

**BIOLOGICAL ASSESSMENT/EVALUATION  
WILDLIFE AND BOTANY REPORTS  
*and*  
MANAGEMENT INDICATOR SPECIES EVALUATIONS  
*for*  
SBNF ROUTE DESIGNATION PROJECT  
(Travel Management Rule Implementation)**

*San Bernardino National Forest*

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02/06/2009

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02/06/2009

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## **SUMMARY**

The SBNF Route Designation Project area consists of classified and unclassified roads and trails across much of the SBNF. Three action alternatives plus the no-action alternative will be analyzed in detail. These are:

- Alternative 1 is the Proposed Action. This alternative includes a mix of actions, including adding non-highway legal uses to routes currently open only to highway legal vehicles, making non-highway legal use permanent on temporary non-highway legal routes, removal of non-highway legal uses from routes currently open to non-highway legal use, decommissioning classified routes, restriction of classified routes to administrative uses, new construction and designation of routes, and restoration of unclassified routes.
- Alternative 2 is the no-action alternative.
- Alternative 3 was developed in response to public comments that raised the issue that some members of the public would prefer more access to riding experiences than would be allowed under Alternative 1.
- Alternative 4 was developed in response to public comments that raised the issue that some members of the public would prefer restricting motorized access on NFS lands beyond restrictions included under Alternative 1.

Table 1. Summary of Alternatives

<b>Item</b>		<b>Alt. 1A</b>	<b>Alt. 2</b>	<b>Alt. 3</b>	<b>Alt. 4</b>
<b>Cross Country Travel</b>		Prohibited	Prohibited	Prohibited	Prohibited
<b>Seasonal Restrictions</b>		No new seasonal restrictions			
<b>Reclassifying NFS roads for administrative use</b>		50.6 miles	0 miles	41.0 miles	50.6 miles
<b>Restoration of unauthorized routes</b>		74.2 miles	0 miles	73.6 miles	74.2 miles
<b>Changes to Vehicle Class</b>	Adding non-highway legal use to NFS roads	55.3 miles	0 miles	55.3 miles	51.0 miles
	Removing non-highway legal use on NFS roads	24.9 miles	0 miles	6.2 miles	25.0 miles
	<b><i>Net change – non-highway legal use on NFS roads</i></b>	<b>30.4 miles</b>	<b>0 miles</b>	<b>49.1 miles</b>	<b>26.0 miles</b>
	Unauthorized routes added as NFS roads	0.3 miles	0 miles	6.5 miles	0.3 miles
	Decommissioning of NFS roads	15.2 miles	0 miles	14.2 miles	17.5 miles
	<b><i>Net change – NFS roads</i></b>	<b>- 14.9 miles</b>	<b>0 miles</b>	<b>-7.7 miles</b>	<b>-17.2 miles</b>
<b>Roads, Trails &amp; Areas Added To</b>	Unauthorized routes added as motorized trails	8.4 miles	0 miles	8.2 miles	8.4 miles
	Decommissioning of NFS motorized trails	3.3 miles	0 miles	0 miles	3.3 miles

Item		Alt. 1A	Alt. 2	Alt. 3	Alt. 4
National Forest System	Construction of new motorized trails	.5 miles	0 miles	0.2 miles	0.5 miles
	<b><i>Net change- NFS motorized trails</i></b>	<b>5.6 miles</b>	<b>0 miles</b>	<b>8.4 miles</b>	<b>5.6 miles</b>
	Open Areas Added	None	None	None	None

Federally-Listed Species

*Plants:* Threatened and Endangered plant species are known to occur in scattered locations adjacent to routes included in each of the alternatives. Designated and proposed critical plant habitats are also present adjacent to routes included in each of the action alternatives. No proposed or candidate plant species are known or expected to occur in or near the project area. Despite proximity of threatened and endangered plant occurrences and critical habitat, no impacts beyond those which occur under the existing conditions (environmental baseline) are expected. All project-related effects to Threatened and Endangered plant species will be wholly beneficial and have been addressed under previous consultation under section 7 of the Endangered Species Act.

*Animals:* Threatened and endangered wildlife species are known to occur in or near the areas planned for various actions in the Route designation project. Designated and proposed critical habitats are also present. No proposed or candidate wildlife species are known or expected to occur in or near the project area. Despite the proximity of threatened or endangered wildlife species and critical habitat, impacts beyond those which occur under the existing conditions are expected to be wholly beneficial.

Despite proximity of threatened and endangered occurrences and critical habitat, no impacts beyond those which occur under the existing conditions (environmental baseline) are expected. Improvements to the non-highway legal system, designation of administrative use on potentially damaging roads, decommissioning, and restoration of unauthorized routes will help protect the species and their habitat.

*Consultation:* Formal consultation with U.S. Fish and Wildlife Service under section 7 of the Endangered Species Act is not required.

Forest Service Sensitive Species

*Plants:* Numerous sensitive plant species are known from lands adjacent to routes included in each of the alternatives. Despite proximity of Sensitive plant occurrences, only minimal impacts beyond those which occur under the existing conditions (environmental baseline) are expected. The determination of effects for Sensitive plant species is “may affect individuals but not likely to lead in a trend toward federal listing”.

*Animals:* Numerous sensitive animals are known or have potential to be from lands adjacent to routes included in each of the alternatives. Despite proximity of Sensitive species occurrences, only minimal impacts beyond those which occur under the existing conditions (environmental baseline) are expected. The determination of effects for Sensitive animal species is “may affect individuals but not likely to lead in a trend toward federal listing”.

SBNF Watch Species

*Plants:* Numerous SBNF watch-list plant species are known from lands adjacent to routes included in each of the alternatives. Despite proximity of watch-list plant occurrences, only minimal impacts beyond those which occur under the existing conditions (environmental baseline) are expected. No threat to the viability or overall distribution of any of these species would be expected to be caused by any of the alternatives.

*Animals:* A number of watch-list species are known from the project area and its vicinity. Although there will be some minor impacts from activities associated with the various alternatives, there is no threat to the viability or overall distribution of any of these species from the proposed project.

*Management Indicator Species*

The analysis of effects of the alternatives on MIS species does not indicate a significant concern for any MIS potentially affected by the Route Designation project. The conservation measures incorporated into project design will effectively reduce potential impacts to the MIS present in the project area. The scope of this project is too small relative to the landscape to have a measurable effect on MIS populations or their habitat across the SBNF. The project will have no measurable effect on the MIS populations or habitat at the Province scale.

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## PART I – INTRODUCTION

### 1.0 INTRODUCTION

The San Bernardino National Forest is proposing an update to the Forest transportation system to improve the functionality of the system for the users and provide for resource protection and restoration.

This document has six parts:

- Part 1 is an introduction with the project description, methods, management direction, and description of the project area.
- Part 2 is a Botany and Wildlife Report that discusses general impacts to plants and animals in the project area. It also includes a discussion of Watch List Species.
- Part 3 is a Biological Evaluation (BE) of impacts to species that are on the Regional Forester's Sensitive (S) species list.
- Part 4 is a Biological Assessment (BA) of impacts to federally-listed Threatened (T), Endangered (E), Proposed (P), and Candidate (C) plant and animal species.
- Part 5 addresses Management Indicator Species (MIS).
- Part 6 is an Invasive Weeds Risk Assessment.

These reports are required for all Forest Service funded, executed, authorized, or permitted programs and activities.

### 2.0 METHODS

Data regarding biological and botanical resources on the project area were obtained through review of existing records and thorough field investigations.

#### 2.1 Species Considered and Species Accounts

Each section contains the current list of special-status species considered during the surveys and in the analysis of potential effects. Only those species with known occurrences or considered to have a high likelihood of occurrence within the project areas are discussed in depth in this analysis. Species Accounts for the current San Bernardino National Forest (SBNF) Threatened, Endangered, Proposed, Candidate, Sensitive and Watch (TEPCSW) lists are contained in the SBNF Land Management Plan (LMP) from 2005 (USDA Forest Service 2005) <http://www.fs.fed.us/r5/scfpr/projects/lmp/read.htm>

#### 2.2 Pre-field Reviews

Pre-field reviews were conducted to determine which TEPCSW species are known from the project area or have suitable habitat present and potentially occur. Data regarding biological and botanical resources within and near the project areas were obtained through literature review, existing reports, and field investigations.

Sensitive biological and botanical resources present, or potentially present were identified through a literature review using the following sources: California Department of Fish and Game (CDFG) (1988, 1990a, 1990b, and 2001), California Natural Diversity Data Base (CNDDDB), United States Forest Service records, and the California Native Plant Society (CNPS) (2001). Consultations with other sources (e.g., other literature pertinent to the project area, and local experts) are described

below where applicable.

### **2.3 Botanical Methods and Surveys**

Botanical field studies for this project were focused on the relatively small fraction of the action alternatives where ground disturbing impacts beyond those occurring under existing conditions would be expected. Therefore, botanical field studies were generally limited to proposed new construction and designation of currently-unclassified routes.

Potential short-term ground disturbing impacts associated with proposed decommissioning of classified routes and restoration of unclassified routes are expected to be avoided/minimized through application of design features described below. The majority of the unclassified routes proposed for restoration were initially mapped and surveyed by Mountain District botany staff during the winter of 1998 and 1999. Follow-up surveys of these unclassified routes were performed by mountaintop botany staff in 2000 and 2001. The summer of 2001 was an exceptional field season for the detection of the target rare plants, and it is unlikely that occurrences in and adjacent to these routes were missed. However, since seven years have passed since these surveys were performed, avoidance and minimization will be achieved through at implementation.

Targeted field surveys were performed by Mountaintop District Botanist Scott Eliason during the Summer of 2007 and San Jacinto District Botanist Tracy Tennant during the Summer of 2007. These surveys were performed to specifically address the 'new construction' and 'designation of unclassified routes' action categories of the proposed action and alternatives. The botanical surveys were floristic in nature, and were performed during the times of year when target species would be most detectable. Woody perennials were detectable but few plant species were observed in bloom. Annuals and short-lived perennials had low to no detectability. Because the 2007 rainfall year was the driest on record throughout the SBNF, it is likely that focal plant species went undetected. No specific vegetation mapping was done in association with this project.

### **2.4 Wildlife Methods and Surveys**

Fish and wildlife field studies for this project were focused on the relatively small fraction of the action alternatives where ground disturbing impacts beyond those occurring under existing conditions would be expected. Therefore, botanical field visits were generally limited to proposed new construction and designation of currently-unclassified routes.

Wildlife species detected during field surveys by sight, calls, tracks, scat, or other sign were recorded. In addition to species actually observed, expected wildlife usage of the site was determined according to known habitat preferences of regional wildlife species and knowledge of their relative distributions in the area.

The main focus of the faunal species surveys was to identify habitat suitability for special-status wildlife within the project area in order to predict those species with a higher probability of occurrence within the project area. Because a species was not detected does not mean that the species does not occur within the project area. Surveys of wildlife species have the inherent limitation that absence is difficult or impossible to determine. This is especially true for wildlife species with a nocturnal pattern of activity or otherwise difficult to detect.

Scientific nomenclature and common names for vertebrate species referred to in this report follow those used in the 2005 Forest Plan.

### **3.0 CURRENT MANAGEMENT DIRECTION**

Applicable requirements and direction may be found in the Endangered Species Act, National Forest Management Act, Department of Agriculture 9500-4 Regulations, Forest Service Manual, the 2006 SBNF LMP, and the Southern California Conservation Strategy. Appendix B contains details of jurisdictions, legal requirements, and management direction that are applicable to this project.

#### **3.1 Land Use Zones and/or Special Area Designations**

This project crosses multiple Special Area Designations from the LMP (e.g. Special Interest Areas, eligible Wild and Scenic Rivers, and Inventoried Roadless Areas), LMP Land Use Zones, Recreational Opportunity Spectra, Scenic Integrity Objectives, and LMP Places. This project and associated documentation meets all applicable Forest Plan direction with regard to botanical and wildlife resources.

#### **3.2 Compliance with Management Direction and Regulations**

The project is or will be in compliance with the Endangered Species Act, National Forest Management Act, and the SBNF LMP.

