Proposed Action or Alternative 3.

Alternative 3 – 3N14 Mixed Use

Sensitive Bats: The effects would be the same as those described for the Proposed Action.

Determinations of Effects – Forest Service Sensitive Species

Table 19 summarizes the effects determinations for the Sensitive wildlife species discussed above.

Table 19. Summary of Determinations of Effects for Sensitive Species in the Analysis area		
Species	Determination of Effects ¹	Viability Statement
Wildlife		
San Emigdio blue butterfly	MIIH	No threat to viability from this project
Arrowhead Blue Butterfly	MIIH	No threat to viability from this project
Ehrlich's checkerspot butterfly	MIIH	No threat to viability from this project
vernal blue butterfly (Coxey Meadow)	MIIH	No threat to viability from this project
Large/yellow-blotched ensatina	MIIH	No threat to viability from this project
California legless lizard	MIIH	No threat to viability from this project
southern rubber boa	MIIH	No threat to viability from this project
three-lined boa	MIIH	No threat to viability from this project
San Bernardino ringneck snake	MIIH	No threat to viability from this project
San Bernardino mountain kingsnake	MIIH	No threat to viability from this project
Two-striped garter snake	MIIH	No threat to viability from this project
Bald eagle	NI	No threat to viability from this project
Willow flycatcher (migrant)	MIIH	No threat to viability from this project
Gray vireo	MIIH	No threat to viability from this project
Townsend's big-eared bat	MIIH	No threat to viability from this project
fringed myotis	MIIH	No threat to viability from this project
pallid bat	MIIH	No threat to viability from this project
¹ NI=No Impacts MI= May Impact Individuals and Habitat, But Not Likely to Lead Toward a Trend in Federal Listing		

3.5.5.9 Affected Environment, Existing Conditions, and Effects – Other Special Status Species (SBNF Watchlist and CDFW Species of Special Concern)

The following sections contain a summary of the effects or impacts to species listed as either SBNF Watchlist or California Department of Fish and Wildlife (CDFW) Species of Special Concern/Status. This section summarizes information contained in the biology report (Eliason *et al.* 2015); refer to that report for information on species accounts. For some groups of species, the effects are summarized for the group, such as reptiles, since the effects/impacts are similar. For those species where there is the potential for individual species impacts, the discussions are more detailed.

Other Special Status Invertebrates

Springsnails (*Pyrgulopsis sp.*): Springsnails are a SBNF Watchlist species. Springsnails are a diverse group of freshwater gastropods. Many of the species in this genus are at risk of extinction. There is a very high rate of endemism with many of the ~120 species occurring in isolated springs and seeps. No surveys for springsnails have been conducted on the SBNF. There is a high probability that there are endemic springsnails in many of

the springs and seeps in the San Bernardino Mountains. Suitable habitat for springsnails (*Pyruglopsis* sp.) likely exists in the springs and seeps. See the earlier discussions of the potential effects to riparian areas, including suitable habitat for this species, as a result of the proposed project.

Dorhn's Elegant Eucnemid Beetle (Palaeoxus dorhni): The Dorhn's elegant eucnemid beetle is a SBNF Watchlist species. All known occurrences of this species are found on National Forest System lands. Dorhn's elegant eucnemid beetle is a rare species that has been reported from Crestline. Dorhn's elegant eucnemid beetle is found on dead pine and incense cedar (*Calocedrus decurrens*) trees or stumps close to the ground. Both larvae and adults of Dorhn's elegant eucnemid beetle are found under the bark of pines and incense cedars. Larvae feed on rotted wood, and adults are predatory. Suitable habitat for this species occurs in the analysis area. Individual beetles may be killed or injured as a result of the trail network although the Proposed Action and Alternative 3 may reduce this risk by reducing the number of unauthorized routes bisecting the habitat.

Bicolored Rain Beetle (Pleocomma bicolor): The bicolored rain beetle is a SBNF Watchlist species. Bicolored rain beetle is endemic to a small region of the San Bernardino Mountains. The known range of this beetle is restricted to an area extending from Rim of the World Drive (Highway 18) near the Crestline cutoff through Crestline, Bluejay, and Arrowhead City to the north shore of Lake Arrowhead. Bicolored rain beetle larvae feed on the roots and rootlets of various vegetation types including hardwoods, shrubs, and grasses. Although the analysis area is outside the known distribution for this species, suitable habitat for this species occurs in the analysis area. Under the Proposed Action and Alternative 3, it is not expected that additional habitat would be lost. Individual rain beetles may be killed or injured as a result of the trail network although the Proposed Action and Alternative 3 may reduce this risk by reducing the number of unauthorized routes bisecting the habitat.

Desert Monkey Grasshopper (Psychomastax deserticola): Desert monkey grasshopper is a Federal Species of Concern (formerly known as USFWS Candidate species), a SBNF Watchlist species, and a State Special Status Animal (S1.2: Threatened). The desert monkey grasshopper is described as occurring in arid environments, and chamise (*Adenostoma fasciculatum*) has been identified as a possible food plant. Desert monkey grasshoppers are known from the Cushenbury Springs and Cactus Flats areas which have similar habitat to the project area. If this species is present, there may be some individuals lost during the regular recreation use of the trail network. However, under the Proposed Action and Alternative 3, many unauthorized routes would be restored which would create large blocks of uninterrupted habitat presumably resulting in fewer losses than the existing condition.

San Bernardino Mountains Silk Moth (Coloradia velda): San Bernardino Mountains silk moth has been identified by the Forest Service as a species with a local viability concern and is a SBNF Watchlist species. The type locality for San Bernardino Mountains silk moth, also known as the velda pinemoth, is at Coxey Meadow adjacent to the project area. San Bernardino Mountains silk moth is most commonly found in stands of pinyon

pine (*Pinus monophylla*), the larval host plant. It has also been collected in Jeffrey pine (*Pinus jeffreyi*), although in much smaller numbers. Larvae feed primarily on the leaves of the pinyon pine, although larvae above the first instar have also been collected on, and presumably eat, Jeffrey pine. Adults do not feed.

This species has a high likelihood of occurring in the analysis area. There may be some individuals lost during reroutes and regular trail use although the Proposed Action and Alternative 3 would be beneficial to the species by reducing the number of unauthorized routes that bisect habitat.

Andrew's Marble Butterfly (*Euchloe hyanitis andrewsi*): Andrew's marble butterfly is a subspecies of the widely distributed California marble butterfly. It is a SBNF Watchlist species and a State Special Status Animal. It is a federal species of concern (previously USFWS Candidate species). Andrew's marble butterfly is endemic to the San Bernardino Mountains. Andrew's marble butterfly is found primarily in pine and mixed conifer forests. All of the larval host plants for this species are members of the mustard family. Members of the mustard family occur in the project area. Andrew's marble butterfly may occur in the analysis area wherever host plants are present. Individual marble butterflies may be killed or injured as a result of the trail network although the Proposed Action and Alternative 3 may reduce this risk by reducing the number of unauthorized routes bisecting the habitat.

Other Special Statues Amphibians

Monterey Ensatina (*Ensatina eschscholtzii eschscholtzii*)

Monterey ensatina has been identified by the Forest Service as a species of local viability concern and is a SBNF Watchlist species. There is a "hybrid swarm" for *Ensatina* in the San Bernardino Mountains where Monterey, yellow-blotched, and large-blotched ensatina hybridize. The genetics for these three species is yet to be resolved. Monterey salamanders are most common in oak woodlands with extensive leaf litter and downed wood; however, they occupy a wide variety of other habitats as well. Monterey ensatinas are known from the North Slope north near Lake Silverwood. While not known from the project vicinity, the analysis area is within the known distribution and the large/yellow blotched subspecies of ensatina is known from the North Slope (suggesting that suitable habitat exists). They are unlikely to occur within the footprint of the trail network due to careful rerouting efforts but they may occur in the springs or damp drainages in the analysis area. See the large/yellow-blotched ensatinas in the Sensitive species section of this document for a discussion of potential effects.

Other Special Statues Reptiles

San Diego Coast Horned Lizard (*Phrynosoma coronatum blainvillii*): The coast horned lizard was removed from the Forest Service's Regional Forester Sensitive species list in early 2013. It is a CDFW Species of Special Concern. It is endemic to southern California and northern Baja California, México. San Diego horned lizards are found in a wide variety of habitats including coastal sage scrub, chaparral, grassland, coniferous forest, oak woodland, riparian, and the margins of the higher elevation desert where it is restricted to the juniper-desert chaparral. This species prefers areas with loose, fine soils, an abundance of open areas for basking and plenty of native ants and other insects. Up to

90 percent of the diet of *P. c. blainvillei* consists of native harvester ants (*Pogonomyrmex spp.*), and this species does not appear to eat nonnative Argentine ants that have replaced native ants in much of southern California.

Coast horned lizards are known from the analysis area and suitable habitat occurs in many parts of the analysis area. There is risk of death or injury due to vehicle traffic on trails and roads in the area. Due to their cryptic coloration and tendency to freeze when threatened, they are especially vulnerable to being run over. There is also the possibility that individuals may be illegally collected. Restoration of unauthorized routes may be beneficial to coast horned lizards by reducing trail density.

Common Chuckwalla (Sauromalus ater): The common chuckwalla is a SBNF Watchlist species. They are found in a variety of desert woodland and scrub habitats. It is restricted to areas with large rocks, boulder piles, or large rock outcrops on slopes. Chuckwallas are known from the North Slope area. While the higher elevation trail areas are not likely to be occupied by this species, the lower portions of the network and associated facilities in desert and desert transition zones are likely occupied.

Western Zebra-Tailed Lizard (Callisaurus draconoides rhodostictus): The western zebra-tailed lizard is a SBNF Watchlist species. It is found in the Mojave and Colorado deserts up to the desert slopes of the Transverse and Peninsular mountain ranges. They frequent sandy and gravelly desert flats, washes and alluvial plains in a variety of desert woodland and scrub habitats. They occasionally occur in rocky areas, but seem to prefer flats dominated by scrub vegetation. Zebra-tailed lizards are known from the North Slope. While the higher elevation trail areas are not likely to be occupied by this species, the lower portions of the network in desert transition zones are likely occupied.

Mojave Black-Collared Lizard (Crotaphytus bicinctores): The black-collared lizard is a SBNF Watchlist species. It is generally restricted to areas with rocky substrates, slopes, gullies, washes, canyons, and sometimes rock piles, although occasionally can be found up to a mile from extensive rocky habitat. It is most common in desert succulent shrub, desert scrub, and desert wash habitats. Collared lizards are known from the North Slope area. While the higher elevation trail areas are not likely to be occupied by this species, the lower portions of the network in desert transition zones are likely occupied.

Desert Night Lizard (Xantusia vigilis): The desert night lizard is a SBNF Watchlist species. The desert night lizard is a small thin lizard with soft skin and fine scales. It is found throughout the Mojave Desert. Desert night lizards are most common in Joshua tree and desert scrub habitats. This species is known from Cushenbury Springs and Cactus Flats which have similar habitat to the analysis area. While the higher elevation trail areas are not likely to be occupied by this species, the lower portions of the network in desert transition zones are likely occupied.

Coast Patch-Nosed Snake (Salvadora hexalepis virgultea): Coast patch-nosed snakes are a CDFW Species of Special Concern, a Federal Species of Concern (formerly known as USFWS Candidate species), and a SBNF Watchlist species. The coast patch-nosed snake

prefers coastal sage scrub and chaparral habitats. Habitat selection is closely related to the presence of the species' primary prey, whiptail lizards (*Cnemidophorus spp.*), and the presence of refuge and overwinter sites provided by ground squirrels or other burrowing mammals. Coast patch-nosed snake seems to require at least a low shrub structure of minimum density; it is not found in habitats lacking this habitat characteristic. Patch-nosed snakes are known from the analysis area near Coxey Meadow. It is not known if that record was the coast subspecies.

Mountain Garter Snake (*Thamnophis elegans elegans*)

The mountain garter snake has been identified by the Forest Service as a species of local viability concern, and is a SBNF Watchlist species. There is little information on the distribution and abundance of the isolated population of this snake in the San Bernardino Mountains. Mountain garter snakes occur in meadow-type vegetation and in very dry locations several miles from water. There are a number of records from the in the San Bernardino Mountains, including areas with similar habitat to the project area. Mountain garter snakes are likely to occur in throughout the analysis area.

Potential Effects to Watchlist Reptiles: There is some potential for mortality of young and adults during initial ground clearing during construction of the OHV trail reroutes and trail/road maintenance proposed in Alternative 3. Death or injury of denned or hibernating individuals may occur as a result of dens and rock crevices being compacted or shifted during construction or maintenance activities. Additionally, these slow-moving reptiles are susceptible to being run over by vehicles that are using the trails and access roads. Design Features call for avoiding high-quality habitat features such as rock outcrops and downed logs during trail layout and construction. This would help reduce the risk to individual reptiles. It is expected that the Proposed Action and Alternative 3 would have some beneficial effects to reptile species in the analysis area by lowering the trail density through restoration of unauthorized routes.

Other Special Status Birds

Turkey Vulture (*Cathartes aura*): Breeding turkey vultures are a SBNF Watchlist species due to lack of breeding in southern California. Turkey vultures are known to forage in the area during the summer and migration. Suitable nesting habitat occurs nearby but not in the analysis area. There is the potential that over the life of the project, turkey vultures could nest on the North Slope, including in the vicinity of the Rattlesnake trails area.

Osprey (*Pandion haliaetus*): The osprey is a SBNF Watchlist species and a CDFW Watch species. The first confirmed nesting of ospreys occurred in 2015 at both Big Bear Lake and Silverwood Lake. Ospreys are fish-eaters associated with salt or fresh water. Ospreys have been observed at Coxey pond. This is likely an infrequent occurrence and nesting is considered unlikely. Coxey pond is the only place in/near the project area with suitable habitat for this species. No new trails are proposed near the pond.

White-Tailed Kite (*Elanus leucurus*): The white-tailed kite is a SBNF Watchlist species and a CDFW "Fully Protected" species. This species is a yearlong resident in coastal and valley lowlands. White-tailed kites inhabit open areas of most habitats mostly in cismontane California. The range of the white-tailed kite been extended and their

numbers have increased in recent decades. White-tailed kites are known from the Coxey Meadow area. Occurrences of white-tailed kites at higher elevations in the San Bernardino Mountains appear to be increasing. There is potential for this species to forage and nest in the analysis area.