### **4.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES**

**A. 1. Proposed Action:** The original proposed action dated February 2007 (Appendix A) has been eliminated from detailed study. Alternative 1 is identical to the original proposed action with three exceptions:

- a. widening of 2W01 to accommodate 50" vehicles is not proposed
- b. addition of new OHV staging areas is not proposed
- c. adding non-highway legal designation on 2N02 from 2N61Y east to the National Forest boundary is not proposed.

This alternative is aimed at providing a balanced mix of route designations and transportation management actions that offer an improved diversity of riding/driving opportunities as well as protection and restoration, relative to existing conditions. The details of this alternative are shown on the project maps, and the summary of miles is shown in Table 1.

**B. No-Action:** Under this alternative no changes would be made to the SBNF's existing travel system. No new route designations would be made and no other transportation management actions would be taken. No system routes would be decommissioned and no unclassified routes would be rehabilitated. The existing motorized transportation system, non-highway legal system, and current prohibitions on motorized vehicle travel off of designated system routes would continue as the status quo. Current unauthorized use of user created trails would be expected to continue or increase.

**C. Alternative 3:** This alternative provides more non-highway legal opportunities and more highway legal motorized access than Alternative 1. It is the same as Alternative 1 except for the following changes (as shown on project maps and summarized in Table 1):

- a. Designate access for highway legal vehicles to designated (yellow post) dispersed camping sites. If the yellow post site is adjacent to a non-highway legal route, then designate access for non-highway legal vehicles as well.
- b. Utilize an unclassified route in Horsethief Flat to create a small loop for highway legal vehicles. Decommission the remainder of 3N03A that extends to the wilderness boundary.

- c. Do not reclassify 1N34 and 1N35 for administrative use only.
- d. Do not decommission the portion of 3N11 north of 3N17. (Wright Mine area)
- e. Do not decommission 3W12 and 3W13 (just south of 3N34)
- f. Do not make changes to the following routes on the northeast corner of Lake Arrowhead: Do not decommission 3W12, 3W13 Willow Crk, and 2N95; do not make 2N96 administrative use only; and do not remove non-highway legal use on 2N28Y. Also no construction of access connector to Forest Service North Shore Work Center.
- g. Do not remove non-highway legal use on 2N30 and 2N40 (Marshall Peak/Cloudland).
- h. Do not remove non-highway legal use on 3N10 (John Bull trail).
- i. Do not remove non-highway legal use on 3N53 (along railroad).

**D. Alternative 4:** This alternative provides fewer non-highway legal opportunities and less highway legal motorized access than Alternative 1. It is the same as Alternative 1 except for the following changes (as shown on project maps and summarized in Table 1):

- a. Decommission 1N39A between Highway 38 and Fish Creek.
- b. Decommission 1N05A after the Aspen Grove trailhead.
- c. Do not add non-highway legal use to 2N90A (to Tip Top Mountain).
- d. Do not add non-highway legal use to 4S19 (San Jacinto District).

**Features common to all three action alternatives**

On the San Bernardino National Forest, there is already a designated system for non-highway legal use and other motor vehicle use, and travel off of designated routes is already prohibited and enforced. The existing designated non-highway legal system was reconfirmed, with public input, through the LMP process and Record of Decision of September 2005. The San Bernardino National Forest Land Management Plan (SBNF LMP) prohibits motor vehicle travel off designated National Forest System roads and trails and limited areas that are designated for vehicle use (SBNF LMP, Part 3, S35, pp 8-9). Concurrently with this Route Designation project, the Forest is implementing the Travel Management Rule with publication of a Motor Vehicle Use Map (MVUM), which defines the designated transportation system and will be used as an enforcement tool.

The SBNF maintains employees and volunteers whose responsibilities are, at least in part, to patrol and monitor the Forest Transportation System, street-legal motorized recreation, and non-highway legal use. These employees make positive contacts with the public, providing information and education (*i.e.*, Conservation Education). They can also cite motorists who violate prohibitions and/or cause resource damage. Finally, user-created routes are identified and remedied as quickly as possible. The Forest has a Wildlife Habitat Protection Program and Habitat Protection Program funded as part of the State funding for non-highway legal use provided to the Forest. Annual monitoring and reporting are conducted based on this annually updated plan. Despite this presence in the field, unauthorized vehicle travel off of designated routes continues to be one of the primary threats to the biological and botanical resources of the SBNF.

The monitoring plan in EA Appendix E for all action alternatives would incorporate additional monitoring requirements into the existing San Bernardino National Forest monitoring program. Monitoring is critical for evaluating the effectiveness of management decisions and the accuracy of analysis assumptions and conclusions. Monitoring of road and trail conditions is required and must meet regional and national standards. If monitoring determines additional resource damage is occurring, steps to prevent further damage must be taken.

The Forest will follow its guidelines on adaptive mitigation for recreation uses in the LMP (USDA FS, 2005, Appendix D). Actions such as fencing or other barriers for perimeter control, limiting periods of visitor use or enacting Forest Orders to administratively close a road or trail due to resource damage can be done without additional NEPA analysis. If the mitigations are not effective or are not possible, road or trail closures and decommissioning may be required and would require additional NEPA analysis.

**Resources Design Features Incorporated into the Project Design:**

These design features apply to the elements of each action alternative. Development of measures to reduce the potential impacts to wildlife and plants is part of compliance with the LMP standard S-11 (LMP Part 3, p.6) that reads:

When occupied or suitable habitat for a Threatened, Endangered, Proposed, Candidate, or Sensitive species is present on an ongoing or proposed project site, consider species guidance documents (Appendix H of the LMP) to develop project-specific or activity-specific design criteria. This guidance is intended to provide a range of possible conservation measures that may be selectively applied during site-specific planning to avoid, minimize, or mitigate negative long-term effects on TEPCS species and habitat. Involve appropriate resource specialists in the identification of relevant design criteria.

Table 2 displays the design features incorporated into all action alternatives in order to help ensure that impacts are avoided, minimized or mitigated.

<b>Table 2. Design Features Common to All Action Alternatives</b>		
<b>Concern</b>		<b>Design Feature</b>
Riparian areas, water bodies, wetlands, seeps, springs, and meadows	R-1	The Five-Step project screening process will be used to identify riparian conservation areas (RCAs) (S-47, LMP Part 3, p. 11) wherever designations and/or transportation management actions intersect riparian areas.
	R-2	New construction will avoid identified RCA's to the maximum extent possible.
	R-3	Decommissioning of roads and restoration of unclassified routes, wherever they are within identified RCAs, will be implemented with minimal impact to the RCA and associated botanical and wildlife resources. To the extent possible, snags and downed logs will be retained within the RCA.
Botanical Resources	B-1	New construction will avoid impacts to Threatened, Endangered and Sensitive (TES) plant species. Prior to construction, coordination will occur with the District Botanist or Forest Botanist to ensure that route alignments are chosen that will not impact TES plants.
	B-2	New construction should minimize impacts to Watch-list plant species to the extent feasible. Prior to construction, coordination will occur with the District Botanist or Forest Botanist to help select alignments to minimize impacts to Watch-list plants. Watch-list species and other

**Table 2. Design Features Common to All Action Alternatives**

Concern	Design Feature
	species of interest may be flagged and avoided where they co-occur with TES species or riparian conservation areas. Any impacted Watch-list plant occurrences will be monitored during and after implementation to the extent possible.
	B-3 All decommissioning and restoration will be planned and implemented to avoid impacts to TES species.
Invasive Plants	<p>IP-1 For new construction, decommissioning and restoration, all mechanized heavy equipment to be used off of system roads will be cleaned prior to entering the project area. This is to reduce the likelihood of introduction or spread of non-native invasive plants. In all project-related contracts, include provisions that require equipment cleaning before project implementation.</p> <p>IP-2 Where available, any plant materials used for decommissioning and restoration will be from on-site sources (e.g., chipped wood, etc.). All plant material from off-site sources (straw, mulch, etc.) must be certified weed-free. (S-6, LMP Part 3, p. 5)</p> <p>IP-3 A handout will be prepared for the project administrator to use to identify target weed species and to use to educate the permittee and contractors.</p> <p>IP-4 Information and training will be provided to field-going OHV employees and resources patrol employees and volunteers regarding invasive non-native plant species to help identify new introductions before they become inordinately expensive or impossible to eradicate.</p>
Restoration	RE-1 Decommissioned roads and rehabilitated routes should be restored using locally-collected plant materials and seeds (S-6, LMP Part 3, p. 5). Seed mixes and planting palettes must be approved by a Forest Service botanist prior to application.
General - Wildlife	<p>WG-1 For new construction, decommissioning and restoration, known occurrences of Sensitive and Watch animals and/or habitat features that support sensitive animals will be flagged and avoided. These areas may be buffered to prevent indirect impacts. A qualified biologist will work with the project administrator to avoid known occurrences.</p> <p>WG-2 For new construction, decommissioning and restoration, no night-time work (and use of artificial lighting) during construction will be allowed. Night-time is defined as the period between sunset and sunrise.</p> <p>WG-3 Use of water sources from National Forest System (NFS) lands for dust abatement or other project operations would be evaluated on a site-specific basis. If use is approved, it would be in excess of National Forest needs and such that flows would not be</p>

**Table 2. Design Features Common to All Action Alternatives**

Concern	Design Feature
	substantially altered.
Nesting Birds	<p data-bbox="448 344 1409 533">B-1 For new construction, decommissioning and restoration: To comply with the Migratory Bird Treaty Act, prior to onset of implementation between March 1<sup>st</sup> and August 31<sup>st</sup>, surveys will be conducted for nesting birds no more than two weeks prior. If nesting birds are found, the project administrator will work with the biologist to minimize impacts and ensure consistency with the Act.</p> <p data-bbox="448 562 1409 688">B-2 For new construction, decommissioning and restoration: active and inactive raptor nest areas will be avoided, using buffers and LOPs as needed (S-18, LMP Part 3, p 7). Nest trees will be flagged for avoidance during implementation.</p>
General – trees w/high wildlife value and for stand diversity	<p data-bbox="448 718 1386 873">WT-1 For new construction, decommissioning and restoration: Live and dead western junipers and black oaks that are 14” or greater in DBH and single-leaf pinyon pines 12” or greater in DBH will be retained where possible, unless they must be removed because they pose falling hazards.</p> <p data-bbox="448 903 1386 1058">WT-2 For new construction, decommissioning and restoration: Mountain mahogany (<i>Cercocarpus</i>) and manzanita (<i>Arctostaphylos</i>) shrubs with any stem greater than 6” total basal stem diameter will be retained where possible. Some limbing/thinning of these plants may occur in the shaded fuelbreak.</p> <p data-bbox="448 1087 1409 1243">WT-3 For new construction, decommissioning and restoration: Retain live and dead trees with signs of wildlife (visible cavities, acorn woodpecker storage trees, sapsucker feeding holes, etc.) unless they are a safety hazard. A Wildlife Biologist will help guide selection of leave-trees.</p>
Rare terrestrial reptiles and amphibians	<p data-bbox="448 1272 1386 1365">HE-1 For new construction, decommissioning and restoration: Protect rock outcrops, springs, seeps and riparian areas from mechanical disturbance where possible.</p> <p data-bbox="448 1394 1347 1520">HE-2 For new construction, decommissioning and restoration: When needed, temporary mesh barriers may be installed to prevent southern rubber boas and other species from moving into high activity areas.</p>
Monitoring	<p data-bbox="448 1549 1386 1642">M-1 The project area will be monitored periodically for non-native invasive plants. If weeds are found, a plan for eradication/control will be developed as a component of the WHPP/HMP.</p> <p data-bbox="448 1671 1386 1797">M-2 The SBNF will continue to provide field staff, and well as continue to cultivate volunteers, to patrol, enforce and monitor uses of the non-highway legal and highway legal motorized transportation system to the maximum extent possible.</p> <p data-bbox="448 1827 1409 1883">M-3 New non-highway legal routes designated as a part of this project will be evaluated and appropriate monitoring will be carried forward</p>

**Table 2. Design Features Common to All Action Alternatives**

Concern	Design Feature
	to the next WHPP/HMP.
	M-4 Special Attention in monitoring will be paid to insuring new unauthorized routes are quickly identified and disguised in the Soboba new designation on 4S19 and the road to TipTop Mountain 2N90 A and B. 2N90 C will be monitored as well to discourage off route use.
Yellow Post Sites	YP-1 Any currently unclassified routes that are brought into the Forest Transportation System under this project to access existing Yellow Post dispersed camping sites will meet the following conditions: <ol style="list-style-type: none"><li>1. The route will follow a single well-used alignment to the extent possible so that no new construction would be needed.</li><li>2. In coordination with district or Forest biologists and botanists, a route will be defined that avoids or minimizes impacts to TES plants and wildlife habitat.</li><li>3. The route will be clearly delineated on the ground and on maps, and any secondary (unclassified) routes into the campsite should be blocked and/or disguised.</li><li>4. A new set of maps will be prepared that clearly indicates locations of all yellow post sites with authorized vehicle access. These maps will replace all existing yellow post site maps and will be used by the districts to direct the public to these sites.</li><li>5. Former yellow post sites with no authorized vehicle access will be discontinued, not shown on maps, and not improved/maintained for camping uses (e.g. fire rings, picnic tables)</li></ol>

## 5.0 MANAGEMENT AND MONITORING RECOMMENDATIONS

These following recommendations are measures that are not included in any action alternative, and effects determinations in this document do not depend on any of them. However, implementing any of these recommendations would further reduce the effects of the project on botanical and wildlife resources.

1. Exclude the new construction of a bypass on 3W14 without provisions to decommission existing alignment. This would protect the Sensitive plant *Castilleja lasiorhyncha* and its habitat.
2. Exclude designation of unclassified spur to Big Bear South Shore YP 26. Vehicle access to this site is via a Riparian Conservation Area which supports the Sensitive plant species *Lilium parryi*.
3. Monitoring should have a strong emphasis on sections of non-highway legal routes that run alongside threatened and endangered and sensitive plant habitat. For all three action alternatives, these include 3N14, 4N16, 3N16, 2N02, 3N03, and Holcomb Creek crossing at 3N16.

4. Repeat Hund study with true and sufficient replication to test the assumptions of this analysis
5. Monitoring should have a strong emphasis on sections of non-highway legal routes that are adjacent to or cross perennial streams.
6. Where non-highway legal use is newly-authorized, make sure all highway legal spurs off of these routes are well signed indicating prohibited non-highway legal vehicle use.
7. Closely monitor springs and coast live oak woodlands in the Soboba/Vista Grand area to prevent unauthorized use and associated damage to the extent possible.

## **6.0 PROJECT AREA DESCRIPTION**

The proposed project area spans most of the SBNF, exclusive of wilderness areas. Biological descriptions at this broad scale can be found in the Place descriptions in the 2005 Forest Plan.

The total scope of the project constitutes up to 235 linear miles of roads and unclassified routes (depending on elements and alternatives selected) and all affected adjacent areas and areas accessed solely or primarily via these routes. While this project represents a relatively small fraction of the total land area managed by the SBNF, it encompasses nearly the full range of elevations, slopes, soils, watersheds, vegetation, climates, habitats, and visitor bases found within the borders of the SBNF.

Due to this very broad project area, site specific descriptions are only provided in the following BE and BA where potential effects warrant site-specific evaluation.

## **PART II: BOTANY AND WILDLIFE REPORT**

### **1.0 INTRODUCTION**

This section addresses impacts and concerns that are not specifically related to MIS, weeds, or TEPCS species. It includes a brief analysis of effects to Watch list species and addresses concerns regarding general wildlife and vegetation. The purpose of this report is to generally describe species and habitats within the project area as well as to document the types and degree of potential effects from the proposed project.

### **2.0 AFFECTED ENVIRONMENT AND POTENTIAL EFFECTS – GENERAL**

#### **2.1 Existing Conditions and General Effects**

##### Past and Present Actions/Activities Contributing to the Existing Condition:

Historic logging, mining, grazing, settlement, water development, and motorized recreation beginning in the latter half of the 19<sup>th</sup> century and continuing through the mid-20<sup>th</sup> century created many of the Forest Transportation System roads on the San Bernardino National Forest. The modern network of Forest roads formally became the designated Transportation System with the 1989 Forest Plan. (see part 2 for general effects of roads and motorized trails)

Fire Suppression activities, especially the creation of fuelbreaks, has led to the establishment of many miles of user-created routes along these paths of reduced resistance to motorized travel. In a much broader sense, fire suppression over the past century has led to altered vegetation conditions across the National Forest lands, which increases susceptibility to disease, and a tendency toward larger and more catastrophic wildfires.

Drought-related mortality: The montane conifer forests of the SBNF were heavily logged in the late 1800 and early 1900s. The resulting dense and mostly even-aged stands of trees became established during the era of fire suppression and finally experienced widespread mortality during the drought years of 2001-2004. Dense stands of trees are more susceptible to drought stress, and stressed trees are more susceptible to boring insects (e.g. "bark beetles") and root pathogens. Surveys in southern California in 2003 found fir engraver beetles, pine engravers (*Ips*), California flatheaded borers, Jeffrey pine beetle, and western pine beetle in the SBNF. Approximately 500,000 acres of insect-related mortality were mapped in 2003 over the SBNF. By March of 2004, there was a 1% increase, and by June, there was a 6% increase.

By 2003, images of widespread tree mortality in and around mountain communities of southern California, combined with the huge wildfires that year resulted in national-scale attention by the public, congress and the administration. The Healthy Forest Initiative was ratified as the Healthy Forests and Restoration Act, and significant funds to treat hazardous fuels followed. Many fuels reduction and forest health projects were planned and implemented, and many more are being planned for the future, with widespread past, present and future impacts to the same species affected by this project.

The Forest Plan was revised in 2006, and the transportation system from the 1989 Plan was carried forward. The 2006 Forest Plan and associated forest orders also prohibited motorized vehicle travel off of system roads and motorized trails.

Despite this prohibition, unauthorized motorized vehicle travel off of system roads and motorized trails continues to be the greatest threat to wildlife and botanical resources on the SBNF.

Private Land Development has caused past and ongoing destruction of habitats of all of the species that would be affected by the action alternatives. Most of this cumulative habitat loss is within the mountain communities of the San Bernardino and San Jacinto mountains. While massive losses of habitat have resulted at the urban interfaces at the base of these mountains, the species affected are not generally the same as those affected by the action alternatives.

Multiple large wildfires in and near the project area, and associated suppression activities, have impacted many of the sensitive species that would be affected by the action alternatives. These fires include Willow, Grand Prix, Old, Heart/Millard, Runway, Blue Cut, Butler 2, Slide, Grass Valley, and Esperanza. Effects to Sensitive species included crushing and uprooting of plants through the construction of dozer lines, and increased off-route travel following loss of protective vegetation cover.

The Forest Transportation System is shown on project maps. Road densities on the SBNF range from extremely high (greater than 10 miles per square mile) to roadless. The vegetation and wildlife of the Forest are generally described in the Place descriptions in the Land Management Plan, and are incorporated herein by reference. The scope of this project includes such a wide range of habitats and habitat conditions; they will not be reiterated here.

#### General Effects of Roads, Motorized Trails, and Cross Country Vehicle Use

The following information is from the Forest Plan EIS:

The effects motorized roads and trails and cross country motorized vehicle use on plants and animals are discussed below. These effects are not ranked in order of severity and they do not always occur with each activity or use. The degree of impact depends on the timing of when a use or activity occurs, the magnitude or amount of habitat affected by the use or disturbance, the intensity of activity or use, the location in relation to species and habitats, and the duration of the impact. These environmental effects are known to occur at times depending on the specific on-the-ground situation and are described to help explain the relationship of land uses and activities to plants and animals and their habitats. These effects were drawn from the literature and experience of Forest Service biologists, botanists and ecologists working on thousands of projects over the span of many years. The species that are affected by the use or activity are noted in parentheses after the effect using the following key:

A=All Species

B=Birds

F=Fish

H=Amphibians

I=Invertebrates

M=Mammals

R=Reptiles

P=Plants

#### General effects of Motorized Roads and Trails

Activities associated with the use, maintenance and construction of roads and motorized trails include: vehicular travel (personal, commercial and heavy construction vehicles); fuel and/or

other toxic substance spills; hauling of materials; presence of people and domestic pets, road maintenance activities (grading of road surfaces, installation of road surfaces - gravel, asphalt, cement); clearing of snow or debris following storm events; filling of washouts and potholes, brush removal, mowing, culvert cleaning) and motorized events for groups.

The level of intensity of impacts typically increases significantly at stream crossings for the aquatic species due to the concentrated occupancy of the species and effects at these locations (for References and Literature Cited, please refer to Appendix B of the Forest Plan EIS).

The following effects may be associated with roads and motorized trails. Roads and motorized trail activities may cause loss of individuals or habitat by:

#### Negative Effects

- Crushing and mortality of animals, plants and burrow systems (A)
- Creation of sediment affecting water quality (F, H, I, R)
- Creation of dust and mud which coats nearby species and habitat (A)
- Pollution of water from introduction of toxic substances (F, H, I)
- Generation of noise (day and night) and animal disturbance (A)
- Intermittent night lighting which affects animal behavior (B, M, H, R)
- Providing access for legal and illegal shooting, hunting, and fishing (A)
- Provide access for unauthorized off-route travel off of the road surface and creation of new user created routes (A)
- Loss of vegetative cover (A)
- Introduction of invasive nonnative species brought in on tires/treads/undercarriage of vehicles (A)
- Use of herbicides for weed and grass control (A)
- Blockage or interruptions of fish and wildlife movement corridors for feeding, breeding and dispersal (F, H, R, I, M)
- General disturbance of species through presence of vehicles and human use (B, F, H, I, R)
- Erosion due to concentration of water along roads (A)
- Litter (nuisance species/ingestion of plastic/animal entrapment) (A)

#### Positive Effects

- Well designed located and maintained roads can reduce many of the effects of cross-country driving (A)

#### Effects of Forest System Roads:

The ecological effects of roads have been summarized in various literature reviews (refer to the Forest Plan EIS for References). These reviews all conclude that construction of roads, the presence of roads in the landscape, and the vehicles that travel upon roads have a wide range

of ecological effects. These effects range from changes in the physical and chemical properties of ecosystems to alterations in the population and community structure of living organisms. Roads and their associated use can have substantial effects on species-at-risk and biological diversity, depending on the overlap of the facilities with sensitive habitats or species (see Appendix B, General Direct and Indirect Effects to Plants and Animals). Roads provide access for many forms of recreation; the effects of this recreation on plants and animals can be substantial.

National Forest System roads themselves can have both positive and negative effects on biodiversity. For example, designating a system road or constructing a system road that consolidates use that was formerly on multiple unauthorized, user-created roads can reduce the impacts on habitat and species-at-risk. Generally, however, roads have negative effects. Plants adjacent to roads often get covered with dust, which can affect their vigor and reproductive capabilities. Water runoff and infiltration rates are modified from naturally occurring conditions and can affect adjacent vegetation. Vehicle travel on roads is a major mechanism for the transport and spread of invasive species, which can lead to declines in native species abundance. Roads are an ongoing source of harassment (noise, visual disturbance) for many animals. Roads can often be barriers to movement for terrestrial and aquatic species. Road crossings of riparian areas and streams are especially critical areas because of the higher levels of animal use. The movement of aquatic species can be constrained by the type of stream crossing that is constructed. Improperly designed crossings sometimes results in an inability for species to move up and down stream to optimize habitat effectiveness, reach spawning areas, and adjust to seasonal flows and temperatures.

Effective engineering and design can minimize or prevent many of these impacts by routing new roads away from sensitive areas. Relocating existing roads that are in conflict with species-at-risk or sensitive habitats is another positive way to protect biological diversity. Proper design of stream crossings can reduce the effect on riparian-dependent species by elevating the road prism out of the riparian area or by providing adequate passageways that minimize animal mortality from vehicles (roadkill).