Northern Harrier (*Circus cyaneus*): The northern harrier is a SBNF Watchlist species and a CDFW Species of Special Concern. Northern harriers occur from annual grassland up to lodgepole pine and alpine meadow habitats. This species frequents open grassy areas and are seldom found in wooded areas. Harriers feed mostly on rodents. Northern harriers are known from the North Slope area and at Coxey Meadow. Northern harriers are not known to nest in the San Bernardino Mountains but foraging may occasionally occur in the analysis area.

Sharp-Shinned Hawk (*Accipiter striatus*): The sharp-shinned hawk is a SBNF Watchlist species and a CDFW Watch species. Sharp-shinned hawks in California typically nest in coniferous forests, often within riparian areas or on north-facing slopes. Sharp-shinned hawks are known to nest in the San Bernardino Mountains. Sharp-shinned hawks are known from the San Bernardino Mountains, including the North Slope area and Cushenbury Springs. This species has potential to breed in or near the analysis area.

Cooper's Hawk (*Accipiter cooperii*): The Cooper's hawk is a SBNF Watchlist species and a CDFW Watchlist species. In southern California, Cooper's hawks typically nest in riparian forests, mountain canyons, and oak woodlands. Populations in southern California are likely to be permanent, non-migratory residents. The preferred prey is small birds. Cooper's hawks are known to breed on the North Slope. They are likely to forage, and potentially breed, in the analysis area.

Ferruginous Hawk (*Buteo regalis*): The ferruginous hawk is a SBNF Watchlist species and a CDFW Watchlist species. Ferruginous hawks are migratory; there are no breeding records from California. Ferruginous hawks frequent open grasslands, sagebrush flats, desert scrub, low foothills surrounding valleys, and fringes of pinyon-juniper habitats. The analysis area supports suitable habitat for foraging by migratory ferruginous hawks. Breeding would not be expected; this species does not regularly breed in the San Bernardino Mountains.

Swainson's Hawk (*Buteo swainsoni*): The Swainson's hawk was a Forest Service Region 5 Sensitive species but was removed from the list in 2013. It is a CDFW Threatened species. In California, Swainson's hawk habitat generally consists of large, flat, open landscapes. This species is not a regular breeder in the San Bernardino Mountains. Swainson's hawks have been detected in the desert areas of the North Slope. Swainson's hawks may forage in the Coxey Meadow area during migration and may also forage in the Rattlesnake OHV analysis area.

Golden Eagle (*Aquila chrysaetos*): The golden eagle is a SBNF Watchlist species, a species identified by the Forest Service as a local viability concern, a CDFW Watchlist species, and a California state fully-protected species. It is protected under the federal

Bald and Golden Eagle Protection Act (Eagle Act) and the Migratory Bird Treaty Act (MBTA).

Golden eagles nest primarily on cliffs. Golden eagles are known to nest from a number of sites on and near the North Slope. The analysis area is currently used by foraging golden eagles. The entire analysis area is suitable for prey species used by golden eagles. There are no suitable cliff nest sites along the proposed trails.

The project analysis area does not support suitable cliff or rock outcrop features for nesting but there are suitable sites and known nesting territories on the North Slope. Golden eagles are known to nest in trees occasionally and the habitat that is present could potentially be used for nesting. No high quality cliff or rock outcrop nesting habitat is expected to be directly affected.

The Proposed Action and Alternative 3 would result in restoration of previously-disturbed foraging habitat. Prey habitat would be restored in the areas where unauthorized routes are restored. This project may result in a net gain of foraging habitat as result of the prey species habitat being restored.

If golden eagles are foraging in the analysis area, the presence of OHV users and the associated noise may cause them to flush and move to other areas. Golden eagles may be disturbed if they nest or forage within line-of-sight of trails or trailering sites or if they nest close enough to be disturbed by the noise of OHVs. They may also be disturbed by activities that they are not accustomed to; if they nest or frequently forage within view of a road, they may have acclimatized to that activity already and have a higher tolerance for those types of disturbance. However, most trail designations under the Proposed Action are existing unauthorized routes. Since OHV-related activities are already occurring in the area, it is not expected that there would be anything outside of what they are already accustomed to.

Under the Eagle Act, “take” is defined as “pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, destroy, molest or disturb.” “Disturb” is defined in regulations as “to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available: (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior.”

The Design Features include a several measures to help limit the potential for disturbance of raptors as a result of OHV activities, including reroutes of trails that are currently running through nesting habitat. It is not expected that the activities associated with construction, restoration, or use/maintenance of the trail system would result in disturbance that would fit the Eagle Act definition of disturbance.

Golden eagle populations are believed to have local declines in some areas of its range in the U.S. Threats to golden eagles include powerlines (electrocutions and collisions),

contaminants (*e.g.*, lead, secondary poisoning from rodenticides), shooting and poaching, incidental trapping in furbearer traps, drowning in stock-tanks, vehicle collisions, habitat loss, disturbance, and large-scale non-renewable and renewable energy developments.

Mortality of golden eagles as a result of wind turbine collisions has been high (as many as an average of 64/year at Altamont Pass over the past six years). Large-scale solar panel projects result in losses of large acreages of foraging habitat for golden eagles. Within the foreseeable future, a number of new renewable energy projects are expected to come online in California's deserts, as suggested by the number of applications for renewable energy projects (<http://www.energy.ca.gov/siting/solar/>; <http://www.blm.gov/ca/st/en/prog/energy/wind.html>). Those combined with existing developments and other threats to golden eagles contribute to the concern for the golden eagle population in the western U.S.

Large wildfires also pose a threat to golden eagles by affecting habitat suitability for nesting and foraging. Climate change may increase the frequency and severity of wildfires, reducing the availability of prey, perch, and nest sites.

Currently, the SBNF is evaluating a proposal by Mitsubishi to develop a new large open pit quarry a few miles to the east on the North Slope. Omya has also proposed an expansion of their White Knob, Sentinel, and Butterfield quarry limestone mining. All of those operations have the potential to affect the availability of foraging and nesting habitat and may result in disturbance to golden eagles using the areas.

The proposed project may add some minor effects to the cumulative effects for this species.

Summary of Effects for Golden Eagle: The Proposed Action and Alternative 3 may result in gains of habitat for prey species as a result of reduced trail densities. Nesting habitat is not expected to be affected. Disturbance effects are expected to be minor.

Merlin (Falco columbarius): The merlin is a Forest Service Watchlist and a CDFW Watch species. It is a USFWS Bird of Conservation Concern. Merlins are uncommon fall/winter migrants. They are seldom found in heavily-wooded areas, or open deserts, preferring to frequent coastlines, open grasslands, savannahs, woodlands, lakes, wetlands, edges, and early successional stages. The primary prey includes small birds; also small mammals and insects. This species does not breed in California. Merlins have been observed in the analysis area by USFS biologists.

American Peregrine Falcon (Falco peregrines anatus): The peregrine falcon is a Forest Service Watchlist and a CDFW "fully protected" species. It is a USFWS Bird of Conservation Concern. It has been removed from the Federal and State of California's Endangered Species lists.

Peregrine falcons nest almost exclusively on protected ledges of high cliffs, primarily in woodland, forest, and coastal habitats. The North Slope, including areas close to the Rattlesnake analysis area, has an abundance of rocky outcrops and cliffs that are suitable peregrine falcon nest sites. With successful nesting efforts in the mountain range and increasing populations of peregrine falcons in the western U.S., it is possible that this species could nest on the North Slope of the San Bernardino Mountains, including near the analysis area. See the previous effects discussion for golden eagles. The discussions of effects to habitat, nest sites, and disturbance apply to peregrine falcons.

Prairie Falcon (Falco mexicanus): Prairie falcons are a SBNF Watchlist species and a CDFW Watchlist species. Prairie falcons inhabit shrub-steppe desert, open desert scrub, grassland, mixed shrub-grasslands, and alpine tundra. Nests are located on cliffs, generally in arid open areas. Desert scrub and grasslands are preferred foraging habitats in southern California. Prairie falcons are known to occur in the analysis area, on the North Slope and adjacent SBNF lands. Suitable habitat for foraging and nesting exists in and near the analysis area. Nesting is suspected on the North Slope but has not been confirmed. See the previous effects discussion for golden eagles. The discussions of effects to habitat, nest sites, and disturbance apply to prairie falcons.

Flammulated Owl (Otus flammeolus): The flammulated owl has been identified by the Forest Service as a local viability concern and a SBNF Watchlist species. In southern California, flammulated owls breed in open, mature Jeffrey (*Pinus jeffreyi*) or ponderosa pine (*P. ponderosa*) forests and in pinyon pine (*P. quadrifolia*) woodlands. They are secondary cavity nesters. Flammulated owls are a nocturnal species. Flammulated owls are almost entirely insectivorous. Suitable habitat occurs for this species within the Rattlesnake analysis area and in Coxey Creek, Holcomb Creek, and other drainages around the analysis area. This species is a regular breeder in the San Bernardino Mountains and could nest in or near the analysis area.

Western Screech Owl (Otus kennicottii): The western screech owl has been identified by the Forest Service as a local viability concern and a SBNF Watchlist species. Western screech owls are uncommon to common, yearlong resident of open oak, pinyon-juniper, riparian, redwood, and mixed conifer habitats. They prey on mice and other small mammals, birds, fish, reptiles, amphibians, and arthropods. They roost and nest in abandoned woodpecker holes or other tree cavities. Western screech owls are nocturnal. They are non-migratory. This species is a regular breeder in the San Bernardino Mountains and could nest in or near the analysis area. Suitable habitat for nesting, roosting, and foraging exists for this species occurs in the Coxey Creek area and the portions of the analysis area with pinyon-juniper woodland and Jeffrey pine forest.

Northern Pygmy Owl (Glaucidium gnoma): The northern pygmy owl has been identified by the Forest Service as a species of local viability concern and a SBNF Watchlist species. It is an uncommon to fairly common, yearlong resident of most forest habitats in California. It is most commonly found along edges near meadows, streams, lakes, and other openings. They roost and nest in abandoned woodpecker holes or other tree cavities. They are non-migratory. Northern pygmy owls are at least partly diurnal. The

main food items of northern pygmy-owl are insects, small rodents, and reptiles. This species is a regular breeder in the San Bernardino Mountains and could nest in or near the proposed analysis area. Suitable habitat for nesting, roosting, and foraging exists for this species occurs in the Coxey Creek area and the portions of the analysis area with pinyon-juniper woodland and Jeffrey pine forest. It is unlikely to occur in the lower portions in desert transition habitats.

Long-Eared Owl (Asio otus): The long-eared owl is a CDFW Species of Special Concern and a SBNF Watchlist species. Long-eared owls breed in mature live oak and riparian woodlands, but also occur in desert riparian, woodland, and oasis habitats. Long-eared owls are active primarily during the night. They most often hunt at night over open grasslands and meadows. This species is a regular breeder in the San Bernardino Mountains. Long-eared owls are known to breed at Cushenbury Springs. Suitable habitat for nesting, roosting, and foraging habitat for long-eared owls occurs in the Coxey Pond area as well as in Jeffrey pine forest or pinyon/juniper woodlands. It is unlikely to occur in desert transition habitat of the analysis area.

Northern Saw-Whet Owl (Aegolius acadicus): The northern saw-whet owl has been identified by the Forest Service as a species of local viability concern and a SBNF Watchlist species. Northern saw-whet owl most commonly breeds in dense oaks intermixed with conifers and in pine and fir forests that have an oak understory, although open conifer forests are occupied at higher elevations. Northern saw-whet owls are secondary cavity nesters. Northern saw-whet owls exhibit yearlong nocturnal activity. The diet of northern saw-whet owl consists mainly of small rodents and occasionally small birds, frogs, and insects. This species is a regular breeder in the San Bernardino Mountains and could nest in or near the analysis area. Suitable habitat for nesting, roosting, and foraging habitat for this species occurs in forested portions of the analysis area. It is unlikely to occur in the desert transition habitat.

Common Nighthawk (Chordeiles minor): The common nighthawk has been identified by the Forest Service as a species of local viability concern and a SBNF Watchlist species. The common nighthawk is a local species of concern because it is a rare breeder in southern California. Common nighthawks forage over a variety of habitats, from open coniferous forest to sagebrush plains, and are frequently seen foraging over open bodies of water. Common nighthawks typically nest on bare ground, using no gathered material. Common nighthawks forage by hawking flying insects. This species is known from the vicinity of the analysis area (Coxey Meadow area) and is a regular breeder in the San Bernardino Mountains. Suitable habitat for nesting, roosting, and foraging habitat for common nighthawk occurs in the analysis area and vicinity.

Mexican Whip-Poor-Will (Caprimulgus arizonae): The whip-poor-will is a SBNF Watchlist species. The whip-poor-will is a rare and local summer resident in mountains of southern California. It is found in the San Bernardino Mountains. In California, has been found on steep slopes in montane hardwood, montane hardwood-conifer, and mixed conifer habitats, as well as in montane riparian and pinyon-juniper habitats. Whip-poor-wills feed on flying insects, especially moths caught in short sallies made from the

ground or from a perch in a tree. They nest in a scrape on the ground in the litter of woodlands. They are found in sparse and dense woodlands, often on steep slopes. This species is a regular breeder in the San Bernardino Mountains. Suitable habitat for nesting, roosting, and foraging habitat for whip-poor-will occurs in the analysis area and vicinity.

Calliope Hummingbird (Stellula calliope): The calliope hummingbird is a SBNF Watchlist species and has been identified by the Forest Service as a local viability concern. Calliope hummingbirds occur primarily in montane habitats. Calliope hummingbirds generally breed along meadow borders and in streamside thickets (especially willows) within arid mixed-conifer forests. This species is a regular breeder in the San Bernardino Mountains and could nest in or near the analysis area.

Williamson's Sapsucker (Sphyrapicus thyroideus): The Williamson's sapsucker is a SBNF Watchlist species and was identified as a species of local viability concern. Williamson's sapsuckers breed at high elevations in coniferous forests dominated by white fir (*Abies concolor*) or lodgepole pine (*Pinus contorta*) and are more widely distributed in montane conifer forests during the winter. Williamson's sapsuckers nest in cavities. Williamson's sapsucker is a local species of concern because its breeding population in southern California is small, disjunct, and restricted to high-elevation forests. This species is a regular breeder in the San Bernardino Mountains and could nest in or near the analysis area. Suitable habitat for nesting, roosting, and foraging habitat for Williamson's sapsuckers occurs in the analysis area and vicinity.