Construction of new roads can destroy habitat where the ground is disturbed. It can also result in increased erosion and sedimentation, which affects aquatic species by reducing oxygen, covering eggs, and silting in resting pools. Best Management Practices and good design greatly reduce these potential impacts. Maintenance of existing roads crushes some animals and plants on the road edges, creates loose soil which is subject to erosion, and can expose species to effects similar to road construction. Maintenance activities create noise and human disturbance, to which some animals are very sensitive depending on timing of the activity. Failure to adequately maintain existing roads can also result in erosion and sedimentation that can negatively affect aquatic ecosystems. Correcting problem areas and poor conditions on existing roads, as well as doing proper maintenance, is beneficial to species-at-risk and habitats.

The ongoing establishment and use of unclassified routes has chronic impacts on biodiversity. Many unclassified routes are the product of off-route vehicle travel, generally developing over time as people access favorite dispersed recreation sites, participate in off-highway vehicle activities off of designated routes, or pioneer routes into wood cutting, hunting, and camping areas. In other instances they are remnants of previous logging, mining, or other activities. Unclassified routes are not engineered to any standard and can pose a direct threat to species-at-risk through the destruction of habitat and the potential for soil erosion.

Converting unclassified roads to National Forest System roads may have short-term impacts in the form of erosion and sediment due to the reconstruction needed to bring them up to standard. However, once an unclassified road is brought up to standard, erosion and sediment effects associated with the road should decrease.

#### Effects of Motorized Trails:

The ecological effects of motorized trails have been described in various literature reviews (refer to the Forest Plan EIS for References). Motorized trails can have effects on species and habitat that are similar to those of roads (described above), although the scale is different because of the lower mileage of the motorized trail system compared to the national forest road system and because the trail tread is narrower than typical National Forest System roads.

Potential impacts on species-at-risk are essentially proportional to the size of the motorized trail system and the habitat area it accesses. Non-highway legal vehicle use is expected to remain a popular activity on all the national forests, and demand is expected to increase over time. Based on the increases in non-highway legal vehicle sales and the projected increase in visitation to the national forests, management efforts to prevent impacts from motorized trail use and unauthorized off-route travel will be challenged during the next 10 to 15 years.

In an area with high demand for non-highway legal use, managed non-highway legal systems can provide many benefits for the sustainability of biodiversity. Failure to have a designated system in this situation will result in an unauthorized system of user-created trails developing, with no environmental planning or design. Even with a well-designed and engineered system, the designated motorized trail system can have direct effects on species-at-risk and their habitats.

Sound and human disturbance associated with the activity can disrupt behavioral patterns of animals, causing them to abandon preferred habitat or use more energy, and negatively affect reproduction and survival.

Some National Forest System trails were poorly located or poorly designed originally and are now resulting in chronic soil movement. Other trails are poorly located in relationship to riparian areas or occupied habitat for species-at-risk, contributing high levels of sediment into streams or directly affecting species. In some localized areas, the incorporation of user-created routes, skid trails, abandoned roadbeds, or dozer lines as part of the designated motorized route system has contributed to the general deterioration of habitat. In other cases, trails were constructed before concerns for individual species became apparent or before species were listed as threatened and endangered. Relocation of trail segments that are directly affecting species or habitat could mitigate some of these effects. Proper design and location of proposed additions to the designated trail system will remain an important component in the protection of biological diversity.

Unauthorized off-route vehicle travel is the greatest management concern associated with motorized trails. Indeed, the Chief of the Forest Service has identified unmanaged OHV use as the major component of one of the four threats facing the national forests (for more information see <http://www.fs.fed.us/projects/four-threats/>). The proliferation of unclassified routes originating from National Forest System roads and motorized trails, and their associated effects on resources such as species-at-risk, can be one of the major consequences of unauthorized vehicle use. Newly pioneered trails can quickly become established routes because of high levels of use and the substantial effects that motorized vehicles can have on undisturbed

ground. For the non-highway legal vehicle enthusiast, unclassified routes have all the appearances of an authorized National Forest System road or trail.

Many animals adapt somewhat to predictable travel on well used, properly designed and designated trails and learn to avoid them. On unauthorized trails, the effects of disturbance to species-at-risk are greater because they often go through sensitive areas, and animals are not as likely to adapt to the presence of irregular trail use. In addition, erosion and sedimentation often result from these routes, which were not located, designed or engineered properly. This can negatively affect aquatic species and habitats, sensitive soils and dependent plants, and wetland habitats. Open terrain without vegetation barriers that supports habitat for plant species-at-risk can also be affected by unauthorized off-route vehicle use, especially when soils are saturated. Ground disturbance caused by unauthorized off-route use also increases the network of denuded areas throughout the national forests and can contribute to the spread of invasive nonnative plants.

Unrestricted off-route vehicle use is prohibited on the San Bernardino National Forest and non-highway legal vehicle use is restricted to designated National Forest System roads and trails. This helps managers, law enforcement officers, and visitors clearly understand that off-route travel by motorized vehicles is not an authorized use on the southern California national forests. A motorized trail system is being developed in an effort to achieve greater user compliance and for the sustainability of resources and the activity. Properly designed and maintained, designated motorized trail systems are expected to reduce the effects on species-at-risk and their habitats; they are also expected to reduce the extent of area affected by motorized vehicles when compared to the random development of a user-created unauthorized trail network.

#### Effects of Cross Country Vehicle Use

The following effects may be associated with cross-country vehicle use. Cross-country vehicle use may cause loss of individuals or habitat by:

- Direct mortality or injury from crushing of individuals by operating vehicles on designated/undesignated roads and trails and open space within occupied habitat (H, I, M, R, B)
- Direct mortality or injury from crushing of individuals by operating vehicles in streams and riparian corridors in occupied habitat (A)
- Direct mortality or injury as a result of spillage of gas and/or oil into streams within and downstream from occupied habitat (H, F, I)
- Direct mortality or injury of eggs and tadpoles as a result of added sedimentation and/or suspension by wave action from vehicle use within stream courses or at designated/undesignated crossings (H, F, I)
- Reduced habitat quality due to noise, presence of vehicles and people (B, F, H, M, R)
- Interference with and/or loss of breeding activity (displacement) as a result of noise and presence of vehicles and people (H, F, B,)
- Habitat degradation by spread of invasive nonnative plants in disturbed/denuded areas (A)
- Litter (nuisance species/ingestion of plastic/animal entrapment) (A)

- Displacement of animals from preferred habitat to less quality habitat (B, M, H, R)
- Making of user created routes that encourage other unauthorized cross-country use (A)

## **2.2 Impacts of No-Action - Common to General and Special Status Plants and Animals**

Under the no-action alternative, habitat conditions within the project area would remain the same as under current conditions for the foreseeable future. Under the no-action alternative, wildlife and plant species in the project area will experience no changes in levels and types of disturbance with regard to individuals, populations, and habitats other than increases in use from anticipated larger numbers of users over time.

Under this alternative, the long-term adverse effects of construction and route designation would not occur, nor would the short-term adverse effects to plants and animals that would be caused by route rehab and decommissioning. However, the many adverse effects to plants and animals that would be remedied under each of the action alternatives through route restoration, decommissioning and reclassification would not occur, and no progress would be made toward the desired conditions with regard to unclassified routes, off-route vehicle travel, and unmanaged recreation in general.

## **2.3 Impacts of All Three Action Alternatives - Common to General and Special Status Plants and Animals**

This is a discussion of general types of direct and indirect impacts that may result from this project for all animals and plants that are present in the project area. Native species in the project area would be impacted in two general ways: through habitat loss/degradation and through direct and indirect impacts to individual plants and animals. Species and habitats would also benefit from some elements of the action alternatives.

### 2.3.1 General Effects to Plants and Wildlife by Action Category

a. Addition of non-highway legal use to existing routes open to highway legal vehicles: This action category would designate system routes currently open only to highway legal vehicles adding use by non-highway legal vehicles.

i. Plants: No effects relative to existing conditions are expected. This evaluation is based on the assumption that adding non-highway legal access to roads already open to public motorized travel with highway legal vehicles would have no impacts to plants, plant populations, or general vegetation beyond those occurring under existing conditions. This assumption is based on the following premises: 1) highway legal vehicles and non-highway legal vehicles do not differ with regard to their maximum capabilities for travel and terrain; 2) there is no indication that an operator of a non-highway legal vehicle would be more or less likely than an operator of a highway legal vehicle to venture off of a designated route and engage in illegal/unauthorized off-route travel; 3) non-highway legal vehicles that are properly equipped and meet legal requirements are no more likely to start fires than are properly equipped highway legal vehicles; and 4) the extent, severity, frequency, and duration of habitat degradation and impacts to plants and general vegetation caused by unauthorized off-route travel do not differ with regard to whether or not the offending vehicle is street-legal.

It is likely that this designation would increase use on these roads, simply due to the fact that the designation opens up legal access to previously-excluded users. However, there is no indication that this increased use would result in increased abuse, and more traffic on the road does not directly equate to increased impacts to plants. The improved riding opportunities,

connectivity, and efficiency of the non-highway legal system may even reduce the tendency for motorists to venture off-route.

Even if one were to assume that an overall increase in use would lead to proportionally more individuals venturing off-route and causing damage to vegetation, this would likely be offset by improved management of the system. It is likely that the designation would lead to funding for increased patrols, enforcement, restoration, and possibly a greater degree of route adoption and self-enforcement within the non-highway legal user communities.

If monitoring does reveal a conflict between non-highway legal use and protection of special-status plant species, Standard 34 in the Forest Plan and the associated adaptive mitigation provisions of Forest Plan Appendix D would be invoked. This Forest plan direction seeks the least-restrictive effective solution to conflicts, ranging from conservation education to closure and decommissioning of facilities. This full range of possible responses to identified conflicts is included within the scope of all of the action alternatives and will not require subsequent NEPA process to implement as needed.

A report by Kathryn C. Hund dated March 9, 2007 was submitted to the SBNF and is considered as part of this analysis. This report provided a pertinent look at this question of whether different types of vehicles (*i.e.* non-highway legal and highway legal) cause different levels of environmental impact. The report also provided useful information about the adverse environmental effects of roads in general. Unfortunately, the three categories of roads studied were not independently replicated. That is, it appears from the report that the replicate samples for each road type were each taken along a single road of that type, and were therefore not independent of one another. Therefore it is not possible to rule out an alternative hypothesis that the particular roads selected to represent each category were used by more or less law-abiding motorists, irrespective of the type of vehicles they drove and irrespective of the types of vehicles the road is open to. This is a very worthy question to pursue, and a recommendation is included in this document to continue this study with adequate replication across multiple roads of each type, Forest-wide.

ii. Wildlife: Designating existing system routes as legal for non-highway legal vehicles will increase the amount of use these routes receive. This will increase the potential for road kill. In addition, it could result in some additional avoidance of the roadway due to noise and potential for harassment. Where hunting or illegal shooting is common, some species (deer, predators, etc.) will avoid roads where this occurs. In open areas with long sight distance, the area avoided can be quite large (up to ¼ mile). Where there is good cover either provided by vegetation or topography, this distance can be much smaller. The findings presented in the above referenced report by Kathryn C. Hund indicate that there are additional off route impacts on routes designated as open to non-highway legal vehicles versus highway legal vehicles. Although we do not doubt that this appeared to be the case on the routes studied, observations in the San Bernardino Mountains by non-highway vehicle patrols and resource patrol personnel do not bear this out for the designated system. Damage off-route is generally caused by illegal activities and these are not restricted or limited to non-highway legal vehicle users. The differences observed between these two areas may be due to the specific area studied in the San Jacinto Mountains, and the difference in enforcement and user education/contact provided in the two mountain ranges. As described in the above plant discussion, it would be good to expand the study done by Hund to the entire Forest.

b. Remove Non-highway legal use from existing routes:

i. Plants: No direct effects relative to existing conditions are expected, based on the assumptions described above. Indirectly, removal of non-highway vehicle designation on these specific routes is expected to have beneficial effects on plant species and general vegetation. The routes proposed for this reclassification are included because they do not contribute to an efficient manageable system of non-highway legal routes. For example, non-highway legal vehicle use of the John Bull Trail (3N10) is currently allowed, but this route is isolated from other non-highway legal routes and there is limited available for trailering/staging. This creates a situation where non-highway legal users are more likely to seek access to this route from other parts of the non-highway legal system, cross country and/or via unclassified routes. Removal of non-highway legal routes that are inefficient and difficult to manage is expected to benefit plants and general vegetation to the extent that off-route travel and parking are reduced.

ii Wildlife: Removing non-highway legal use from a roadway and making it only for highway legal vehicles will reduce road kill, disturbance and harassment as described above. Removing non-highway legal use from the John Bull Trail will also benefit wildlife because it will not act as an attractive nuisance for non-highway legal users trying to get to it cross country from legal routes to the west or east.

c. Reclassify existing routes as administrative (or permittee) use only: This action category would designate routes currently open to public motorized vehicle travel as administrative or permittee use only. This designation closes the road to public use, but leaves the road in place and maintained for administrative (e.g. Forest Service) and/or permittee (e.g. utility company) uses. Some of the roads that are being designated as administrative or permittee use only are already functioning in that way but have not been formally designated as such.

i. Plants: Net beneficial effects are expected. Removing authorized public use from these roads is expected to reduce the frequency and extent of unauthorized travel off of these roads. This is based on the premise that restricting access to the road, along which points of departure are used to venture off-route, will reduce the frequency and extent of use of these points of departure. Gating or otherwise blocking these roads to public access may have small-scale and short-term impacts to plants, such as uprooting, crushing, and/or trampling.

This designation will likely result in patrols and general field presence along these routes becoming less frequent than under current conditions, which would reduce enforcement and monitoring along the road. However these adverse effects are expected to be outweighed by the benefits of the designation. In several cases these roads are already gated and this designation would have no effects compared with existing conditions.

Because these roads will remain in place and will be subject to some level ongoing use and maintenance, all other ongoing effects to botanical resources along these roads will remain the same as under existing conditions.

ii. Wildlife: Removing public use from system roads is expected to reduce the amount of road kill, disturbance and harassment of wildlife. It should also reduce the amount of unauthorized off route travel and subsequent effects on animals and their habitat.

d. Construct and designate new routes: This action category would entail new construction of road segments and classification of these routes as new additions to both the highway legal and non-highway legal systems. For alternatives 1A and 4, this action category is limited to three short segments totaling approximately ½ mile. These sections are: 1) a bypass of a section of route 3W14, 2) a connector between 3W12 and 3W13, and 3) a connector to the North Shore

OHV work center. The latter two are part of a suite of actions aimed at providing a holistic solution to the problematic non-highway legal system near Lake Arrowhead's north shore and are not included under Alternative 3.

i. Plants: Net adverse effects of direct vegetation and plant habitat loss would be long-term but small in scale. Route alignment would be planned and implemented to avoid impacts to special status plant species (B-1). The extent to which construction of these segments would improve the trail system and reduce tendencies to leave designated routes would be beneficial to general botanical resources long-term. However, this upside is impossible to predict and measure in advance, and this action would rely on monitoring for an eventual evaluation. The adverse effects to plants from this action class are substantially offset by action categories f and g (decommissioning and restoration).

ii. Wildlife: This activity will result in a loss of habitat and an increase in long-term wildlife impacts associated with the presence of a road. Since the amount of this activity being proposed is so small, the impacts are relatively minor. The areas where this work is proposed are heavily impacted at the present time and the road construction proposed at the North Shore OHV work center facilitates a significant amount of road and trail decommissioning and administrative use designation. The combined effect of this work will benefit wildlife.

e. Open and designate unclassified routes: This action category would open unclassified routes to highway legal or to both highway legal and non-highway legal travel, depending on adjacent use. Uses on these routes would presumably increase relative to the existing levels of unauthorized travel as a result of a combination of signage, mapping, and maintenance. Under alternatives 1A and 4, this category would be limited to four short segments and two long composite segments for a total of 8.75 miles. Alternative 3 would exclude one of these (3W13 to 3N34 connector) and adds additional segments under this category, as described below under 2.4.

The segments included under all alternatives are:

**Cleghorn Ridge:** Multiple segments that parallel 3N24 and 2N47. These routes are burned in and well used, and the topography along the ridge is such that opportunities for off-route exploration and the formation of additional user-created trails is minimal. This designation would be expected to provide a benefit to general vegetation and wildlife because the associated maintenance of these routes would reduce erosion problems that are currently fairly serious. Maintenance, including likely construction of rolling dips and lead-outs, would have localized adverse effects on adjacent general vegetation.

**Pilot Rock Ridge:** Multiple Segments that parallel 2N33. These routes are burned in and well used, and the topography along the ridge is such that opportunities for off-route exploration and the formation of additional user-created trails are limited. This designation would provide a benefit to general vegetation and wildlife because the associated maintenance of these routes would reduce erosion problems that are currently fairly serious. Maintenance, including likely construction of rolling dips and lead-outs, would have localized adverse effects on adjacent general vegetation.

**Garner Valley:** This short spur off of Forest Road 6S05 is well established and frequently used by a variety of visitors (e.g. permittees, equestrians, hikers, shooters, mountain bikers). As mapped, classifying this route would have no effect on general vegetation. However, the route accesses a larger network of unclassified routes around Quinn Flat. According to San Jacinto

District recreation staff (Ladley pers comm), there would be no practical way to block this newly-designated route at its terminus in order to prevent unauthorized motorized vehicle access to Quinn Flat. But also according to San Jacinto District Staff (Ladley and Kramer pers comms), the unclassified routes on Quinn Flat that could be accessed via this proposed route are not in or adjacent to rare plant habitat or sensitive vegetation, and furthermore motorists who use these well-established unclassified routes tend to stay on these routes and do not tend to drive off these routes (*i.e.*, route proliferation is not perceived to be a threat at this site).

Cactus Flats: This short connector off of 3N03 is well-established and well-used. No effects to botanical resources would be expected from this designation.

Willow Creek: This proposed designation of an existing unclassified route connecting 3W13 to 3N34 will substantially improve the situation for wildlife and riparian vegetation at Willow Creek. A trail segment that immediately parallels the very important riparian area would be eliminated as part of this proposal. This will make the situation better for a variety of riparian dependent species.

In general for this action category, there are expected to be benefits related to patrol, maintenance, and monitoring as well as possible benefits of increased compliance on a more functional road and trail system.

f. Decommission existing classified routes: This activity will benefit plants and animals significantly in the long-term. There may be some short-term adverse effects from ground disturbance required to decommission the road or trail. Native plants and wildlife will return to the area and this can be accelerated through restoration techniques. Newly-available habitat will become occupied, and impacts associated with off-route vehicle travel will be reduced.

g. Rehabilitate unclassified routes: Restoration of unclassified routes will also benefit plants and animals significantly and long-term. In addition to restoring the ground occupied by the unclassified trail or road, there will also be off-site benefits from reduced erosion. Once restored, they will not be the attractant for additional off-route travel. User created unauthorized routes result in additional routes being formed. This is a vicious cycle which has severe landscape-scale and localized consequences for plants and animals. Portions of the Forest where this has happened the most (North of Big Bear Lake and West of Idyllwild) create areas with severely reduced wildlife habitat quality. This is both from the habitat loss and the amount of wildlife disturbance that results from high road and trail density.

**2.4 Additional Impacts under Alternative 3, Common to General and Special Status Plants and Animals:** Alternative 3 includes several transportation actions that are not included in the other alternatives, and some actions found under the other alternatives are not included in Alternative 3. Differences between Alternative 3 and Alternative 1, and the associated impacts to plants and wildlife are as follows:

a. Designate unclassified access routes to existing yellow-post (dispersed primitive camping) sites. Add as highway legal only or highway legal and non-highway legal based on designation of connected system route. These yellow post camping sites all have at least one unclassified route leading to them. Some of them have multiple roads leading to and around the campsite. Identifying the best route and designating it (per design feature YP-1) will benefit plants and animals by keeping use on one route.

b. Add an unclassified route at Horsethief Flat to create a terminal loop for street-legal vehicles. Decommission the remainder of 3N03A that extends south to the wilderness boundary. This action will have little effect on plants and animals since the unclassified loop road is already well-established. If the loop is designated and clearly mapped and signed, there will be increased potential to successfully rehabilitate the other unclassified routes at Horsethief Flat. This will benefit wildlife and plants. Decommissioning the terminal section of 3N03A will be beneficial to plants and animals of the desert scrub vegetation of Horsethief Flat as well as of the riparian zone of Arrastre Creek.

c through i: These are seven transportation actions proposed under Alternative 1 and excluded under Alternative 3. Each of these seven are designed to reduce management problems with the non-highway legal system. None of these exclusions would have effects to plants or animals relative to the existing environment as they are essentially no-action. All of the exclusions would remove net benefits to plants and animals relative to Alternative 1.

**2.5 Additional Impacts under Alternative 4, Common to General and Special Status Plants and Animals:** Alternative 4 has the following differences relative to Alternative 1.

a and b: Decommission 1N39A and 1N05A. These two decommissionings are beyond those proposed under Alternative 1 and may add minor short term adverse affects to plants and animals but would also add long-term beneficial effects for general plants and animals as described under section 2.3.1 (f), above.

c and d: Exclude adding non-highway legal use on 2N90A and 4S19. Neither of these exclusions would have effects to plants relative to the existing environmental conditions. Neither of these exclusions would affect plants relative to Alternative 1. Not adding non-highway legal use to these routes would reduce potential road kill and disturbance somewhat. There is a concern in both locations regarding users using spurs that would not be designated and in the potential for additional user created roads and trails forming. In the case of 4S19 , there are some important springs and coast live oak woodlands that would need to be carefully monitored to provide protection. This area has been a deer management emphasis area for years and if vehicles are not carefully controlled, they could become a substantial problem for deer.

**3.0 AFFECTED ENVIRONMENT AND DIRECT AND INDIRECT IMPACTS - WATCH LIST SPECIES**

Watch list species are those that the local biologists and botanists have expressed concern about either because of apparent downward trends, apparent changes in habitat availability, or because of lack of knowledge and/or understanding of the species. The purpose of this report for plants is to document occurrences of these species within the project area as well as to document the types and degree of potential effects from the proposed project. For wildlife, the list of potential wildlife species in the project area is included in the appendix. For complete species accounts and references, refer to the Forest Plan.

<http://www.fs.fed.us/r5/scfpr/projects/lmp/read.htm>

**3.1 Watch List Animals - Impacts of No Action**

The general discussions in Part II, Section 2 is applicable for any Watch-list animals that occur in the project area.

**3.2 Watch List Animals – Affected Environment and Direct and Indirect Impacts of the Action Alternatives**

The project area spans most of the Forest, so no attempt has been made to indicate which wildlife species are known or suspected from areas included in the project. The list of the Forest Watchlist Wildlife Species is provided in Appendix B. This list is used during surveys to note occurrence of these species to assist the Forest in doing a better job of protecting them in the long-term. Impacts to these species are described above in the General Impacts to wildlife sections. Impacts from this project are relatively minor when considering all the benefits provided by restoration, elimination of vehicles in sensitive areas, designating some roads as administrative use only, and decommissioning some roads. The impacts of designating new non-highway legal routes and new construction are offset by these measures.

### **3.3 Watch List Plants - Impacts of No Action**

The discussion in Part II, Section 2 are applicable for all Watch-list plant species that occur in the project area.