Nuttall's Woodpecker (Picoides nuttallii): The Nuttall's woodpecker is a SBNF Watchlist species and a USFWS Bird of Conservation Concern. Nuttall's woodpeckers are a common, permanent resident of low-elevation riparian deciduous and oak habitats. Nuttall's woodpeckers are cavity-nesters. This species is a regular breeder in the San Bernardino Mountains and could nest in or near the analysis area. Nuttall's woodpeckers known to breed on the North Slope in similar habitats to those that are present in the project area.

Southern White-Headed Woodpecker (Picoides albolarvatus gravirostris): The southern white-headed woodpecker is a SBNF Watchlist species, a USFWS Bird of Conservation Concern, and has been identified by the Forest Service as a species of local viability concern. The southern California populations of this species are considered to be a distinct, endemic subspecies. White-headed woodpecker is found in mixed conifer forests. This species is a regular breeder in the San Bernardino Mountains and could nest in or near the analysis area. This species is known from Dry and Deep Canyons and the Holcomb Valley area. It is likely to nest and forage in the portions of the project area that contain Jeffrey pine forest habitat.

Olive-Sided Flycatcher (Contopus cooperi): The olive-sided flycatcher is a CDFW Species of Special Concern and a USFWS Bird of Conservation Concern. This flycatcher is an uncommon transient and uncommon summer resident (breeding bird) in conifer forest as well as montane riparian habitats with the San Bernardino Mountains.

Olive-sided flycatchers are predominantly a montane and northern coniferous forest species. They prefer forest edges and openings. Olive-sided flycatchers are sustained nearly entirely on flying insects. This species is a regular breeder in the San Bernardino Mountains and it is known the North Slope. Suitable habitat for nesting, roosting, and foraging habitat for this species occurs in the analysis area and vicinity.

Gray Flycatcher (*Empidonax wrightii*): The gray flycatcher has been identified by the Forest Service as a species of local viability concern and a SBNF Watchlist species. In the San Bernardino Mountains, it is found along the northern slope in areas east of Baldwin Lake and Arrastre Creek during the summer. In southern California, breeding gray flycatchers are primarily found in pinyon pine (*Pinus monophylla*) woodlands with grassland understory. This insect-eating species is a regular breeder in the San Bernardino Mountains and could nest in or near the analysis area. The analysis area and vicinity provide suitable nesting and foraging habitat for this species.

Loggerhead Shrike (*Lanius ludovicianus*): Thee loggerhead shrike is a CDFW Species of Special Concern and a SBNF Watchlist species. The loggerhead shrike prefers open habitats (including pinyon/juniper and desert) with scattered shrubs, trees, posts, fences, utility lines, or other perches. Loggerhead shrikes nest in trees and shrubs, and breeding shrikes typically use isolated trees or large shrubs. Loggerhead shrikes are known from the project vicinity. This species is a regular breeder in the San Bernardino Mountains and could nest in or near the analysis area. Records indicate that this species is a year-round resident and breeder on the North Slope. The analysis area and vicinity provide suitable nesting and foraging habitat for this species.

Plumbeous Vireo (*Vireo plumbeus*): Solitary vireo was split into Cassin's vireo, plumbeous vireo, and blue-headed vireo. The plumbeous vireo has been identified by the Forest Service as a species of local viability concern and is a SBNF Watchlist species. Plumbeous vireo has been observed in upper Arrastre Creek on the north side of the San Bernardino Mountains. In southern California, plumbeous vireo breeds in arid woodlands of mature pinyon pine (*Pinus quadrifolia*), white fir (*Abies concolor*), ponderosa pine (*Pinus ponderosa*), and Jeffrey pine (*Pinus jeffreyi*), often extending into adjacent riparian growth. There are records for breeding solitary vireos (before the split) in the San Bernardino Mountains. There is suitable nesting and foraging habitat (pinyon woodlands) for the plumbeous vireo in and near the Rattlesnake analysis area.

Cassin's Vireo (*Vireo cassinii*): Solitary vireo was split into Cassin's vireo, plumbeous vireo, and blue-headed vireo. The Cassin's vireo has been identified by the Forest Service as a species of local viability concern and is a SBNF Watchlist species. Cassin's vireo breeds in dry, warm, forested habitats, especially in montane hardwood-conifer, montane hardwood, ponderosa pine (*Pinus ponderosa*), and Jeffrey pine (*Pinus jeffreyi*) forests. It also occurs in riparian and other habitat types. Cassin's vireos are migratory and only present in southern California during the breeding season. This species is a regular breeder in the San Bernardino Mountains and could nest in or near the analysis area. There are records for breeding solitary vireos (before the split) in the San

Bernardino Mountains. There is suitable nesting and foraging habitat (pinyon woodlands) for Cassin's vireo in and near the Rattlesnake analysis area.

Warbling Vireo (*Vireo gilvus*): The Forest Service identified the warbling vireo as a riparian obligate species of concern (as defined by Partners in Flight) and is a SBNF Watchlist species. Warbling vireos are primarily associated with mixed deciduous woodlands near riparian areas, but also occasionally in uplands away from water or in mixed hardwood or rarely, pure conifer forests. Warbling vireos forage primarily on arthropods; they also eat fruit during winter. This species is a regular breeder in the San Bernardino Mountains and could nest in or near the analysis area. Coxey Creek, Willow Canyon, and other areas in the vicinity of the project provide suitable nesting and foraging habitat for this species.

Pinyon Jay (*Gymnorhinus cyanocephalus*): The pinyon jay has been identified by the Forest Service as a species of local viability concern and a SBNF Watchlist species. The pinyon jay is known to breed in the northeastern San Bernardino Mountains. In southern California, pinyon jays are found primarily in mature pinyon pine-juniper-yucca woodland on arid mountain slopes and in open montane valleys of sagebrush or grasslands bordered by pinyon pines, junipers, or yellow pines. Pinyon jays are known from the project analysis area. This species is a regular breeder in the San Bernardino Mountains and could nest in or near the analysis area. The analysis area and vicinity provide suitable nesting and foraging habitat for this species.

California Horned Lark (*Eremophila alpestris actia*): The California horned lark is a SBNF Watchlist species and a CDFW Watchlist species. It frequents grasslands and other open habitats with low, sparse vegetation. It mostly eats insects and grass/forb seeds. Horned larks build grass-lined cup nests on the ground in the open. California horned larks are known from the vicinity of the analysis area (Coxey Meadow) and have a high likelihood of occurring in the analysis area. This species is a regular breeder in the San Bernardino Mountains and could nest in or near the analysis area. The analysis area and vicinity provide suitable nesting and foraging habitat for this species.

Tree Swallow (*Tachycineta bicolor*): The tree swallow is a SBNF Watchlist species and was identified by the Forest Service as having a local viability concern. Tree swallows are now a local and increasingly uncommon-to-rare summer resident in southern California. In southern California, tree swallows breed in lowland and foothill riparian habitats near slow moving or standing water. Tree swallows require cavities for nesting. Tree swallows feed aerially, primarily on flying insects. This species is a regular breeder in the San Bernardino Mountains and could nest in or near the analysis area. The analysis area and vicinity provide suitable nesting and foraging habitat for this species.

Swainson's Thrush (*Catharus ustulatus oedicus*): The Swainson's thrush has been identified as a Riparian Obligate Species of Concern (as defined by Partners in Flight) and a SBNF Watchlist species. In southern California, breeding Swainson's thrushes are restricted to low-elevation deciduous riparian woodlands. The diet of Swainson's thrush consists of berries and insects. Swainson's thrushes have been recorded on/near the

North Slope in areas that have similar habitat to areas of the Rattlesnake project. This species is a regular breeder in the San Bernardino Mountains and could nest in or near the analysis area. The analysis area and vicinity provide suitable nesting and foraging habitat for this species.

Hermit Thrush (Catharus guttatus): The hermit thrush is a SBNF Watchlist species and was identified by the Forest Service as a species with a local viability concern. In southern California, hermit thrush breeds primarily in forests dominated by white fir (*Abies concolor*) and other high-elevation conifers, and is usually found on steep, north-facing slopes. Hermit thrushes nest on the ground or on low branches. The hermit thrush is a local species of concern because its breeding population in southern California is small, disjunct, and primarily restricted to high-elevation conifer forests. This species is a regular breeder in the San Bernardino Mountains and could nest in or near the analysis area. The analysis area and vicinity provide suitable nesting and foraging habitat for this species.

Virginia's Warbler (Vermivora virginiae): Virginia's warbler is a SBNF Watchlist species and a CDFW Watchlist species. In southern California, Virginia's warbler occupies understory scrub or open brushfields (e.g., mountain mahogany, manzanita, and serviceberry) within arid coniferous forest. Nests are built on the ground on steep slopes in a hollow or under a clump of vegetation. Virginia's warblers forage exclusively on arthropods; they glean or hover-glean prey from leaves and sallies for flying insects. This species is not a regular breeder in the San Bernardino Mountains, but there are several records. Virginia warbler has been detected in Jacoby Canyon (SBNF records) which has similar habitat to areas within the project boundary. There is suitable nesting and foraging habitat for Virginia's warblers in the analysis area and in the Coxey Creek drainage.

Yellow Warbler (Dendroica petechia brewsteri): Yellow warbler is a CDFW Species of Special Concern and is a SBNF Watchlist species. In southern California, yellow warblers breed in riparian woodlands in the lowlands and foothill canyons. They typically occur in riparian forests that contain cottonwoods, sycamores, willows, or alders. Yellow warblers feed primarily on arthropods, and rarely on wild fruit. This species is a regular breeder in the San Bernardino Mountains. Yellow warblers are known from Coxey and Holcomb creeks adjacent to the analysis area. The analysis area and vicinity provide suitable nesting and foraging habitat for this species.

MacGillivray's Warbler (Oporornis tolmiei): MacGillivray's warbler has been identified by the Forest Service as a local viability concern and is a SBNF Watchlist species. In southern California, MacGillivray's warbler occurs in willow thickets and other brushy, montane riparian areas in conifer forests at elevations above 6,000 feet. This species requires moderate cover and thick understory vegetation for nesting. MacGillivray's warblers eat insects during the breeding season. This species is a regular breeder in the San Bernardino Mountains. MacGillivray's warblers are known from Holcomb Creek. There is suitable nesting and foraging habitat for MacGillivray's warbler in the upper

elevations of the analysis area. The analysis area and vicinity provide suitable nesting and foraging habitat for this species.

Wilson's Warbler (Wilsonia pusilla): The Wilson's warbler is a SBNF Watchlist species. In the San Gabriel and San Bernardino Mountains, Wilson's warblers breed in dense willow thickets in high-elevation meadows and riparian areas. Wilson's warblers forage primarily on arthropods, including bees, flies, mayflies, spiders, beetles, and caterpillars; they occasionally eat berries. This species is a regular breeder in the San Bernardino Mountains. Wilson's warblers have been recorded at Holcomb Creek and Coxe Creek. There is suitable nesting and foraging habitat for the Wilson's warblers in analysis area.

Black-Chinned Sparrow (Spizella atrogularis): The black-chinned sparrow is a SBNF Watchlist species and a USFWS Bird of Conservation Concern. The black-chinned sparrow is a summer resident in southern California, breeding locally on arid mountain slopes of southern California. It occurs mostly on sloping ground in mixed chaparral, chamise-redshank chaparral, sagebrush, and similar brushy habitats, including those in understory of sparse pinyon-juniper, juniper, and other conifer habitats. Black-chinned sparrows apparently feed on seeds, insects, and fruits. This species is a regular breeder in the San Bernardino Mountains. Black-chinned sparrows have been observed on/near the North Slope in areas with similar habitat to areas within the analysis area. There is suitable nesting and foraging habitat for black-chinned sparrows in and near the analysis area.

Lincoln's Sparrow (Melospiza lincolni): The Forest Service has identified Lincoln's sparrow as a local viability concern and is a SBNF Watchlist species. In southern California, Lincoln's sparrows breed in wet montane meadows. Lincoln's sparrow nests are small cups built on the ground. Lincoln's sparrows eat seeds, insects, millipedes, and other small invertebrates. This species is a regular breeder in the San Bernardino Mountains. There is suitable nesting and foraging habitat for this species in Coxe Meadow adjacent to the analysis area. Nesting is unlikely within the analysis area but foraging may occur if nesting occurs nearby.

Yellow-Headed Blackbird (Xanthocephalus xanthocephalus): The yellow-headed blackbird is a CDFW Species of Special Concern. Yellow-headed blackbirds nest and forage in fresh emergent wetlands with dense vegetation and deep water, often along borders of lakes or ponds. This species is a migrant and local breeder in deserts. Adults feed primarily on seeds and cultivated grains; they eat insects in breeding season. They only breed where large insects such as dragonflies are abundant with nesting timed to coincide with maximum emergence of aquatic insects. Yellow-headed blackbirds are known from the Baldwin Lake area and Coxe Meadow/Pond. Because of their presence during summer months, nesting is suspected in the Baldwin Lake area. Nesting at Coxe Meadow has not been documented but may occur. No new routes are proposed near the suitable habitat at Coxe Meadow.

Under Alternative 3, adding OHV use to 3N14 would likely increase the use on that road, especially on weekends. Noise from the additional vehicles on 3N15 would not change

the disturbance levels in the suitable habitat farther from the road. It is possible that increased use on 3N14 might increase the level of foot traffic to Coxeys pond and could increase disturbance in that way.

Lawrence's Goldfinch (*Carduelis lawrencei*): The Forest Service has identified Lawrence's goldfinch as a riparian species of concern, it is a SBNF Watchlist species, and a USFWS Bird of Conservation Concern. Lawrence's goldfinches breed in a variety of habitats in southern California, including, chaparral, riparian woodland, pinyon-juniper woodland, and mixed coniferous-oak forest. Lawrence's goldfinches forage on seeds, with a predilection for those of native plants. This species is a regular breeder in the San Bernardino Mountains. Lawrence's goldfinches are known to occur near the analysis area (Coxey Meadow area) and have a high likelihood of occurring in the analysis area. Suitable nesting and foraging habitat occurs for this species in the analysis area and vicinity.