TABLE 3. SAN BERNARDINO NATIONAL FOREST WATCH PLANT SPECIES					
SPECIES NAME	COMMON NAME	OCCURRENCE INFORMATION			OCCURRENCE IN PROJECT AREA
		Mountaintop	Front Country	San Jacinto	
<i>Allium parishii</i>	Parish's onion	P		P	
<b><i>Androsace elongata</i> ssp. <i>acuta</i></b>	<b>California androsace</b>	<b>P</b>	<b>P</b>	<b>X</b>	<b>Known</b>
<i>Antennaria marginata</i>	White-margined everlasting	X	X		
<b><i>Arabis dispar</i></b>	<b>pinyon rock-cress</b>	<b>X</b>			<b>Known</b>
<b><i>Astragalus leucolobus</i></b>	<b>Bear Valley woollypod</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>Known</b>
<i>Boykenia rotundifolia</i>	Round-leaved boykenia	X	X	X	
<i>Calyptidium pygmaeum</i>	pygmy pussypaws	X	X		
<b><i>Castilleja montigena</i></b>	<b>Heckard's paintbrush</b>	<b>X</b>	<b>X</b>		<b>Known</b>
<i>Chaenactis parishii</i>	Parish's chaenactis			X	
<i>Chorizanthe xanti</i> var. <i>leucotheca</i>	White-bracted spineflower		X	X	
<i>Corydalthus eremicus</i> ssp. <i>eremicus</i>	desert bird's beak	P			
<i>Erigeron breweri</i> var. <i>jacinteus</i>	San Jacinto Mts. daisy			P	
<b><i>Eriogonum microthecum</i> var. <i>corymbosoides</i></b>	<b>San Bernardino Mountains buckwheat</b>	<b>X</b>			<b>Known</b>
<b><i>Eriogonum umbellatum</i> var. <i>minus</i></b>	<b>alpine sulpher-flowered buckwheat</b>	<b>X</b>			<b>Known</b>
<b><i>Eriophyllum lanatum</i> var. <i>obovatum</i></b>	<b>southern Sierra woolly sunflower</b>	<b>X</b>	<b>X</b>		<b>Known</b>
<i>Galium angustifolium</i> ssp. <i>gabrielense</i>	San Antonio Canyon bedstraw		P		
<i>Galium jepsonii</i>	Jepson's bedstraw		P		
<i>Galium johnstonii</i>	Johnston's bedstraw	X	X	X	
<i>Hulsea vestita</i> ssp. <i>callicarpha</i>	Beautiful hulsea			X	
<b><i>Hulsea vestita</i> ssp. <i>parryi</i></b>	<b>Parry's sunflower</b>	<b>X</b>	<b>X</b>		
<i>Juglans californica</i>	southern California black walnut		X	X	
<i>Juncus duranii</i>	Duran's rush	X			
<b><i>Layia ziegleri</i></b>	<b>Ziegler's aster</b>			<b>X</b>	<b>Known</b>
<i>Lepidium virginicum</i> var. <i>robinsonii</i>	Robinson's peppergrass		P	P	
<i>Linanthus maculatus</i>	Little San Bernardino Mountains gilia	P		P	
<b><i>Lilium humboldtii</i> var. <i>ocellatum</i></b>	<b>ocellated Humboldt lily</b>	<b>X</b>	<b>X</b>	<b>P</b>	<b>Known</b>
<i>Monardella cinerea</i>	Gray monardella		P	P	
<i>Muhlenbergia californica</i>	California muhly grass		X		
<i>Muilla coronata</i>	Crowned muilla	P			
<i>Oxytropis oreophila</i> var. <i>oreophila</i>	mountain oxytrope		X		

TABLE 3. SAN BERNARDINO NATIONAL FOREST WATCH PLANT SPECIES					
SPECIES NAME	COMMON NAME	OCCURRENCE INFORMATION			OCCURRENCE IN PROJECT AREA
		Mountaintop	Front Country	San Jacinto	
<i>Packera ionophylla</i>	Tehachapi ragwort	X	X		
<b><i>Perideridida parishii</i> ssp. <i>parishii</i></b>	<b>Parish's yampah</b>				<b>Known</b>
<b><i>Phacelia mohavensis</i></b>	<b>Mojave phacelia</b>	<b>X</b>	<b>P</b>		<b>Known</b>
<i>Piperia leptopetala</i>	Narrow-petaled rein orchid	X	X		
<i>Podistera nevadensis</i>	Sierra podistera	X			
<b><i>Rupertia rigida</i></b>	<b>Parish's California tea</b>	<b>X</b>	<b>P</b>	<b>P</b>	<b>Known</b>
<b><i>Swertia neglecta</i></b>	<b>pine-green gentian</b>	<b>X</b>			<b>Known</b>
<b><i>Syntrichopappus lemmonii</i></b>	<b>Lemmon's syntrichopappus</b>	<b>X</b>	<b>P</b>	<b>X</b>	<b>Known</b>
<i>Viola aurea</i>	Golden violet	P	P		

### 3.4 Watch List Plants – Affected Environment and Direct and Indirect Impacts Common to All Action Alternatives

There are 13 watch-list plant species known to occur within the reach of direct and indirect effects of the action alternatives. All species listed in Table 3 were considered in this analysis and those shown in bold are those known to occur. It is likely that Watch-list plant occurrences are present but undetected/unmapped throughout the project area.

See the Forest Plan for complete species accounts with citations. The earlier discussion in Part II, Section 2.3 also applies to watch-list plants known to occur as well as any that were undetected during surveys.

Direct and indirect effects to Watch-list plants are as follows:

*Androsace elongata* ssp. *acuta*: The spur off of Forest Road 6S05, proposed under all action alternatives for addition to the transportation system as a highway legal route, could indirectly impact this species. While the alignment of the proposed spur does not intersect this plant's habitat, the route provides access to a network of unclassified routes through Quinn Flat which could further proliferate into this plant's habitat. The habitat structure is flat with a very open vegetation structure, and is vulnerable to impacts from off road motorized vehicle exploration, as well as parking along these unclassified routes. Designation of this spur could have adverse indirect effects on this species and its habitat.

*Arabis dispar*: This species occurs on clay-rich soils on the east end of the Mountaintop District, primarily along the Forest Roads 2N02 and 3N03 corridors. Many unclassified routes along these corridors are proposed for restoration. While restoration activities may have short term adverse effects on this species and plants in general, these effects will be actively avoided and minimized. Long term, restoration of these routes will be very beneficial to this species by opening up new habitat and removing/reducing the primary source of chronic disturbance to its habitat.

*Astragalus leucolobus*, *Castilleja montegena*, and *Swertia neglecta*: The majority of these species' regional distributions occur in the 6000-7000 foot elevation range of the eastern San Bernardino Mountains. This is same area as the majority of the proposed restoration of unclassified routes. These species are tolerant of, and often associated with intermediate levels of disturbance, so are often found roadside. While restoration activities may have short term adverse effects on these species and plants in general, these effects will be actively avoided and minimized. Long term, restoration of these routes will be very beneficial to these species by opening up new habitat and removing/reducing the primary source of severe and chronic disturbance to its habitat (*i.e.*, off road vehicle travel).

*Eriogonum microthecum* var. *corymbosoides*: This taxon is endemic to carbonate habitats of the San Bernardino Mountains, sharing virtually the same distribution as the five federally-listed carbonate endemic plants of the San Bernardino Mountains. This species, however, is more common within the narrow distribution. Reclassification of the Mining Roads 3N88, 88B, 87, and 54, and restoration of multiple unclassified routes near these mining roads and Forest Roads 2N02 and 3N03 will provide a benefit for this taxon by removing/reducing a primary source of chronic disturbance to its habitat.

*Hulsea vestita* ssp. *parryi* and *Rupertia rigida*: These taxa occur within the project area throughout Holcomb Valley and in Bear Valley south and east of the town of Sugarloaf. In both of these areas, restoration of unclassified routes may cause short-term localized adverse effects (direct impacts such as uprooting, crushing, trampling, etc), but with long-term benefits associated with discontinuation of use of these routes and availability of additional habitat. The suite of transportation solutions south of the town of Sugarloaf

also includes decommissioning of system roads and reclassification of system roads to administrative use only. Together, these actions will have the same potential for short term impacts to plants but with significant long-term benefits for the plant populations.

*Layia zieglerei*: This species is currently considered to be a synonym of the more common *Layia platyglossa*. However, because this form is endemic to the Garner Valley area, the SBNF maintains this formerly recognized taxon on the watch list as a distinct population of conservation and taxonomic interest. This plant is known to occur near the unclassified spur off of Forest Road 6S05, proposed for designation under all action alternatives as a system road. This unclassified spur is well used and designation would not be expected to cause direct impacts to this plant. However, the spur crosses a wash (and periodically blows out), so expected maintenance and periodic reconstruction of the road following designation could impact this plant where it occur near and downstream from the spur. This impact could include uprooting, crushing, burial, and downstream erosion and deposition of sediments.

*Lilium humboldtii* var. *ocellatum*: This species is associated with mountain and foothill canyons below 6000 feet and occurs within the riparian zone as well as on shaded and moist canyon slopes. Several occurrences of this species would benefit from the suite of transportation solutions near the North Shore of Lake Arrowhead and Ash Meadows areas. A more clear and efficient transportation system for this area is expected to reduce the likelihood that motorists will venture off-road into this plant's habitat. This species also occurs in the Holcomb Creek riparian zone near the 3N16 crossing. This section of 3N16 is proposed to be redesignated to add non-highway legal use to the existing use by highway legal vehicles. Forest Road 3N16 is heavily used, and no effects are expected to be caused by this redesignation, based on the assumptions stated in section 2.3.1(a)(i), above. There is a recommendation to monitor and test this assumption, and the Holcomb Creek crossing at 3N16 should be included with this monitoring.

*Perideridida parishii* ssp. *parishii* and *Phacelia mohavensis*: These species occur in montane wet meadows, seeps, springs, and vernal-wet drainages. They are part of a suite of species (collectively, the vernal wetland species) that are particularly vulnerable to unauthorized off-road vehicle travel because of relatively flat topography, open vegetation structure, seasonally-wet soils that are fragile and easily rutted, and dependence on highly localized hydrological patterns. This localized hydrology is readily disrupted by vehicle tracks, which can divert and concentrate surface water flows. Plants of this habitat are also vulnerable to crushing and uprooting because the soils are fragile and easily displaced when wet. Several occurrences of this species would benefit from the suite of transportation solutions in the North Shore Lake Arrowhead and Ash Meadows areas, and near the sections of 2N26, 2N75, and 2N25Y proposed for decommissioning. A more clear and efficient transportation system for this area is expected to reduce the likelihood that motorists will venture off-road into this plant's habitat.

*Syntrichopappus lemmonii*: This species occurs in sunny openings with little to no shrub or tree canopy cover and little to no slope. This habitat offers virtually no resistance to off-road vehicle exploration. This plant's habitat is known on the SBNF from the central and western transmontane Mountaintop District, from Little Pine Flats to Saddle Flats and Burnt Flats to Cajon Pass, and on the San Jacinto District in the Garner Valley and Quinn Flats areas. The proposed classification of an unclassified spur off of 6S05 would likely result in indirect adverse effects caused by increased unauthorized vehicle access to the Quinn Flat area. The decommissioning of 2N25Y at Rouse Meadow would be a great benefit for this species, as this is one of its largest documented occurrences and this decommissioning will reduce threats and open up available habitat.

Decommissioning of 3N96 and 3N98, along with redesignation of 3N41, would also be beneficial for this species.

### **3.5 Additional Impacts to Watch List Plants Under Alternative 3**

*Eriophyllum lanatum* var. *obovatum*: This taxon occurs in open-canopy forest habitats in the Childrens' Forest and Bluff Mesa areas, in the 7500-8000' elevation range. Yellow post sites in these areas occur within and near occurrences of this plant. Designation of routes to provide authorized motorized access to yellow post sites would not impact these occurrences. However, the associated efforts to define a single route and block/disguise alternative routes into these sites is expected to benefit this taxon.

*Eriogonum umbellatum* var. *minus*: This taxon reportedly occurs in open-canopy forest habitats in the Bluff Mesa area, in the 7500-8000' elevation range. However, these may be misapplied records of *Eriogonum umbellatum* var. *subaridum* or *E. u.* var. *munzii*. Yellow post sites in these areas occur within and near occurrences of these occurrences. Designation of routes to provide authorized motorized access to yellow post sites would not directly impact these occurrences. However, the associated efforts to define a single route and block/disguise alternative routes into these sites is expected to provide a net benefit to general vegetation, and by extension to this taxon if this nomenclature is correctly applied to the plants in this area.

The exclusion of the suite of transportation actions at North Shore of Lake Arrowhead from Alternative 3 would remove substantial benefits to the following Watch List plants, relative to Alternative 1: *Perideridia parishii* spp. *parishii*, *Phacelia mohavensis*, and *Lilium humboldtii* var. *ocellatum*.

### **3.6 Additional Impacts to Watch List Plants Under Alternative 4: None.**

## **4.0 VIABILITY DETERMINATIONS**

These determinations are based on the complete proposed action as defined in Part 1 of this document, including all net-adverse and net-beneficial elements under each action category, and all listed design features.

### **4.1 Wildlife Species**

Implementation of the proposed action will have some impacts to Watch-list animal species, as described above in Part II, Section 2. However, the proposed project will not result in a loss of viability for the wildlife species discussed in Section 3.0. The project will not interfere with maintaining viable populations well distributed across the planning area.

### **4.2 Plant Species**

Implementation of the proposed action likely will result in loss of individuals of Watch-list plant species, as described above. However, the project will not result in a loss of viability for these species, nor interfere with maintaining viable populations well distributed across the planning area.

## **PART III: BIOLOGICAL EVALUATION OF IMPACTS TO FOREST SERVICE SENSITIVE SPECIES**

### **1.0 AFFECTED ENVIRONMENT AND EFFECTS OF THE PROPOSED PROJECT FOR SENSITIVE SPECIES**

Part I contains descriptions of the methods/evaluation process, proposed action, alternatives, and habitat for this project. Part II contains discussions on general impacts to plants and animals – many of those general impacts also apply to Sensitive plants and animals. Species accounts for the Sensitive species discussed in this section are contained in the Forest Plan Reading Room

<http://www.fs.fed.us/r5/scfpr/projects/lmp/read.htm>

#### **1.1 Sensitive Animals - Impacts of No Action**

The discussion in Part II, Section 2 is applicable for any Sensitive species that occur in the project area.

#### **1.2 Sensitive Animals – Affected Environment and Direct and Indirect Impacts Common to all Action Alternatives**

A number of Sensitive wildlife species are known or expected to occur within the project area. Table 4 contains the current Sensitive animals for the SBNF and the potential for each to occur in the project area. The potential impacts to Sensitive species that are known to occur and those that have a high probability of occurring in and adjacent to the project area are discussed in detail. See the Forest Plan for complete species accounts with citations.

The general discussion included in Part II, Section 2.3 is relevant to many of the specific animal species discussed below; the types of impacts (e.g., direct losses during construction, noise impacts, habitat impacts, etc.) all apply to any of the Sensitive animals that may occur in the project areas. These are not repeated below.

The following table displays the sensitive wildlife species on the Forest, the habitats they occur in and whether or not they are present in the project area or affected by decisions being made. In general the effects to sensitive wildlife species from motorized vehicle use on roads, trails and cross country were described in the previous section on General Fish, Wildlife and Plants. Specific conflicts and benefits from aspects of the various alternatives with sensitive fish and wildlife species will be discussed as appropriate.

Table 4. REGION 5 SENSITIVE WILDLIFE SPECIES						
COMMON NAME	LATIN NAME	OCCURRENCE INFORMATION*			HABITAT TYPE**	OCCURRENCE IN PROJECT AREA?
		Mountainto p	Front Country	San Jacinto		
Santa Ana speckled dace	<i>Rhinichthys osculus</i> ssp.	N	Y	Y	aq	Y
arroyo chub	<i>Gila orcutti</i>	N	P	Y	aq	Y Hybrid
partially armored threespine stickleback	<i>Gasterosteus aculeatus microcephalus</i>	N	H	Y	aq	Y
large-blotched ensatina	<i>Ensatina eschscholtzii klauberi</i>	Y	Y	Y	r, mc	P
Monterey Salamander	<i>Ensatina eschscholtzii eschscholtzii</i>	?	Y	N	r, mc	P
San Gabriel Mountain slender salamander	<i>Batrachoseps gabrieli</i>	N	Y	N		P
southwestern pond turtle	<i>Actinemys marmorata pallida</i>	P	N	Y	aq, r	N
California legless lizard	<i>Aniella pulchra</i>	?	Y	Y	c, d	P
San Diego horned lizard	<i>Phrynosoma coronatum blainvillii</i>	Y	Y	Y	w, d, wo	Y
southern rubber boa	<i>Charina bottae umbratica</i>	Y	Y	Y	mc, c, r	Y
coastal rosy boa	<i>Lichanura trivirgata rosafusca</i>	U	Y	Y	c	L
San Bernardino ringneck snake	<i>Diadophis punctatus modestus</i>	Y	Y	N	c, g, rk, r	L
San Diego ringneck snake	<i>Diadophis punctatus similis</i>	N	N	Y	c, g, rk	P
San Bernardino mountain kingsnake	<i>Lampropeltis zonata parvirubra</i>	Y	Y	Y	mc, c, pj, r	L
San Diego mountain kingsnake	<i>Lampropeltis zonata pulchra</i>	N	N	Y	mc, r	P
two-striped garter snake	<i>Thamnophis hammondi</i>	Y	N	Y	r, aq	P
bald eagle	<i>Haliaeetus leucocephalus</i>	Y	U	Y	aq,r,m	Y
northern goshawk	<i>Accipiter gentilis</i>	Y	Y	Y	mc	P
California spotted owl	<i>Strix occidentalis occidentalis</i>	Y	Y	Y	mc	Y
American peregrine falcon	<i>Falco peregrinus anatus</i>	Y	Y	Y	**	P
willow flycatcher (migrant)	<i>Empidonax traillii</i>	Y	Y	Y	r	Y
San Diego cactus wren	<i>Campylorhynchus bruneicapillus sandiegense</i>	N	Y	H	d, c	N
California leaf-nosed bat	<i>Macrotus californicus</i>	Y	?	P	d, wo (pj)	P
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	Y	?	Y	mc, r, aq, wo, c,	P

					mines	
pallid bat	<i>Antrozous pallidus</i>	L	P	Y	c, wo, mc, d, rk, r	P
western red bat	<i>Lasiurus blossevillii</i>	Y	?	?	mc, r	P
Los Angeles little pocket mouse	<i>Perognathus longimembris brevinasus</i>	U	U	Y	c	N
San Bernardino white-eared pocket mouse	<i>Perognathus alticolus alticolus</i>	H	P	N	mc, wo	U
San Bernardino flying squirrel	<i>Glaucomys sabrinus californicus</i>	Y	Y	H	mc, r	Y
San Gabriel Mountains bighorn sheep	<i>Ovis canadensis nelsoni</i>	N	Y	N	wo, rk, d	Y
<p><u>*Occurrence Information:</u>  N = Outside known distribution/range of the species.  U = Occurrence of the species is unlikely based on habitat present.  P = Occurrence of the species is possible; suitable habitat exists.  L = Occurrence of the species is likely; suitable habitat exists and the species is known for nearby locations.  Y = Species is known to occur.  H = Part of the historical range but the species has been extirpated.  B = Species is known or likely to nest in the area.  M = The species uses the area during migration as a stopover.</p>		<p><u>**HABITAT TYPES/HABITAT COMPONENTS</u>  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</p>				

### 1.2.1 Fish

There are three sensitive fish species potentially effected by the various actions contained in the three alternatives.

Partially armored threespine stickleback occur in Coxey Pond and Coxey Creek. Coxey Creek Trail (3N95) has been closed for some time to protect the sensitive resources in Coxey Creek and Deep Creek. It is very important that this route remain closed and the closure enforced as the road and trail are located in the worst possible location with numerous eroding steep hillsides and multiple stream crossings. All alternatives provide for officially decommissioning this route.

Arroyo chub/Mojave chub hybrids are known from Deep Creek. Actions that would increase erosion and resulting sedimentation in Deep Creek would be adverse to this species. None of the proposed actions in the Deep Creek Watershed are very close to Deep Creek. The amount of decommissioning and change to administrative use is similar to the amount of road being opened to non-highway legal vehicles. There should be no change from current sediment in Deep Creek under any alternative.

Speckled dace are present in Cajon Wash. The only activities proposed under any alternative are making one road administrative use only and removing non-highway legal vehicles from another. Both of these roads are some distance from the creek. No alternative should have any effect on Santa Ana speckled dace.

### 1.2.2 Amphibians

There are three sensitive amphibians potentially present in the area affected by the various proposed actions in the action alternatives. The two ensatina salamander species are generally found in moist situations in canyons and north facing slopes, or in riparian or moist forest and woodlands. They spend the majority of their time in situations with lots of hiding cover and moist microclimates, so they are not likely to hang out on edges of roads and trails. The majority of the activity planned in this project is in dryer more open habitats. Very little new construction is planned and it is not in situations conducive to ensatina salamanders. Existing routes that are being designated as open for GS do pass through some areas that could have salamanders. Some of the areas being closed to GS use, rehabilitated, and designated for administrative use only could also have Ensatina. The greatest impact to ensatina would be the creation of eroding surfaces with gullies and waterways from cross country vehicle use that would dewater a site and make it less suitable for this species. Overall, there should be little effect on this species because the proposal is for designated routes accompanied with enforcement and Forest Service presence.

San Gabriel Mountain slender salamander may be present on the far west end of the project in the San Gabriel Mountains. Making 1N34 and 1N35 administrative use only could reduce the small potential for roadkill of salamanders.

### 1.2.3 Reptiles

There are two sensitive lizards, California legless lizard and San Diego Coast horned lizard, that are potentially affected by this proposal. In addition, there are seven snakes including the southern rubber boa, coastal rosy boa, San Bernardino and San Diego ringneck snake, San Bernardino and San Diego Mountain kingsnake, and two-striped garter snake that are in the project area.

For the most part, these species prefer areas with cover such as down logs, duff, leaf litter, surface and subsurface rocks with spaces, cavities in down logs and the like. For most of them, surface and subsurface moisture is important and the microhabitat created by cover and moisture. Riparian areas are important. For two-striped garter snakes, only perennial riparian areas with fish or tree frogs appear to be used. For all of these species, cross country vehicle use can be very damaging. In addition to the killing of individuals by crushing, loud noise can disrupt their behavior and even cause long term damage to their hearing. Perhaps the greatest impact of cross country use is the creation of eroding surfaces with gullies and waterways that dewater a site and make it less suitable for these species. Since this project will only allow use on designated roads and trails which for the most part have existing use and riparian areas are avoided, the impacts are expected to be minor. There could potentially be some limited mortality to these species from roadkill where roads or trails pass through suitable habitat.

San Diego horned lizard is a species that may be impacted more than the rest of these species. They are attracted to bare areas with loose soil and an abundance of native ants. Often times, roads and trails have loose soil on the edges with bare areas that are perfect for foraging. As a result, horned lizards are probably the most likely species to be killed by crushing as routes are used. However, of the sensitive reptile species on the project, San Diego horned lizards appear to be the most abundant and widespread of all the species. They have been found in virtually all habitats from coastal to desert and valley to montane up to around 8,000 feet.

#### 1.2.4 Birds

Sensitive bird species present in the project area include the bald eagle, northern goshawk, California spotted owl, American peregrine falcon, and willow flycatcher. Bald eagles are primarily around Big Bear Lake, Silverwood, Lake Arrowhead, and Lake Hemet. None of the proposed project areas are within known nesting or roosting habitat for bald eagles. They may fly over some of the areas and occasionally land near a route, but none of the routes are in habitat considered to be important for this species. There should be no impact to bald eagles from this project.

The northern goshawk is a very rare visitor to the San Bernardino National Forest. Breeding has not been confirmed in the San Bernardino, San Gabriel or San Jacinto Mountains, however there are infrequent observations in the summer. Summer observations have been primarily in the higher elevation forests and there is not much activity associated with this project in those areas other than identifying and designating access roads to yellow post campsites. There should be no impact to the northern goshawk.

The American peregrine falcon forages over most of the forest. One of the only locations where nesting has been documented is in the Mormon Rocks formation in Cajon Pass. Although this area is heavily impacted by freeways, railroads, powerlines and other utilities, suitable habitat still exists for this species where they historically nested. The only part of any alternative that would potentially affect this area is planning to make 2N87 Administrative Use or Permittee use only. Making 2N87 and 2N88 Administrative use only will reduce the potential harassment of prairie and peregrine falcons in the Mormon Rocks.

This should be a benefit to peregrine falcons and reduce potential human conflicts in the form of shooting or harassment. Riparian areas are important foraging areas for peregrines and these areas are being avoided by new route designation.

Migrant willow flycatchers are known to use most of the high quality riparian habitats on the San Bernardino National Forest. This project proposes no new non-highway legal routes that would

impact riparian areas that are not already impacted by roads and vehicle use. Creating a system that provides quality experience and reduces unauthorized trail and cross country vehicle use should benefit this species. There should be no adverse impact to migrant willow flycatchers.