Summary of Potential Effects to Watchlist/Special Status Bird Species:

The Proposed Action, No Action, and Alternative 3 could potentially affect birds using the analysis area in four ways:

- a) Loss/degradation of areas suitable for breeding/nesting, foraging, sheltering, and migration stopovers.
- b) Disturbance to birds in and near the analysis area as a result of the use/maintenance of the trail system.
- c) Death and injury of birds in and near the analysis area.
- d) Beneficial effects as a result of restoration of unauthorized routes.

The types and degree of effects from the Proposed Action and Alternative 3 would be similar. The Proposed Action and Alternative 3 would be expected to have fewer effects due to a reduction in trail density and relocation of trails from higher quality habitat. The Design Features include several measures to help limit the potential for disturbance of nesting birds and raptors as a result of project activities. Surveys would be conducted prior to ground clearing activities to locate and avoid nesting birds.

Other Special Status Mammals

Western Small-Footed Myotis (*Myotis ciliolabrum*): The western small-footed myotis is a SBNF Watchlist species, a BLM Sensitive species, and a Western Bat Working Group Medium Priority species. The western small-footed myotis rears its young in cliff-face crevices, erosion cavities, and beneath rocks on the ground. These bats are among America's least-studied animals. Western small-footed myotis bats have been detected at on/near the North Slope in similar pinyon/juniper habitat. They are known to occur in the analysis area.

Long-Eared Myotis (*Myotis evotis*): Long-eared myotis is a SBNF Watchlist species, BLM Sensitive species, and a Western Bat Working Group Medium Priority species. Long-eared myotis are found predominantly in coniferous forests, typically only at higher elevations in southern areas (between 7,000 and 8,500 feet). They roost in tree cavities and beneath exfoliating bark in both living trees and dead snags. Pregnant long-eared

myotis often roost at ground level in rock crevices, fallen logs, and even in the crevices of sawed-off stumps. Long-eared myotis capture prey in flight, but also glean stationary insects from foliage or the ground. Long-eared myotis bats have been detected at on/near the North Slope in similar pinyon/juniper habitat. They occur in the analysis area.

Little Brown Myotis (Myotis lucifugus): The little brown myotis is a SBNF Watchlist species. The San Bernardino Mountains population has been identified as a Western Bat Working Group Medium Priority species. In the Western U.S., the little brown myotis is found mainly in mountainous and riparian areas in a wide variety of forest habitats; from tree-lined xeric-scrub to aspen meadows. In addition to day roosts in tree cavities and crevices, little brown myotis seem quite dependent upon roosts that provide safe havens from predators that are close to foraging grounds. Little brown myotis forage over water, forest trails, cliff faces, meadows, and farmlands. Little brown myotis bats have been detected at on/near the North Slope in similar pinyon/juniper habitat. They are known occur in the analysis area.

Long-Legged Myotis (Myotis volans): The long-legged myotis is a SBNF Watchlist species and a Western Bat Working Group High Priority species. Long-legged myotis are especially dependent on wooded habitats from pinyon- juniper to coniferous forests. Maternity roosts are found beneath bark and in other cavities. Long-legged myotis are typically located in openings or along forest edges. Long-legged myotis forage over ponds, streams, water tanks, and in forest clearings. Long-legged myotis bats have been detected at on/near the North Slope in similar pinyon/juniper habitat. They are known occur in the analysis area.

Yuma Myotis (Myotis yumanensis): The Yuma myotis is a SBNF Watchlist species and a Western Bat Working Group Low-Medium Priority species. Occasionally roosting in mines or caves, Yuma myotis are most often found in buildings or bridges. Single males also sometimes roost in abandoned cliff swallow nests. Tree cavities are used for most nursery roosts. These bats typically forage over water in forested areas. Yuma myotis have been detected at on/near the North Slope in similar pinyon/juniper habitat. They are known to occur in the analysis area.

Spotted Bat (Euderma maculatum): The spotted bat is a SBNF Watchlist species, a CDFW Species of Special Concern, a BLM Sensitive species, and a Western Bat Working Group High Priority species. Spotted bats are found in a variety of habitats ranging from below sea level desert, sagebrush, montane forests and up to high-elevation coniferous forests. This includes foraging habitat in forest openings and pinyon juniper woodlands. They are closely associated with rock cliffs, where they roost in crevices. Mines and caves may also be used during winter. Spotted bats hibernate but occasionally become active during the winter. They subsist almost entirely on moths. Spotted bats have been detected at Cactus Flats in similar pinyon/juniper habitat. They are likely to occur in the analysis area.

California Leaf-Nosed Bat (Macrotus californicus): The California leaf-nosed bat was removed from the Forest Service's Regional Forester Sensitive species list in 2013. It is a

CDFW Species of Special Concern, a BLM Sensitive species, and a Western Bat Working Group high priority species. California leaf-nosed bats are strongly associated with desert riparian and wash habitats and favor caves and mines. California leaf-nosed bats do not migrate. California leaf-nosed bats feed primarily on grasshoppers, cicadas, moths, butterflies, dragonflies, beetles, and caterpillars.

California leaf-nosed bats records exist for the Arrastre Creek, in similar pinyon/juniper and desert transition habitat to that found at the project site. However, there is some question about the validity of that record. Because this species is generally associated with low-elevation desert habitat, it is unlikely that it occurs at the project area. It may occur at lower elevations in desert habitat on the northwest part of the project area, but even those areas are above the typical elevation distribution for this species.

Western Red Bat (*Lasiurus blossevillii*): The western red bat was removed from the Forest Service's Regional Forester Sensitive species list in early 2013. It is a CDFW Species of Special Concern and a Western Bat Working Group high priority species. The western red bat is associated with large deciduous trees in riparian habitat. Foraging occurs in association with streams, forest openings, and clearings. The diet of western red bat consists of a variety of flying insects such as moths, but it also includes flies, bugs, beetles, cicadas, ground-dwelling crickets, and hymenopterans. Red bats are known from Deep Creek and the Big Bear area and may occur in the analysis area.

Silver-Haired Bat (*Lasionycteris noctivagans*): The silver-haired bat is a Western Bat Working Group Medium priority species and a "Recommended Watch" species for CDFW. Habitats include coastal and montane coniferous forests, valley foothill woodlands, pinyon-juniper woodlands, and valley foothill and montane riparian habitats. They are primarily forest dwellers, feeding over streams, ponds, and open brushy areas. This species feeds mainly on moths and other soft-bodied insects. Silver-haired bats roost in hollow trees, snags, buildings, rock crevices, caves, and under bark. Silver-haired bats are known from the Mountaintop District in similar habitat and have a potential to occur in the analysis area.

Hoary Bat (*Lasiurus cinereus*): The hoary bat is a Western Bat Working Group Medium priority species and a "Recommended Watch" species for CDFW. This common, solitary species winters along the coast and in southern California, breeding inland and north of the winter range. This species migrates between summer and winter ranges. During migration in southern California, males are found in foothills, deserts and mountains; females in lowlands and coastal valleys. Habitats suitable for bearing young include all woodlands and forests with medium to large-size trees and dense foliage. The hoary bat feeds primarily on moths, although various flying insects are taken. These bats generally roost in dense foliage of medium to large trees. Hoary bats are known from the Mountaintop District in similar habitat and have a potential to occur in the analysis area.

Pocketed Free-Tailed Bat (*Nyctinomops femerosaccus*): The pocketed free-tailed bat is a SBNF Watchlist species, a CDFW Species of Special Concern, and a Western Bat Working Group Medium Priority species. Pocketed free-tailed bats live in pinyon/juniper

woodlands, and desert habitats. They roost in crevices high on cliff faces of rugged canyons and must drop from the roost site to gain flight. Nursery colonies are located in rock crevices, caverns/mines, and buildings. They forage over ponds, streams, or arid desert habitat, feeding on flying insects. Pocketed free-tailed bats have been detected at on/near the North Slope. Suitable habitat occurs at the project site and it is likely to occur.

Western Bonneted Bat (Eumops perotis californicus): The western bonneted bat is a SBNF Watchlist species, a CDFW Species of Special Concern and a Western Bat Working Group High Priority species. Western bonneted bats roost in cliff-face crevices and feed high above the ground. Western bonneted bats have been detected at Cactus Flats in pinyon/juniper habitat (SBNF records) and at Cushenbury Springs. Suitable habitat occurs at the project site and it is likely to occur.

Potential Effects for Bat Species: Suitable foraging habitat exists for all of the above bat species. In general, the above-mentioned bats forage on insects in or above riparian areas, open areas, and on vegetation directly by gleaning. All of the above species use rock outcrops and cliffs for roosting, hibernating, and breeding. A few use tree cavities for roost sites.

Roost/maternity sites for cliff or rocky outcrop roosting species (*i.e.*, small-footed myotis, spotted bat, western bonneted bat) would not be directly affected by the proposed project. Small-footed myotis are known to rear young under rocks on the ground. This roost habitat could be affected by trail construction, reroutes, and restoration. For the species that roost in trees (*i.e.*, little brown myotis, long-legged myotis, long-eared myotis, and Yuma myotis), there may be some minor effects to habitat as hazard trees within falling distance of the trail system are removed.

Mortality of bats living beneath exfoliating bark or in snags/cavities would occur if animals were not flushed prior to tree-felling. The risk would be highest during summer months for young-of-the-year that are not yet competent fliers. OHV use at night may produce noise that could interfere with important vocalizations that are used for communicating between colony members and territorial disputes. This might interfere with courtship, breeding, and foraging success.

The effects from the Proposed Action and Alternative 3 would be similar. Because of the reduction in route density and restoration of routes in higher quality habitat, the action alternatives would result in fewer effects from habitat loss and disturbance than the No Action alternative.

San Bernardino Golden-Mantled Ground Squirrel (Spermophilus lateralis bernardinus): The golden-mantled ground squirrel is a SBNF Watchlist species. The San Bernardino golden-mantled ground squirrel is a locally-endemic subspecies that is known from a number of sites in the San Bernardino Mountains. They are most common in open, well-illuminated forests with a mix of tall trees, brush, and open ground supporting herbaceous plants. Golden-mantled ground squirrels have also been found in sagebrush and meadow

habitats with abundant rocks for shelter. Golden-mantled ground squirrels dig their burrows beneath rocks, stumps, and logs. Golden-mantled ground squirrels are known from the vicinity of the analysis area and are very likely to occur throughout it.

Death or injury is unlikely except for collisions with OHVs. If a den were discovered during pre-work surveys or implementation, the Design Features allow for the den to be flagged for avoidance during trail construction or restoration, further reducing the risk to individuals. Noise disturbance associated with trail construction, restoration, and use/maintenance could cause adults to abandon young and denning areas resulting in abandonment of the area.

Design Features that provide for retention or protection of logs, snags, and rock piles would help protect some of these important habitat components throughout most of the analysis area. Unauthorized routes that would be restored under the Proposed Action and Alternative 3 could become suitable habitat for this species.

Lodgepole Chipmunk (Tamias speciosus speciosus): The lodgepole chipmunk is a SBNF Watchlist species. The distribution of the southern California population of lodgepole chipmunk is discontinuous. They are known from the San Bernardino Mountains and may have been extirpated from the San Jacinto Mountains. Lodgepole chipmunks are generally found in open-canopy forests with a mix of shrubs and trees. They use trees for refuge, observation posts, and nests. They also use cavities in logs, snags and stumps, and underground burrows. This species is known from the analysis area as well as surrounding areas. Habitat in the analysis area is at the northern end of their distribution in this part of the San Bernardino Mountains and transitions out of suitability to the north on the desert-facing slopes. The effects for lodgepole chipmunks are similar to that described above for golden-mantled ground squirrel.

San Diego Pocket Mouse (Chaetodipus fallax fallax): The San Diego pocket mouse is a CDFW Species of Special Concern and is a SBNF Watchlist species. The historical and present distribution of the San Diego pocket mouse is restricted to San Diego, Riverside, and San Bernardino Counties in southern California. A broad range of habitats appears to be occupied on the desert side of the mountains. The San Diego pocket mouse has been found in pinyon-juniper woodland, desert scrub, rocky slopes, and agave-ocotillo habitat.

San Diego pocket mice are primarily nocturnal. They excavate burrows in gravelly or sandy soils. San Diego pocket mice forage for seeds of forbs, grasses, and shrubs. San Diego pocket mice are known from Arrastre Canyon in the analysis area. The rocky slopes in pinyon-juniper woodland and the desert transition habitat are highly suitable for this species. The effects for San Diego pocket mice are similar to that described above for golden-mantled ground squirrel.

Southern Grasshopper Mouse (Onychomys torridus ramona): The southern grasshopper mouse is a SBNF Watchlist species and a CDFW Species of Special Concern. Southern grasshopper mice are found in the Mojave Desert and southern Central Valley of

California. Alkali desert scrub and desert scrub habitats are preferred, but it also occurs in coastal scrub, mixed chaparral, sagebrush, low sage, and bitterbrush habitats. They prefer low to moderate shrub cover. Nests are constructed in burrows. Grasshopper mice feed almost exclusively on arthropods, especially scorpions and orthopteran insects. Southern grasshopper mice are known from Cushenbury Springs. This species may occur along trails in the northern sections of the project. The effects for southern grasshopper mice are similar to that described above for golden-mantled ground squirrel.

San Diego Desert Woodrat (Neotoma lepida intermedia): The San Diego desert woodrat is a CDFW Species of Special Concern and is a SBNF Watchlist species. Desert woodrats commonly inhabit Joshua tree woodlands, pinyon-juniper woodlands, mixed chaparral, sagebrush, and desert habitats. Desert woodrats appear to preferentially occupy dens in habitats with large-sized rocks and boulders. Like other woodrats, they construct above-ground houses of twigs, sticks, cactus parts, and rocks. Houses are used for breeding, food caching, and shelter. Desert woodrats exhibit nocturnal foraging behavior; any diurnal activity is restricted to the den site. Desert woodrats are primarily herbivorous and rely on a continuous supply of green vegetation for food and water.

San Diego desert woodrats are known from Cactus Flats/Lone Valley in pinyon/juniper woodland habitat. The analysis area is on the edge of the known range of this subspecies. The San Diego desert woodrat subspecies may occur in the analysis area due to an abundance of suitable habitat. The potential effects for the San Diego desert woodrat are similar to that described above for golden-mantled ground squirrel.

Porcupine (Erethizon dorsatum): The Forest Service has identified this species as a local viability concern and is a SBNF Watchlist species. The porcupine population in California is restricted to the northern Coast, Klamath, and Cascade ranges, and south through the Sierra Nevada. An isolated occurrence has been recorded in the San Bernardino Mountains in southern California. Reported sightings of porcupines in the San Bernardino Mountains are rare (3 records since the 1960s). In southern California, the current status of the porcupine population is unknown.

Porcupines are found in coniferous forests, pinyon-juniper woodlands, riparian forests, sagebrush, rangelands, and desert chaparral. Porcupines have been known to wander between different habitats and occasionally migrate short to long distances. They feed on inner bark of trees and on evergreen needles, roots, stems, leaves, berries, catkins, seeds, flowers, nuts, riparian vegetation, and grass. Suitable habitat for porcupines exists in the analysis area. They may occur in the analysis area. The effects for porcupines are similar to that described above for golden-mantled ground squirrel.

Ringtail (Bassariscus astutus): The Forest Service has identified this species as a local viability concern and is a SBNF Watchlist species. Ringtails are generally known to occupy brushy and wooded areas along watercourses in foothill and lower montane canyons. Its principal habitat requirements seem to be den sites among boulders or in hollows of trees and sufficient food in the form of rodents and other small animals. Rocky habitats are apparently preferred. Ringtails are nocturnal and active

year-round. Although primarily carnivorous, ringtails appear to be opportunistic feeders, eating insects, fruits, berries, frogs, birds, rodents (white-footed mouse and woodrat) and rabbits. Ringtails have been observed on the North Slope. They have potential to occur throughout the analysis area. The effects for ringtails are similar to that described above for golden-mantled ground squirrel.

American Badger (Taxidea taxus): The American badger is a CDFW Species of Special Concern and is a SBNF Watchlist species. American badgers occur in a wide variety of open, arid habitats, but are most commonly associated with grasslands, savannas, mountain meadows, and open areas of desert scrub; they are not usually found in mature chaparral. The principal habitat requirements for this species appear to be sufficient food (burrowing rodents), friable soils, and relatively open, uncultivated ground. Burrows are used for denning, escape, and predation on burrowing rodents. American badgers are carnivorous and are opportunistic predators. They are nocturnal and diurnal.

American badgers are known from the vicinity of Coxey Creek. Suitable habitat exists throughout the analysis area and it may occur due to the proximately of known occurrences. The effects for the American badger are similar to that described above for golden-mantled ground squirrel.

Western Spotted Skunk (Spilogale gracilis): The western spotted skunk is a SBNF Watchlist species. The western spotted skunk is believed to be widespread throughout California, but the present distribution and abundance of this species on NFS lands is not well-understood. The Mountaintop Ranger District records are all considerably higher in elevation than CDFW's Wildlife Habitat Relationship's description of occupied habitat (between sea level and 4,500 feet). The western spotted skunk uses underground burrows, cavities in rocks or trees, and crevices in artificial structures for protection, resting, and rearing of young. While spotted skunks have not been recorded from the analysis area, there is potential that they may occur in the analysis area. The effects for spotted skunks are similar to that described above for golden-mantled ground squirrel.

Nelson's Bighorn Sheep (Ovis canadensis nelsoni): Nelson's bighorn sheep is a BLM Sensitive species, a CDFW Fully Protected Mammal, was identified by the Forest Service as a local viability concern species, and is a SBNF Watchlist species.

Nelson's bighorn sheep in the San Bernardino Mountains are considered to constitute two separate populations: the larger population (San Gorgonio Herd) occurs in the vicinity of Mount San Gorgonio in wilderness; the other population (Cushenbury Herd) occurs on the northern edge of the range in desert-facing canyons (e.g., Furnace, Bousic, Arctic, and Marble Canyons). Desert bighorn sheep inhabit dry, relatively barren, desert mountain ranges throughout North America. Escape terrain and sufficient forage are identified as the most important habitat components for bighorn sheep in these mountains. Escape terrain is defined as steep slopes with abundant rock outcrops and sparse shrub cover.

The Cushenbury herd is seemingly isolated from other bighorn herds. The Cushenbury bighorn sheep herd is currently believed to be about 15 individual animals, down from an

estimated 40-50 in the 1990s. If the Cushenbury herd is only fifteen animals as suspected, the herd may reach a genetic bottleneck where genetic variation is so small that it affects the population's potential to adapt to environmental conditions. Biologists are concerned about this population because it is so small and possibly isolated. This places it at a higher risk for extirpation than other local populations. A single episode such as disease, drought resulting in lack of forage or water, a mountain lion targeting bighorn sheep, etc. could have devastating effects to this herd.

The Proposed Action and Alternative 3 would not be expected to affect bighorn sheep habitat quality or availability. There may be occasional disturbance effects if bighorn sheep are foraging near one of the proposed trails. Because of the habitat conditions, there is a very low likelihood of bighorn sheep occurring or utilizing the area.

Mountain Lion (*Felis concolor californica*): The mountain lion is a SBNF Watchlist species and a CDFW Specially-Protected Mammal. While mountain lions remain one of the most widely distributed terrestrial mammals in the western hemisphere; populations have been reduced in urbanized areas, such as southern California, where concerns have been raised about population viability.

Mountain lions are habitat generalists; they are most abundant in areas that support a large population of deer, their primary prey. Mountain lions tend to prefer rocky cliffs, ledges, and other areas that provide cover.

Mountain lions are primarily nocturnal and commonly forage at dawn and dusk. Mountain lions are closely associated with mule deer populations in California and follow deer along migration routes. Mountain lions are keystone predators with the ability to exert population-level influences on primary and alternate prey species under certain conditions. Mountain lion numbers are ultimately governed by the population of mule deer, their primary prey. Mountain lions have been documented adjacent to the analysis area, including using the wildlife water developments at the mines on the North Slope. They are very likely to occur in the analysis area.

The types of potential effects from the Proposed Action would be similar to those discussed above for Nelson's bighorn sheep. In addition, if the project caused displacement, reduction in size, or loss of the deer and bighorn sheep herds in the vicinity, mountain lions may be affected due to lack of a sustainable prey base. See discussions below about mule deer below.

Mule Deer (*Odocoileus hemionus*): The mule deer is a popular game species in the San Bernardino Mountains. The characteristics of habitat used by mule deer differ geographically, including oak woodlands, riparian areas, grassland/meadow margins, open scrub, young chaparral, and pine forests. The availability of water during the summer is a critical habitat requirement. Mule deer are herbivores and require adequate supplies of highly digestible, succulent forage. Mule deer may be active day or night but are generally crepuscular.

The North Slope of the San Bernardino Mountains provides high-quality habitat for reproduction and growth of mule deer, likely as a result of reduced disturbance from recreation due to the reduced density of roads and trails, compared to the less rugged areas to the south, as well as to the availability of several water supplies and high quality forage associated with these springs and seeps.

Deer are especially sensitive to motorized vehicle activities. High road/trail densities can cause abandonment and fragmentation of habitat. The areas close to the official system trail network would likely be avoided by mule deer over the long-term. The Proposed Action and Alternative 3 would result in a reduction of trail densities in the project area as well as fewer trails in/near riparian areas. By reducing the trail densities and relocating trails away from riparian areas, the Proposed Action would be expected to improve habitat conditions and reduce disturbance for mule deer.

Summary Effects to Other Species of Concern

Summary of Effects from Proposed Action

Individual animals may be killed or injured as a result of the trail network although the Proposed Action may reduce this risk by reducing the number of unauthorized routes and overall trail density in the project area. There may be some individuals lost during the regular recreation use of the trail network. However, unauthorized routes would be restored, which would create large blocks of uninterrupted habitat presumably resulting in fewer losses than the existing condition.

Disturbance from OHV and use of unauthorized trails would affect mammals in those areas. Small and slow-moving species may be killed or injured from OHV use on the trails.

Summary of Effects from No Action

Under the No Action alternative, the baseline condition would persist and the effects to rare species and their habitats, including riparian, would continue and may increase. Unauthorized routes would continue to be utilized by motorized vehicles throughout the project area. It is likely that effects would increase over time as the result of continued use of unauthorized routes that are not engineered or maintained properly and the creation of new routes. Habitats along existing and new unauthorized routes would be degraded and lost.

Under the No Action alternative, restoration of unauthorized routes may still occur based on site-specific review and other NEPA decisions, subject to available funding. However, it is unlikely that the scope of unauthorized route restoration included in the Proposed Action could be funded in the near-term without it being included in a comprehensive package of trail designation and travel management actions such as the Proposed Action or Alternative 3.

Summary of Effects from Alternative 3

Alternative 3 is the same as the Proposed Action with the addition of mixed use of vehicle types (street legal and non-street legal) on 3N14 between Big Pine Flats and 4N16A (the road to Horse Springs Campground). The effects of Alternative 3 on other

animal species of concern would be the same as the effects described above for the Proposed Action with the addition of some increased potential for disturbance of animals along 3N14 if increased use occurs as a result of the change.

In addition, there is potential for an overall increase in traffic volume on 3N14 as a result of adding OHV use to the road. The potential for increased disturbance to species along the road may be slightly higher than existing conditions but would not be expected to be substantially greater than the current condition. Some small areas of 3N14 may require road maintenance and brush trimming to enhance visibility along the roadway but this is expected to be along the road's edge and would not adversely affect the integrity of the roadside habitat.

Alternative 3 would have the same beneficial effects as discussed under the Proposed Action as a result of restoration of unauthorized routes, reducing overall route densities.

Findings for Other Species of Concern

SBNF Watchlist Animals and Other Animal Species of Concern: For many of the animals discussed above, implementation of the Proposed Action or Alternative 3 would degrade wildlife conditions close to the proposed trails as a result of frequent disturbance. After completion of the proposed restoration of unauthorized routes, the resulting reduced road/trail density may provide better habitat conditions for the blocks of habitat away from the trail system. Some individuals would likely be injured or killed as a result of use of the trail system. However, the proposed project would not result in a loss of viability for the wildlife species discussed in this document.

Migratory Birds: Implementation of either of the Proposed Action may unintentionally affect individual migratory birds. The project complies with the Migratory Bird Executive Order (January 11, 2001), because the analysis meets direction defined under the 2008 Memorandum of Understanding between the Forest Service and USFWS.

3.5.6 Project Level Assessment for Management Indicator Species – Wildlife MIS

Management indicator species (MIS) are selected because their population changes are believed to indicate the effects of management activities and to serve as a focus for monitoring (36 CFR [Code of Federal Regulations] 219.19(a) (1 and 6), 1982). The regulation required the selection of vertebrate and/or invertebrate species as MIS. The purpose of the MIS assessment is to evaluate the potential effects of the proposed project on the MIS populations identified in the Forest Plan. The rationale for MIS species selection is presented in Appendix B of the Forest Plan EIS.

To be biologically meaningful, this information is discussed at a variety of spatial scales, including the range of the species, State (*i.e.*, California), Province (*e.g.*, Southern), and Forest. The purpose of the MIS analysis is to identify species/habitat relationships (identified in the Forest Plan) and evaluate the potential effects to the MIS habitat. *The MIS evaluation does not address effects to the species, but instead focuses on how the project's effects on the MIS habitat may contribute to population trends at the different scales.*

There are five MIS animals and three MIS trees present on the SBNF. Of those, only three (song sparrow, mountain lion, and mule deer) have habitat that could be affected by the proposed project (Table 20).

The MIS evaluation summarizes known information about MIS occurrence in or near the analysis area, population trends over time, the amount of potentially available and affected suitable habitat, and *discusses the potential effects to habitat and the issue for which the species was selected as an MIS. Potential disturbance or direct/indirect effects to individuals are not part of the MIS evaluation. For example, the song sparrow discussion addresses effects to riparian/aquatic habitat using song sparrow population trends as a way to measure those effects.*

Table 20. Management Indicator Species Selection and Monitoring Information					
Species	Habitat Type	Issue	Objectives	Monitoring Method	Measure
Mule Deer	All	Vegetation Diversity and Age Class Mosaics; Roads and Recreation Effects	Stable or increasing well-distributed populations	Herd composition in cooperation with CDFW; habitat condition	Trend in abundance and/or habitat condition
Mountain Lion	All	Habitat Linkages/Habitat Fragmentation	Functional landscape linkages; species well-distributed	Studies in cooperation with CDFW and USGS	Trend in distribution, movement, and/or habitat conditions
Song Sparrow	Aquatic and Riparian	Ground Disturbance including trampling and compaction; spread of invasive nonnative species; mortality from collision; altered stream flow regimes	Stable or increasing populations; healthy riparian habitat	Riparian bird species point counts and/or habitat condition	Trend in abundance and/or habitat condition

Song Sparrow

The song sparrow was selected as a MIS for riparian areas because its abundance is expected to be responsive to management actions and to indicate trends in the status of the riparian biological community, particularly birds. The desired condition for song sparrows is that wildlife habitat conditions sustain healthy populations of native and desired non-native fish and game species. And, that wildlife habitat functions are maintained or improved, including primary feeding areas, winter ranges, breeding areas, birthing areas, rearing areas, migration corridors, and landscape linkages (Forest Plan, Part 1 p.45).

The desired condition is that flow regimes in streams that provide habitat for Threatened, Endangered, Proposed, Candidate, and/or Sensitive aquatic and riparian-dependent species are sufficient to allow the species to persist and complete all phases of their life cycles (Forest Plan, Part 1, p. 45). The desired condition for riparian condition is that watercourses are functioning properly and support healthy populations of native and desired non-native riparian-dependent species (Forest Plan, Part 1, p. 41).

The objectives for song sparrow are that there are stable or increasing populations and healthy riparian habitat. Trends in abundance and/or habitat conditions are to be used as measurements for evaluation. The monitoring method is to be riparian bird counts and/or habitat conditions (Forest Plan FEIS, Vol. 1. p. 177, Table 433). Song sparrows are expected to occur in the riparian habitat in the project area. Available data are not robust enough to assess current trends.

The purpose of using song sparrows as an MIS is to assess effects to riparian health. The Proposed Action includes areas where the trails cross or go through unnamed drainages with riparian habitat/conditions suitable for song sparrows. The Proposed Action would designate and reroute some of the current unauthorized routes to reduce effects to riparian habitat. Other unauthorized routes in riparian habitat would be restored. The net effect to riparian habitat would be reduced under the Proposed Action.

Under Alternative 3, there are several other riparian areas (Coxey Meadow, Coxey Creek, and Willow Creek) adjacent to 3N14. Alternative 3 would add mixed use to 3N14. However, there would be no changes to the riparian habitat quality or quantity as a result of Alternative 3.

Under the No Action alternative, riparian/aquatic habitat would likely continue to degrade as a result of use of unauthorized trails and the creation of more unauthorized trails.

Summary for Song Sparrow: The song sparrow was selected as a MIS for riparian habitat condition on the SBNF. The Proposed Action and Alternative 3 would be expected to have a positive effect on riparian habitat availability and quality by rerouting existing unauthorized routes out of riparian areas and establishing crossings that meet forest standards in areas where the trail must cross as stream corridor. Currently, this project is expected to be neutral or beneficial to the desired condition for riparian habitat in the National Forest Southern Province.

Mule Deer

The mule deer was selected as an MIS for forest health related to vegetation management, roads and associated recreation management. The desired condition for mule deer is that habitat functions are maintained or improved, including primary feeding areas, winter ranges, breeding areas, birthing areas, rearing areas, migration corridors, and landscape linkages (Forest Plan, Part 1, pg. 45). The objective for mule deer is that there are stable or increasing well-distributed populations. Trends in abundance and/or habitat condition are to be used for measuring populations. Populations are to be

monitored by herd composition counts in cooperation with CDFW or by habitat condition (Forest Plan EIS, Vol. 1, pg. 177, Table 433).

The number of deer taken during the hunting season, used to represent population status, appears to be relatively stable over time. However, if the low numbers in 2002 (due to extreme drought) are discounted, it appears that the populations in the hunt zone have some fluctuations but are relatively stable. Since the records are for the entire hunt zone, it is difficult to assess the situation in the analysis area itself. It is likely that the deer populations in the analysis area are experiencing the same general trend seen by CDFW in the D-14 Zone due to roads and development. Temporary increases in populations may have occurred after the 2003 fires in response to early-successional vegetation.

The project area supports suitable year-round, including fawning, habitat for mule deer. Under the Proposed Action and Alternative 3, mule deer habitat conditions would experience a net improvement as a result of reducing the trail densities and relocating trails away from riparian areas. The areas close to the proposed trail system would likely be avoided by mule deer over the long-term. Under both of these alternatives, no trails would be authorized/created in a large block of habitat between Rattlesnake Mountain and Horse Springs and unauthorized routes would be restored. This would improve the deer habitat over the existing conditions.

Under the No Action alternative, mule deer habitat and the issues for which it was chosen as an MIS (vegetation diversity and age class mosaics; roads and recreation effects) would likely continue to degrade as a result of unauthorized OHV trail use and development. Trail densities would likely increase over time and effects in high quality habitat near water sources and riparian vegetation would continue.

Summary – Mule Deer: Mule deer is a MIS for healthy diverse habitat conditions on the SBNF. The Proposed Action and Alternative 3 would reduce the overall number of miles of trail in the area. It would decrease fragmentation of mule deer habitat and may have a positive effect on the local population. The overall effects to mule deer would be beneficial when compared to the current condition.

Mountain Lion

The mountain lion was selected as an MIS to detect the effects of National Forest activities and uses on landscape-level habitat fragmentation and habitat linkages. The desired condition for mountain lion is that habitat function conditions sustain healthy and that wildlife habitat functions are maintained or improved, including primary feeding areas, winter ranges, breeding areas, birthing areas, rearing areas, migration corridors, and landscape linkages (Forest Plan, Part 1, pg.45).

The objectives for mountain lion are that there are functional landscape linkages and that the species is well-distributed. Trends in distribution, movement, and/or habitat conditions are to be used as measurements for evaluation. The monitoring method is studies in cooperation with CDFW, USGS and other agencies (Forest Plan EIS, Vol. 1, pg. 177, Table 433). Fire and fuel management are the main tools intended to implement

the objective for providing prey availability. The greatest concern for the long-term health of mountain lion populations on the National Forests of southern California is loss of landscape connectivity between mountain ranges and large blocks of open space on private land.

The mountain lion is the largest carnivore in southern California and requires large core habitat areas, abundant prey, and habitat connectivity between sub-populations. Recent state population estimates range from 2,500 to 6,000 individuals, with an increasing population trend. Mountain lions inhabit forest and shrub-land habitats throughout California where deer, their primary prey, are found.

Mountain lion population counts are very difficult and expensive, and do not exist in the analysis area or the SBNF. Influences to prey, such as hunting or diseases that affect mule deer population numbers, probably have the greatest influences on mountain lion numbers (see mule deer analysis above). Increasing urbanization and agricultural pressure outside the SBNF boundary may reduce deer populations on the surrounding lands off-SBNF. As a result, mountain lions may attack more pets and livestock or otherwise threaten local communities, leading to more depredation killings. An area of concern has been the continued decline in permeability of the critical landscape linkages from the San Bernardino Mountains to the other adjacent mountain ranges that support mountain lions.

The greatest concern for the long-term health of mountain lion populations on the National Forests of southern California is loss of landscape connectivity between mountain ranges and large blocks of open space on private land (**Dickson *et al.* 2005**). This project would not affect landscape connectivity between mountain ranges.

The Proposed Action and Alternative 3 would restore unauthorized routes in the analysis area and reduce habitat fragmentation. The overall reduction of trails in the area would be beneficial for the prey base of mule deer. The Proposed Action and Alternative 3 would reduce the disturbance in the area.

Under the No Action alternative, mountain lion habitat and the issues for which it was chosen as an MIS (habitat linkages/habitat fragmentation) would likely continue to degrade as a result of unauthorized OHV trail use and development. Trail densities would likely increase over time and effects in high quality habitat near water sources and riparian vegetation (where prey species like mule deer prefer) would continue.

Summary - Mountain Lion: The mountain lion is a MIS for fragmentation of habitat on the SBNF. The proposed project would not be expected to further fragment mountain lion populations through corridor alteration. The Proposed Action and Alternative 3 would result in restoration of unauthorized routes resulting in a lower trail density in the Rattlesnake analysis area. This project would be a beneficial effect to the desired condition for Mountain lion habitat on the SBNF and in the National Forest Southern Province.

CHAPTER 4. CONSULTATION AND COORDINATION

The SBNF involved and consulted the following individuals, Federal, State, tribal, and local agencies during the development of this environmental assessment.

Line Officers

Forest Supervisor: Jody Noiron

District Rangers: Marc Stamer, Scott Tangenberg

Interdisciplinary Team Members

IDT Leaders: Bjorn Fredrickson, David Kotlarski, Scott Eliason

Wildlife Biologists: Drew Farr, Robin Eliason, David Austin,

Hydrologist: William Wells

Fire: David Kelly

Botanists: Scott Eliason, Emma Williams, Mary Crawford, Adrienne Simmons

Restoration: Deveree Kopp

Recreation Specialists: David Kotlarski, Greg Hoffman

Heritage Resources: William Sapp, Gina Griffith

Engineer: Josh Direen

Environmental Coordinator: Tom Hall, Scott Eliason, Tasha Hernandez

Geographic Information System Support: Tracy Tennant

Federal, State, and Local Agencies

Lahontan Regional Water Quality Control Board

California Department of Fish and Wildlife

US Fish and Wildlife Service

Tribe

San Manuel Band of Mission Indians

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APPENDIX A: INITIAL STUDY CHECKLIST (CEQA)

Aesthetics					
	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Explanation/ Reference*
Would the project:					
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	EA Section 3.2.3. The restoration element of the project would improve scenic vistas within the project area.
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	EA Section 3.2.3. Scenic Resources would be improved.
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	EA Section 3.2.3. Minor localized degradation of visual character would be offset by overall improved visual character.
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The project would not involve any lighting.
* If not addressed in IS/EA explain why there is no impact or why impact is not significant. If addressed in IS/EA reference pages/sections where addressed.					

Agriculture and Forestry Resources					
	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Explanation/Reference*
Would the project*:					
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The project area does not support any agricultural lands.
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	“
c) Conflict with existing zoning for, or cause rezoning of forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland (as defined by Government Code Section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	“

Agriculture and Forestry Resources					
	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Explanation/Reference*
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Trails are a suitable use of Forest land (SBNF Forest Plan). The project would not convert forest land to non-forest use.
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	(see answers to a and d, above)
* If not addressed in IS/EA explain why there is no impact or why impact is not significant. If addressed in IS/EA reference pages/sections where addressed.					

Air Quality					
	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Explanation/Reference*
Would the project:					
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	EA 3.0.2. Not applicable. The project would result in pollutant levels well below de minimis levels.
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	“
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	“
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	EA 3.0.2. There are no sensitive receptors in the project area.
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	EA section 3.0.2. The project area does not include any substantial concentration of people that could be affected by localized emission sources (e.g. motor vehicles).
* If not addressed in IS/EA explain why there is no impact or why impact is not significant. If addressed in IS/EA reference pages/sections where addressed.					

Biological Resources					
	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Explanation/Reference*
Would the project:					
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	EA Sections 3.5 and 3.6, and Wildlife and Botanical Resource Design Features under EA Section 2.2. Effects to T/E species would be wholly beneficial. Effects to FS Sensitive species would be minimized through Design Features.
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	EA Section 3.1. Effects to Riparian areas and other natural communities would be minimized through application of Design Features.
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	EA Section 3.1. Compliance with Sections 401 and 404 of the Clean Water Act will be sought as needed through the Lahontan Regional Water Quality Control Board and the U.S. Army Corps of Engineers.
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	EA Section 3.5. The proposed trails would be narrow and not result in habitat fragmentation. Restoration component would have a net benefit for wildlife movement.
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The project would be consistent with the Forest Plan with regard to Biological Resources.
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	There are no habitat conservation plans that cover the project area.
* If not addressed in IS/EA explain why there is no impact or why impact is not significant. If addressed in IS/EA reference pages/sections where addressed.					

Cultural Resources					
	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Explanation/Reference*
Would the project:					
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	EA Section 3.3. Effects would be not be substantial and would be minimized by Design Features.
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	“
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	There are no known paleontological resources in the project area, and ground disturbance would be so minimal that the likelihood of impacting undiscovered resources is negligible.
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	There are no known human remains in the project area, and ground disturbance would be so minimal that the likelihood impacting undiscovered remains is negligible.
* If not addressed in IS/EA explain why there is no impact or why impact is not significant. If addressed in IS/EA reference pages/sections where addressed.					

Geology and Soils					
	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Explanation/Reference*
Would the project:					
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:					
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	EA Section 2.1.2. This project would not increase exposure to earthquake-related risks.
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	“

Geology and Soils					
	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Explanation/Reference*
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	“
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	“
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	EA Section 3.1. Erosion and soil loss would be minimized by design features and best management practices. Restoration element would have net benefit.
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	“
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The project would not involve construction of structures that would be affected by expansive soils.
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	EA Section 2.0. The project would not involve using septic systems. Any toilets associated with the project would be portable or vault toilets.
* If not addressed in IS/EA explain why there is no impact or why impact is not significant. If addressed in IS/EA reference pages/sections where addressed.					

Greenhouse Gas Emissions					
	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Explanation/Reference*
Would the project:					
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	EA Section 3.0.2. The project would not substantially increase emissions of GHG.
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions or greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	EA Section 3.0.2. There are no GHG plans, policies or regulations that would be in conflict with the proposed action.
* If not addressed in IS/EA explain why there is no impact or why impact is not significant. If addressed in IS/EA reference pages/sections where addressed.					

Hazards and Hazardous Materials					
	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Explanation/Reference*
Would the project:					
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	EA Section 2.1.2. Hazardous materials transport and disposal are not part of the proposed action.
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	“
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	There are no existing or proposed schools with ¼ mile of the project area.
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The project area does not contain any site named in a hazardous materials list compiled pursuant to Government Code Section 65962.5.
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	There are no airports or airstrips within two miles of the project area.
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	“
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	EA Section 2.1.2. Project would not impair implementation of an adopted emergency response/evacuation plan.
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	EA Section 2.1.2. Project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires.
* If not addressed in IS/EA explain why there is no impact or why impact is not significant. If addressed in IS/EA reference pages/sections where addressed.					

Hydrology and Water Quality					
	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Explanation/Reference*
Would the project:					
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	EA Section 3.1. The project would result in a net improvement in water quality due to restoration of unauthorized routes.
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	EA Section 3.1. The project would not use or otherwise affect groundwater.
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	EA Section 3.1. The project would not substantially alter drainage patterns.
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	“
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	EA Section 3.1. The project would not increase runoff or increase polluted runoff.
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	EA Section 3.1. Minor localized adverse effects to water quality would be offset by the beneficial effects of restoration.
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	EA Section 2.1.2. The project would not involve housing.

Hydrology and Water Quality					
	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Explanation/Reference*
Boundary or Flood Insurance Rate Map or other flood hazard delineation map?					
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Section 2.1.2. The project would not involve placement of structures within flood hazard areas.
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The site is not subject to flooding or inundation due to dam or levee failure.
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The project area is not subject to inundation by seiche, tsunami, or mudflow.
* If not addressed in IS/EA explain why there is no impact or why impact is not significant. If addressed in IS/EA reference pages/sections where addressed.					

Land Use and Planning					
	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Explanation/Reference*
Would the project:					
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The project area is not within a community.
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	EA Section 2.0. The Proposed Action requires a project-specific Forest Plan amendment to address localized zoning.
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The project area is not covered by a HCP or NCCP.
* If not addressed in IS/EA explain why there is no impact or why impact is not significant. If addressed in IS/EA reference pages/sections where addressed.					

Mineral Resources					
	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Explanation/Reference*
Would the project:					
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The project would not result in loss of access to mineral resources.
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local -general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	“
* If not addressed in IS/EA explain why there is no impact or why impact is not significant. If addressed in IS/EA reference pages/sections where addressed.					

Noise					
	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Explanation/Reference*
Would the project result in:					
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	EA section 3.2. Noise associated with trail construction and maintenance would be minimal and well below standards. State OHV noise standards are enforced on the SBNF.
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Trail construction elements that could cause groundborne vibration and noise would be short-term and not excessive.
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	EA Section 3.2. The project would not result in a substantial permanent increase in ambient noise levels. There is an expected upward trend in the baseline ambient noise levels with or without the project.
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	EA Section 3.2. The project would result in non-significant localized temporary and periodic increases in ambient noise level, relative to the baseline condition.

Noise					
	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Explanation/Reference*
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	There is no airport or airstrip within 2 miles of the project area.
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	“
* If not addressed in IS/EA explain why there is no impact or why impact is not significant. If addressed in IS/EA reference pages/sections where addressed.					

Population and Housing					
	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Explanation/Reference*
Would the project:					
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	EA Section 2.1.2. The project does not involve the construction of housing or extending urban roads so as to accommodate population growth.
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The project would not displace housing or people.
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	“
* If not addressed in IS/EA explain why there is no impact or why impact is not significant. If addressed in IS/EA reference pages/sections where addressed.					

Public Services					
	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Explanation/Reference*
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:					
i) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The project would not create a demand for new or altered government facilities.
ii) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	“
iii) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	“
iv) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	“
v) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	“
* If not addressed in IS/EA explain why there is no impact or why impact is not significant. If addressed in IS/EA reference pages/sections where addressed.					

Recreation					
	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Explanation/Reference*
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The project would not create demand for use of neighborhood parks.
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	EA Section 2.1.2. The project would not include construction of recreational facilities, other than the trails and parking area detailed in the Proposed Action.
* If not addressed in IS/EA explain why there is no impact or why impact is not significant. If addressed in IS/EA reference pages/sections where addressed.					

Transportation/Traffic					
	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Explanation/Reference*
Would the project:					
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The project is not in an urban setting. The proposed action is consistent with the Forest Plan and Transportation Analysis Process on the SBNF.
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The project is not in an urban setting and there are no congestion management plans in affect.
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The project would have no effect on air traffic.
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	EA Section 3.2. Mixed Use Analysis concluded a low to moderate increased risk of traffic collision by adding OHV use to specified National Forest System Roads.
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The proposed action would not affect emergency access.
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The project is not in an urban setting, and the project would not affect such facilities.
* If not addressed in IS/EA explain why there is no impact or why impact is not significant. If addressed in IS/EA reference pages/sections where addressed.					

Utilities and Service Systems					
	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Explanation/Reference*
Would the project:					
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board (RWQCB)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	EA Section 2.1.2. The project would not involve or affect water or wastewater treatment.
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	“
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The project would not involve the construction or expansion of new storm water drainage facilities.
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The project would not use or affect water supplies or entitlements.
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The project would not require wastewater treatment.
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The project would not generate solid waste.
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	“
* If not addressed in IS/EA explain why there is no impact or why impact is not significant. If addressed in IS/EA reference pages/sections where addressed.					

Mandatory Findings of Significance					
	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact	Explanation/Reference*
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	EA Chapter 3. Impacts to Soils and Hydrology, Heritage Resources, Botanical Resources, and Wildlife are all less than significant with application of Design Features.
b) Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means the incremental effects of past projects, the effects of other current projects, and the effects of probably future projects as defined in Section 15130.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	EA Section 3.2. The project would have cumulative effects to OHV and Route Management by BLM in the Juniper Flat Area. These effects are offset by the restoration element of the proposed action and are therefore not cumulatively considerable.
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	EA Section 3.2. Effects to public non-motorized access and quiet and solitude seeking, are less than significant.

APPENDIX B: RESPONSES TO COMMENTS

The comments received during the public review period are listed in **Table 21**. **Table 22** provides a summary of the responses to comments. Detailed responses follow.

Table 21. Comments Received During the Public Review Period			
Comment Letters	Name	Date	Time (PST)
A	Glen Joralmon	11/20/2015	10:07
B	Chris Halas	11/23/2015	18:12
C	Eric Lint	11/30/2015	13:06
D	David Jones	12/06/2015	10:43
E	Joyce Burk	12/13/2015	08:41
F	Jack Paxton	12/13/2015	14:38
G	Robyn McQuade	12/13/2015	15:59
H	Charles Ashley	12/14/2015	06:03
I	Anon Anon	12/14/2015	09:30
J	Barb Hampton	12/14/2015	09:52
K	William Joyce	12/14/2015	10:54
L	Tim Thomas	12/14/2015	11:59
M	Pam Nelson	12/14/2015	13:16
N	Alison Sheehey	12/14/2015	14:54
O	Ken Markling	12/14/2015	16:35
P	Kim Floyd	12/15/2015	13:56
Q	Randall Cleveland	12/15/2015	22:43
R	Jenny Wilder	12/16/2015	06:06
S	Jenny Wilder	12/16/2015	06:06
T	Marilyn Jasper	12/16/2015	16:08
U	Bryan Baker	12/16/2015	20:29

Table 22. Responses to Comments			
Comments	Comment Topic	From Letter(s)	How Addressed
1	General agreement with proposed designations.	A, B, D	Noted, Alternative 3 Selected.
2	General concern or desire to see more trail designation than proposed.	A	Response below (15)
3	General concern with proposed restoration.	A	Noted, not specific.
4	General agreement with Alternative 3.	C, D, O	Noted, Alternative 3 Selected.
5	FS has not been able to effectively control unauthorized OHV use, or manage/maintain the existing system of roads and trails.	E, K, P, Q, R, S	Response below.

Table 22. Responses to Comments			
Comments	Comment Topic	From Letter(s)	How Addressed
6	The proposed action does not do enough to stop resource impacts caused by OHV use.	E (intro,)	Noted, not specific.
7	General agreement with proposed restoration	E (1), H, I, P U	Noted
8	Proposed OHV access to two campgrounds and system roads currently open only to street legal vehicles will adversely affect visitor experience.	E (2, 3), F, M, P, R, S, T, U	Response below.
9	Question on seasonality of campgrounds.	E (4), U	Response below.
10	Increased use causes increased unauthorized use.	E (5), J, K, P, S, U	Response below
11	Need for increased education and enforcement	E (6), K, L, O, P, R, S, T, U	Response below
12	Trail maintenance question	E (7)	Response below
13	Need for coordination with BLM.	E (8), S	Response below
14	Seasonality of effects.	E (9), R, S	Response below
15	Range of alternatives	E (10), K, P, R	Response below
16	No Action alternative	E (11), K, L	Response below
17	Maintenance Level of 3N14	E (12), S	Response below
18	3N92	E (14), S	Response below
19	Redonda Ridge Trail extension	E (15)	Response below
20	Lack of hiking and equestrian trails	F, J, M, S	Response below
21	Fragmentation	F, K, M	Response below
22	General opposition to Proposed Action	F, G, I, J, K, M, N, P, Q, R, S, T	Noted, non-specific, environmental effects are addressed in Chapter 3 of the EA.
23	Campground maintenance question	J	Response below
24	Current uses include botanizing and wildflower photography	L	Response below (EA edit)
25	Effects to undiscovered botanical resources	L	Response below
26	Ineffectiveness of restoration and design features for offsetting and minimizing rare plant impacts.	L	Response below
27	Route maintenance concerns and questions	E, L, S	Response below
28	NEPA	L	Response below
29	Question about Big Pine Flat trailering site.	R, S	Response below
30	Consistency with E.O. 11644	R	Response below

Table 22. Responses to Comments			
Comments	Comment Topic	From Letter(s)	How Addressed
31	Purpose and Need	R, S	Response below
32	3N14 Mixed Use safety concerns	S	Response below
33	Signage	S	Response below
34	OHV definition	S	Response below
35	The Project Area as a 'Strategic Portal'	S	Response below
36	Question re. 3N14 to 3N59 connector	S	Response below
37	Alternative 3 effects to solitude and quiet	S	Response below
38	Effects to the Pacific Crest Trail	T	Response below

Detailed Responses to Comments

5. Several commenters noted that that SBNF has not been able to successfully manage unauthorized motorized vehicle uses, resulting in the proliferation of unauthorized routes and associated impacts to natural resources. Some of these commenters further noted that the SBNF has not been able to adequately manage or maintain the existing system of designated roads and trails in and near the project area. The conclusion or implication of these comments is that the SBNF should not add additional trails, or draw additional types and numbers of users by selecting the Proposed Action or Alternative 3.

We (the SBNF) acknowledge, as described under the Purpose and Need for the project, that unauthorized motorized uses and routes are a major and growing problem across the Big Bear Backcountry place in general, and in and near the project area in particular. It is our intent under this project to improve on existing conditions by providing additional planned, authorized and maintained routes, along with restoration of unauthorized routes. This approach is consistent with the Forest Plan, and specifically, the desired conditions for the Big Bear Backcountry place.

We also acknowledge that for this approach to be most successful over time at managing motorized uses in the Project Area, reducing unauthorized uses, and reducing associated impacts to the visiting public and to natural resources, continued and increased commitments to patrol, enforcement, education, maintenance, restoration and monitoring are needed. Continued and increased partnerships with motorized and non-motorized user groups, BLM, the State and others are also important to success. Collectively, these commitments are broader than the subject project, and beyond its scope. We have been successful in recent years in applying for and receiving funding for motorized vehicle use and OHV management, increased patrols, and continued restoration and monitoring. And, the proposed route and mixed use designations have the potential to open up additional funding opportunities. Our intent is to continue and increase these efforts.

8. Multiple commenters expressed concerns and beliefs that allowing mixed use (e.g., green sticker vehicles) within Big Pine Flat and Horse Spring campgrounds, and/or system roads

within the project area that are currently open only to highway legal vehicles, will adversely affect the visitor experience. Some of these commenters expressed concern that the campgrounds would be overrun by OHVs to the exclusion of visitors seeking peace and quiet. Others expressed concern that adding mixed use to system roads would similarly exclude visitors or spoil the visitor experience.

The Travel Management Rule of November 9, 2005 (70FR68264) and associated regulations and policies, and the SBNF Forest Plan, uphold the long-standing practice that OHV use is suitable on designated National Forest System Roads and Trails. The desired conditions for the Big Bear Backcountry Place include improved OHV riding opportunities, along with better management of unauthorized uses and restoration.

While it is inevitable that motorized vehicle use on the national forest detracts from opportunities for seeking quiet and solitude, there is a need to find a manageable balance. The Rattlesnake Mountain OHV Trails project seeks balance by designating manageable and sustainable trails and mixed use routes that provide enjoyable riding opportunities and make better connections, while also closing and restoring unauthorized routes throughout the project area. Furthermore, beyond the scope of this project, we are actively engaged in unauthorized route closure and restoration projects including within the adjacent Deep Creek Inventoried Roadless Area, which at about 23,700 acres is nearly three times the size of the Rattlesnake Mountain OHV Trails project area. The work in the Deep Creek IRA is expected to improve quiet and solitude seeking opportunities and non-motorized uses over a large area, and also improve conditions for wildlife and other natural resources. And, we are engaged in providing more and better OHV opportunities elsewhere as well, similarly balanced with efforts to reduce creation and use of unauthorized routes.

Underlying some of these comments is a notion that OHV riders, and operators of non-street-legal vehicles in particular, are more likely to be inconsiderate or unlawful than those who drive/ride street legal vehicles. We acknowledge, in general, that increased traffic on roads and campgrounds poses challenges in management, and can detract from the visitor experience. However, where mixed use is designated, it is our intent to manage these challenges through increased monitoring, patrols, enforcement, and education for highway legal vehicles and green sticker vehicles alike.

9. Two commenters raised questions about the seasons when Big Pine Flat and Horse Springs Campgrounds are open.

Big Pine Flat Campground is closed during winter months, and Horse Spring Campground is open year-round. The Rattlesnake Mountain OHV Trails project does not include any proposed changes to these seasons of operation.

10. Multiple commenters asserted that increased motorized vehicle use, and increases in opportunities (new road and trail designations) directly lead to or cause increased unauthorized uses including unauthorized route creation and use.

The language in section 3.3.3 of the draft EA that some commenters cited to support this assertion was in error and has been corrected in the final EA. Unauthorized use is not a direct

or indirect effect of authorized use. In fact, by providing a well-planned and maintained system of roads and trails, along with clear signage, education, patrols, and enforcement, it is our intent to accommodate the projected increases in motorized vehicle use over time with reduced unauthorized use.

11. Multiple commenters emphasized the need for increased patrol, enforcement and education. Some asserted that the current lack of these elements is the primary reason for the current frequency of unauthorized use and associated impacts to natural resources and visiting public. Most asserted that the proposed action (and/or Alternative 3) in the absence of increased patrol, enforcement and education would substantially worsen existing conditions for visitor experience, spoils, and other resources through trail construction, route designation, designation of a trailering site, and generally inviting increased use. Some commenters stated that the existing conditions relative to which the effects of the proposed action are evaluated should not include illegal or unauthorized activities or routes.

The effects analyses described under Chapter 3 of the EA find that, relative to the existing conditions that include unauthorized route creation, use and proliferation, that the proposed action and Alternative 3 (each with the included element of unauthorized route closure and restoration) would not have significant adverse effects on soils, hydrology, cultural resources, botanical resources, and wildlife. We agree that increased patrol, enforcement and education is of high importance within the Project Area and other areas Forest-wide. It is our intent to include these elements in (or concurrent with) applications for funding for the implementation of this project, as well as future funding opportunities for ongoing management. However, these elements are broader than the proposed action, subject to uncertain funding over time, and are outside the scope of the proposed action and alternatives for the purposes of NEPA. We invite the commenters, and any other interested public, to partner with us as we pursue current and future grant and other funding opportunities.

12. One commenter noted that the EA does not identify the source of additional funding that will be needed to maintain the new trails.

The SBNF receives appropriated funds each year for recreation management, including motorized trails maintenance. The each year priorities are weighed and these funds expended on needed maintenance, but these funds are typically not sufficient to address all motorized trail maintenance needs across the Forest. These newly-designated trails would likely receive some of these funds over time, but it is impossible to predict from year to year which needs will rise to the list of priorities that can be maintained with these funds.

We have a successful record of performing additional maintenance with grant funding and volunteers. We intend to make these newly designated trails available for adoption under the Adopt a Trail program. And we intend to seek additional State grant funding to help monitor and maintain these trails over time.

13. Two commenters raised the importance of coordination between BLM and the SBNF on shared OHV management challenges in the Juniper Flats area and adjacent National Forest System lands.

We agree, and have been in close coordination with the Barstow Office of BLM on these issues. We coordinated with BLM early in this project's development to ensure consistency along the BLM-FS boundary. We are engaged in continued coordination with BLM on the West Mojave Route Network Project, and we have recently increased our participation with the Juniper Flats Working Group and associated projects.

14. Two commenters stated that the EA erroneously asserts that the heaviest OHV use would be expected during summer months (citing one sentence from the EA under section 3.5.2), and therefore that the SBNF did not thoroughly analyze impacts to wildlife.

The tendency for higher use on summer weekends on the SBNF holds true for the higher elevations of the project area, but does not generally hold true at lower elevations. This cited sentence has been edited in the final EA to avoid this point of confusion. The very next sentence under the EA section 3.5.2 following the one cited by commenters clarifies: "Because snow cover is limited in the analysis area, there is often year-round access from the desert side; thus user-related disturbance would be expected year-round."

The wildlife effects analysis under section 3.5.2 continues on to analyze and disclose effects to wildlife from year-round impacts. Furthermore, the Project Design Features for wildlife under Section 2.2 will avoid and minimize impacts to wildlife year-round.

15. Multiple commenters stated that an action alternative with fewer proposed route designations was needed. One of these commenters sought an alternative that did not adopt any unauthorized routes into the system, and another sought an alternative limited to restoration with no route designation. Once commenter stated the desire to see more trail designation than proposed under the action alternatives.

Route designation and improved OHV riding opportunity has been a component of this project since its inception, along with better managing unauthorized use and improving resource conditions. The designation component is consistent with the forest plan and would lead toward stated desired conditions for improved OHV opportunities in the Big Bear Back Country Place. To this end, our grant proposal (and the awarded grant) to fund the planning of this project was based on planning objectives that would analyze and complete the NEPA process for "potential addition of 5 to 20 miles of 24-50 inch trails to the Mountaintop District OHV system".

The early development and planning for this project by a SBNF interdisciplinary team of specialists evaluated many unauthorized routes in the Project Area for their potential to be brought into the system, and also shorter section of potential new construction that would complete connections and loop riding opportunities. All of these were evaluated against the resource-based needs for restoration. Problems and challenges with habitat fragmentation, soils, hydrology, watersheds, riparian areas, rare plants and other factors led to the screening out of many unauthorized routes that are now proposed for restoration under this project. In this context, both action alternatives are on the low end of the range that would satisfy the purpose and need for the project, leaving no room for an alternative with fewer routes proposed for designation. If the Forest Supervisor elected to focus on restoration only for this area, without route designation, the proper process would have been to select the No Action alternative and develop a new project with a purpose and need focused only on resource

protection and restoration. Recent nearby examples of such projects include the Coxey Restoration Project and the Deep Creek IRA Restoration Project.

16. Commenters raised the concern that the no-action alternative as characterized in the EA does not accurately describe the conditions that would exist if the no-action were to be selected, with bias against no-action. Specifically, that if the no-action were to be selected, restoration projects aimed at unauthorized routes could/would still occur, and conversely, under either action alternative, unauthorized uses and associated impacts could actually increase.

The EA does acknowledge that restoration could still occur in the project area, subject to site specific review and funding (e.g., the description of the No Action alternative under 2.1.2 on pg. 23). As for the likelihood of advancing and funding such a project at this time, we just don't know. The purpose and need for this project does speak to reducing unauthorized use through providing new designated routes and authorized riding opportunities, while also restoring unauthorized routes. It is our intent to follow this strategy and do what we can to make it as successful as possible.

17. One commenter raised the concern that the change in road maintenance level of Coxey Road (Forest Road 3N14) under Alternative 3 from Level 3 (maintained for passenger vehicles) to Level 2 (maintained for high clearance vehicles) would cut off access to visitors and present a safety issue by cutting off an important evacuation route.

The proposal under Alternative 3 has been reviewed by the Division Chief for SBNF Fire and found not to present a substantial reduction in the ability of 3N14 to serve as an emergency access/egress route. In practice, we do not anticipate substantial changes in accessibility and travel times on 3N14 within the project area relative to the existing conditions. If anything, the limited extent to which speeds may be reduced on the road, in combination with proposed improvements to sight distance where needed, is expected to improve safety by reducing the likelihood and severity of collisions.

18. Two commenters questioned the purpose of the proposed action with regard to Forest Road 3N92.

This very short proposed designation extending this road is intended to bring the designation in line with current use. The designation and mapping of this road was never quite correct. Following the Willow Fire in 1999, there was a post-fire timber salvage project in the Big Pine Flat area. As part of this project, some minor roads were decommissioned, including the portion of 3N92 north of the Redonda Ridge Trail (1W17). The decommissioned portion of 3N92 followed a stream course with riparian vegetation, and users of this road typically continued up a very steep unauthorized route to South Peak via an important area of endangered plant habitat. 3N92A was a short spur road off of 3N92 following (and pre-dating) the alignment of 1W17) and leading to a good turn-around. 3N92A was inadvertently decommissioned (on paper) as a daughter road to the decommissioned portion of 3N92, but following the Willow Fire became the de facto terminus of 3N92. The current terminus of 3N92 (on paper) does not have a turn-around, or a reasonable place to create one. Extending 3N92 to the existing turn-around (on the current alignment of 1W17 and the former alignment of 3N92A) is intended to bring the road designation and mapping in line with current use.

19. One commenter noted that the proposed extension of the Redonda Ridge Trail (1W17) would not serve any real purpose other than to increase trail mileage.

Increasing the mileage of 1W17 is one benefit of the proposed extension. It also would create a loop ride opportunity near Big Pine Flat (using 3N17 and 3N11). Also, the current terminus of 1W17 at 3N11 is a bit of an anticlimax, the trail just ends at the road without a sense that the rider has reached a destination. The proposed terminus at 3N17 provides a dramatic view north to the Mojave Desert and is intended to give riders a sense that they have reached a special destination.

20. Four commenters noted that the proposed action does not include any hiking or pedestrian trails, and that that project area in general lacks designated non-motorized trails.

It is true that there are no designated non-motorized trails in the project area. There are four nearby within the Deep Creek Inventoried Roadless area: The Pacific Crest Trail, Hawes Ranch Trail (2W14), Muddy Springs Trail (2W02), and Deep Creek Hot Springs trail (3W02). The vegetation in the project area is relatively open and the topography is varied from rolling to steep, but with many opportunities for off-trail exploration on foot or horseback. Designation of additional non-motorized trails is outside the scope of the Rattlesnake Mountain OHV trails project.

21. Multiple commenters raised the concern that trail designation and associated rezoning from motorized to non-motorized would fragment habitat and impact wildlife movement.

Under the effects analysis for General Wildlife (section 3.5.2), the finding is reported that the proposed trails would be relatively narrow and would not result in habitat fragmentation. Mule deer and mountain lions are especially susceptible to the effects of habitat fragmentation. Under the assessment of Management Indication Species (section 3.5.6), the findings are reported that, because of the restoration element of the proposed action and Alternative 3, would have a positive effect on local populations by effectively reducing fragmentation and other disturbances associated with motorized vehicle travel.

23. One commenter raised a question about campground maintenance in light of the proposed mixed use designations to and within Big Pine Flat and Horse Spring Campgrounds.

Big Pine Flat Campground is under concession, and is expected to be continued to be managed and maintained by the concessionaire. Horse Spring Campground is maintained using appropriated recreation funds. The proposed mixed use designation would open up possible opportunities under State OHV grants for supplemental funding for maintenance of Horse Spring Campground. We intend to pursue such opportunities.

24. One commenter noted that current use of the project area includes botanizing and wildflower photography.

We acknowledge that botanizing (investigating and studying plants in their natural habitats) and wildflower photography are current (and long-standing) uses of the project area. These activities have been added to the list of current uses under section 1.3.1 of the EA.

25. One commenter noted that complete floristic surveys were not completed for the entire project area, and raised the concern that the effects analysis for botanical resources did not analyze and disclose potential effects to undiscovered rare plants.

We acknowledge, as stated in the EA under section 3.4.1, that floristic surveys were not completed for the entire project area. Targeted field surveys were completed by SBNF botanists that focused on detection of rare plants along proposed trail designations, and recorded occurrences that needed updated status information. Any project activities that fall outside of the surveyed areas would be restoration activities. The intent of this restoration is to block access to unauthorized routes to motorized vehicles, and to stop and repair the associated damage to soils, wildlife and botanical resources. Long term effects to any undiscovered rare plants along these routes would be beneficial, and any short term impacts of restoration work would be minimized by application of design features.

26. One commenter stated that there are no mitigation techniques for restoration of rare plant habitats or populations, and asserted that restoration would not offset loss of rare plant habitat caused by new routes. The commenter also asserts that design features minimize adverse effects.

The restoration element of the proposed action does not aim to recreate rare plant habitat where it has been lost or degraded. The strategy is to stop the process of unauthorized route creation, use, and proliferation that has resulted in habitat loss and continues to threaten rare plant habitat and other resources throughout the project area. Once blocked and stabilized, restoration techniques and time result in native vegetation reestablishment on these routes. This is not rare plant habitat restoration in the narrowest sense, but does serve to remove tangible and immediate threats to rare plant populations and reestablish native vegetation with associated benefits to wildlife and watersheds.

Also, effects to rare plants as described under section 3.4.3 of the EA are expected to be minimized through application of design features. For instance PLANT-1 under the Rare Plant Design Features requires that effects to Threatened, Endangered, and Sensitive plant species will be avoided. This is mainly expected to be achieved by routing trails away from rare plant occurrences. Under PLANT-2, in limited instances where occurrences cannot be avoided, effects will be minimized through coordination and use of protective measures (e.g., signs, fences or other barriers).

27. Three commenters raised concerns about increased need for route maintenance following the proposed designation.

We acknowledge that additional miles of designated motorized routes will require additional maintenance. See response under comment 12 regarding funding for maintenance. It is also our intent to construct / reconstruct trails to standards that will make routes hold up well under expected traffic and weather, and thereby require less maintenance.

28. One commenter raised the question why NEPA was not included in the EA under Applicable Laws, Regulations, and Policies section 1.11.

This was an oversight and NEPA has been added to section 1.11.

29. One commenter raised a question about the proposed trailering sit at Big Pine Flat and specifically what is proposed.

In the EA, we describe this as a trailering site rather than a staging area because the proposed site would be smaller than users of existing staging areas on the SBNF and adjacent BLM lands are accustomed to. The EA describes the proposed site under section 2.1.2 (11).

30. One commenter asserted that the proposed action is not consistent with and in violation of E.O. 11644.

This project was designed, and will be implemented, under the Forest Service Travel Management Rule of November 9, 2005 (FR 70 68264). This rule and the associated regulations and policy is the primary means by which the Forest Service complies with E.O. 11644.

31. One commenter (in two comment letters) asserted that the Purpose and Need for the project, as described in the EA is lacking and flawed based on the premise that unauthorized use and unauthorized routes are a law enforcement problem, not a basis for a project. The commenter further asserts that unauthorized use is not an indicator for demand for additional legal trails, and that without adequate law enforcement, unauthorized uses will continue with or without the project. The commenter asserts that the existing environmental conditions should not include the existence and use of unauthorized routes, nor should these be included in the baseline against which environmental effects of the proposed action are evaluated, because the Forest Service has the obligation to enforce laws and restore resource damage caused by illegal activities. Finally, the commenter expressed concern that using the existence of unauthorized routes as an indicator for demand, and designating some of these routes as system trails rewards bad behavior and encourages continued creation and use of unauthorized routes.

The purpose and need for this project, specifically the route designation element, is not based on the existence and use of unauthorized routes. It is rooted in the Forest Plan and the Desired Conditions for the Big Bear Back Country Place, along with projections for increased motorized use over time, and our understanding of the capacity of our transportation system. The need for restoration of unauthorized routes is, of course, based on the existence of unauthorized routes.

It is our intent to leverage this project to fund much needed patrol, enforcement, and education. These, in combination with an improved system of roads and motorized trails in the Project Area, is our approach to addressing the very problems of unauthorized use the commenter is rightfully concerned about.

32. One commenter raised concerns about the safety of adding mixed use to National Forest System Roads that are currently open only to highway-legal vehicles.

The mixed use analyses for each of these proposed routes evaluated the increased risk and severity of collisions (EA Section 3.2.3), and include needed measures to mitigate these down to low to moderate risk and severity levels. The Forest Supervisor will not authorize mixed use on any of these routes until these mitigation measures are fully completed and functioning as intended, as specified in the Decision Notice / FONSI.

33. One commenter raised concern about the need for clear signage for any newly designated routes, and noted that the existing signage in the project area and beyond is lacking.

All new routes designated under the proposed action will receive clear new signage as part of the proposed action. We recognize the importance of improving upon signage for existing routes throughout the project area, though this is beyond the scope of the proposed action and Alternative 3. We intend to include improved signage for the whole project area in the development grant application for implementing this project, and/or other grant applications.

34. One commenter raised a question about the definition of OHV.

We follow the definition from the Travel Management Rule (FR 70 68264): “Off Highway Vehicle. Any motor vehicle designed for or capable of crosscountry travel on or immediately over land, water, sand, snow, ice, marsh, swampland, or other natural terrain.” Note that OHVs may be highway-legal, and that all green-sticker vehicles are OHVs.

35. One commenter asked what we meant by a ‘strategic portal’ in the EA section 1.5.

Section 1.5 (3) states that “The Rattlesnake Mountain area is a strategic portal for OHV use on the SBNF. This area is located adjacent to the Redonda Ridge OHV trail (1W17) and BLM’s Juniper Flat trail system.” There is no other meaning to the term ‘strategic portal’ in this context. It simply describes the area and the routes within it as spanning two popular OHV use areas.

36. One commenter raised a question about the proposed 3N14 to 3N59 connector. Specifically, whether the route includes the segments on both sides of 3N14. Concern was raised about erosion.

This proposed connector crosses 3N14 and includes segments on both sides of the road. The segment that the commenter raised concerns about eroding will be repaired, stabilized, and maintained as part of adoption into the motorized trail system.

37. One commenter raised concern that 3N14 Mixed Use (under Alternative 3) would increase traffic and impact solitude and quiet along the road.

While we do expect a baseline increase in traffic on 3N14 over time, and we do expect the mixed use designation to incrementally increase traffic over the baseline, we do not expect Alternative 3 to significantly impact solitude and quiet along the road. From our Mixed Use Analysis, existing peak traffic is 80 vehicles per day, and adding mixed use is expected to increase peak traffic by 25-50% (to a peak 100-120 vehicles per day). Given that these numbers are concentrated during daylight hours, this roughly equates to average peak traffic under Alternative 3 projected to be one vehicle passing through any given spot every 5 minutes. 3N14 within the project area has, and is projected to have, relatively low peak traffic.

38. One commenter raised a question about effects of the proposed action to the Pacific Crest Trail (PCT).

The PCT is about 2 miles south of Big Pine Flat at its nearest point to the Project Area. There are no expected direct or indirect effects to the PCT from the Proposed Action.