California spotted owls are present in areas planned for some activity in this project. A more detailed discussion can be found in the section on Management Indicator Species. Some yellow post sites scattered throughout the Forest are located in or on the edge of California spotted owl home range cores, protected activity centers, and nest stands. These yellow post sites have been used for some time and this project will designate a single access route and eliminate multiple access roads. This should reduce human disturbance to these sites or maintain the status quo. Areas which have this situation are in the Lytle Creek watershed portion of the San Gabriel Mountains, Black Mountain, North Fork, Lake Hemet, and Thomas Mountain areas of the San Jacinto Mountains,

Making 2N12 and 2N12X north of Green Valley Lake administrative use only will benefit owl habitat by reducing disturbance in HRC, PAC, and nest stands.

The changes proposed near the North Lake Arrowhead administrative sites will be a benefit to CASPO by removing non-highway legal use in some areas, decommissioning some routes, and making a more logical non-highway legal system. These changes will more than make up for the small amount of new routes designated for non-highway legal use.

Designating the access road to Cajon Mountain as administrative use is best for CASPO. This road is already gated, but making it official is a positive decision for owls.

Making 1N04 to Rattlesnake Creek administrative use only will benefit CASPO in the long run. This route is currently gated, and officially making the road administrative use only is positive.

Making routes around Sugarloaf Mountain administrative use only as well as a substantial amount of restoration will benefit CASPO. Decommissioning 1N39 A will benefit owls. Making routes north of Sugarloaf Mountain administrative use only as well as a substantial amount of restoration in the area will benefit CASPO.

The various alternatives have actions that will benefit owls for the most part. There are a couple of areas where minor encroachments into protected activity centers (PAC) and nest stands (NS) occur with new construction or non-highway legal designation, but in all cases, this is needed to take other actions that will have a greater benefit to PACs and nest stands by decommissioning, making administrative use only, removing non-highway legal use, or rehabilitating unauthorized routes.

The following table displays the differences in alternatives for mileage in Protected Activity Centers, Nest Stands and Home Range Cores for spotted owls.

Table 5	mi.	mi.	mi.
Alternative 1	Nest Stand	PAC – NS	HRC
Add Non-highway legal use	0.00	0.46	0.00
Decommission	0.00	1.40	0.00
Make Administrative	0.79	2.23	2.21
New Construction	0.05	0.15	0.00
Rehabilitate Unauthorized Route	0.31	3.33	5.08
Remove Non-highway legal use	0.00	0.21	0.00
Alternative 3	Nest Stand	PAC - NS	HRC
Add Non-highway legal use	0.00	0.46	0.00
Decommission	0.00	0.06	0.00
Make Administrative	0.75	1.86	2.21
Open Unclassified Route	0.10	0.16	1.07
Rehabilitate Unauthorized Route	0.31	3.33	5.08
Alternative 4	Nest Stand	PAC - NS	HRC
Add Non-highway legal use	0.00	0.46	0.00
Decommission	0.00	1.40	0.42
Make Administrative	0.79	2.23	2.21
New Construction	0.05	0.15	0.00
Rehabilitate Unauthorized Route	0.31	3.33	5.08
Remove Non-highway legal use	0.00	0.21	0.00

Based on this comparison, all alternatives will have a beneficial effect on California Spotted Owl based on the mileage of restoration, decommissioning, removal of non-highway legal use, and changing to administrative use.

### 1.2.5 Mammals

#### Bats

Four sensitive bat species are potentially present in areas planned for activities related to this project. These species roost in rock crevices, caves, mines, tree cavities and in buildings and bridges. None of these habitats are expected to be affected by the proposals in this project. Foraging takes place over a variety of habitats, primarily at night when non-highway legal vehicle activity on the Forest is not heavy. Preferred areas for foraging are riparian areas and meadows which are avoided by the proposed increase in non-highway legal designation. The impacts to bats of this project are anticipated to be very small because of the balance of opening areas and restricting use in other areas and the protection of riparian habitats.

San Bernardino white-eared pocket mouse is not expected to be found in the project area. This species has not been found on the Forest for many years and the locations believed to be the most likely to potentially have this species are not affected under any of the action alternatives.

San Bernardino flying squirrel lives in mixed conifer habitat throughout the San Bernardino Mountains. They are known from the project area. The area most affected by this project are the higher elevation yellow post sites and sites proposed for decommissioning and administrative use only in mixed conifer. Flying squirrels could be affected by disturbance. Eliminating vehicle use and identifying a single route to yellow post sites should benefit this species. Decommissioning, restoration and making a route administrative use only will benefit this species.

San Gabriel bighorn sheep will benefit from reduced disturbance by designating 1N34 from the Cucamonga Creek side to Day Canyon as administrative use. Designating 2N87 and 2N88 for administrative use only will potentially benefit sheep by reducing harassment in an important habitat linkage between the San Bernardino and San Gabriel Mountains.

### **1.3 Sensitive Plants - Impacts of No Action**

The discussions in Part II, Sections 2.1 and 2.2 are applicable for all Sensitive plant species that occur in the project area.

### **1.4 Sensitive Plants – Affected Environment and Direct and Indirect Impacts Common to All Action Alternatives**

All species listed in Table 8 were considered in this analysis and those shown in bold are those known to occur in or very near the project area. It is likely that Sensitive plant occurrences are present but undetected/unmapped within the project area.

See the Forest Plan for complete species accounts with citations. The earlier discussion in Part II, Section 2.3 also applies to Sensitive plants known to occur as well as any that were undetected during surveys.

TABLE 6: SENSITIVE PLANT SPECIES					
SPECIES NAME	COMMON NAME	OCCURRENCE INFORMATION		San Jacinto	Known from Project Area
		Mountaintop	Front Country		
<i>Abronia nana</i> ssp. <i>covillei</i>	Coville's dwarf abronia	X			
<i>Abronia villosa</i> var. <i>aurita</i>	chaparral sand verbena			X	
<b><i>Acanthoscyphus parishii</i> var. <i>cienegensis</i></b>	<b>Cienega Seca puncturebract</b>	<b>X</b>	<b>P</b>		<b>Known</b>
<i>Allium marvinii</i>	Yucaipa onion		P		
<i>Arabis breweri</i> var. <i>pecuniaria</i>	San Bernardino rock-cress		X		
<b><i>Arabis johnstonii</i></b>	<b>Johnston's rock cress</b>			<b>X</b>	<b>Known</b>
<b><i>Arabis parishii</i></b>	<b>Parish's rock cress</b>	<b>X</b>			<b>Known</b>
<b><i>Arabis shockleyi</i></b>	<b>Shockley's rock-cress</b>	<b>X</b>			<b>Known</b>
<i>Arenaria lanuginosa</i> ssp. <i>saxosa</i>	rock sandwort	X	X		
<b><i>Astragalus bicristatus</i></b>	<b>crested milk vetch</b>	<b>X</b>	<b>P</b>	<b>X</b>	<b>Known</b>
<i>Astragalus lentiginosus</i> var. <i>antonius</i>	San Antonio milk vetch		X		
<b><i>Astragalus lentiginosus</i> var. <i>sierrae</i></b>	<b>Bear Valley milk vetch</b>	<b>X</b>	<b>P</b>		<b>Known</b>
<i>Astragalus pachypus</i> var. <i>jaegeri</i>	Jeager's milkvetch			X	
<i>Atriplex parishii</i>	Parish's brittlescale	P		P	
<i>Botrychium crenulatum</i>	scalloped moonwort	X	X	P	
<i>Calochortus clavatus</i> var. <i>gracilis</i>	Slender mariposa lily		P		
<i>Calochortus palmeri</i> var. <i>munzii</i>	Munz's mariposa lily			X	
<b><i>Calochortus palmeri</i> var. <i>palmeri</i></b>	<b>Palmer's mariposa lily</b>	<b>X</b>	<b>P</b>		<b>Known</b>
<b><i>Calochortus plummerae</i></b>	<b>Plummer's mariposa lily</b>	<b>P</b>	<b>X</b>	<b>X</b>	<b>Known</b>
<i>Calochortus striatus</i>	alkali mariposa lily	P			
<b><i>Canbya candida</i></b>	<b>pygmy poppy</b>	<b>X</b>	<b>X</b>		<b>Known</b>
<b><i>Castilleja lasiorhyncha</i></b>	<b>San Bernardino Mountains owl's clover</b>	<b>X</b>	<b>P</b>	<b>X</b>	<b>Known</b>
<b><i>Castilleja plagiotoma</i></b>	<b>Mojave paintbrush</b>	<b>X</b>	<b>P</b>		<b>Known</b>
<i>Caulanthus simulans</i>	Payson's caulanthus		P	X	
<i>Chorizanthe parryi</i> var. <i>parryi</i>	Parry's spineflower		P	P	
<i>Chorizanthe polygonoides</i> var. <i>longispina</i>	long-spined spineflower	P		X	

<i>Claytonia lanceolata</i> var. <i>piersonii</i>	Pierson's spring beauty		X		
<i>Deinandra mohavensis</i>	Mojave tarplant	P	P	X	
<i>Delphinium hesperium</i> ssp. <i>cuyamaca</i>	Cuyamaca larkspur			X	
<i>Dieteria canescens</i> var. <i>ziegleri</i>	Ziegler's aster			X	
<i>Draba corrugata</i> var. <i>saxosa</i>	rock draba			X	
<b><i>Dudleya abramsii</i> ssp. <i>affinis</i></b>	<b>San Bernardino Mts. dudleya</b>	<b>X</b>			<b>Known</b>
<b><i>Eriogonum evanidum</i></b>	<b>vanishing wild buckwheat</b>	<b>X</b>			<b>Known</b>
<i>Eriogonum kennedyi</i> var. <i>alpigenum</i>	southern alpine buckwheat		X		
<i>Eriogonum microthecum</i> var. <i>johnstonii</i>	Johnston's buckwheat	X	X		
<i>Eriogonum microthecum</i> var. <i>lacus-ursi</i>	Bear Lake buckwheat	P			
<i>Galium angustifolium</i> ssp. <i>jacinticum</i>	San Jacinto Mts bedstraw			X	
<i>Galium californicum</i> ssp. <i>primum</i>	California bedstraw			X	
<i>Gentiana fremontii</i>	moss gentian		X		
<i>Gilia leptantha</i> ssp. <i>leptantha</i>	San Bernardino gilia	X	X		
<i>Helianthus nuttallii</i> ssp. <i>parishii</i>	Los Angeles sunflower	P	P	P	
<i>Heuchera abramsii</i>	Abrams' alumroot		P		
<i>Heuchera elegans</i>	Urn-flowered alumroot		X		
<i>Heuchera hirsutissima</i>	shaggy-haired alum root			X	
<b><i>Heuchera parishii</i></b>	<b>Parish's alumroot</b>	<b>X</b>	<b>X</b>	<b>X</b>	<b>Known</b>
<i>Horkelia cuneata</i> ssp. <i>puberula</i>	Mesa horkelia		P		
<i>Horkelia wilderae</i>	Barton Flats horkelia	X	X		
<i>Hulsea vestita</i> ssp. <i>gabrielensis</i>	San Gabriel Mountains sunflower		P		
<i>Hulsea vestita</i> ssp. <i>pygmaea</i>	pygmy hulsea	X	X		
<i>Imperata brevifolia</i>	California satintail		P		
<b><i>Ivesia argyrocoma</i></b>	<b>Silver-haired ivesia</b>	<b>X</b>			<b>Known</b>
<i>Ivesia callida</i>	Tahquitz ivesia			X	
<b><i>Lepechinia fragrans</i></b>	<b>Fragrant pitcher sage</b>		<b>X</b>		<b>Known</b>
<i>Leptosiphon floribundus</i> ssp. <i>hallii</i>	Santa Rosa Mts linanthus			X	
<i>Lilium parryi</i>	Lemon lily	X	X	X	
<i>Linanthus concinnus</i>	San Gabriel linanthus		X		
<i>Linanthus jaegeri</i>	San Jacinto prickly phlox			X	
<b><i>Linanthus killipii</i></b>	<b>Baldwin Lake linanthus</b>	<b>X</b>			<b>Known</b>
<b><i>Linanthus orcuttii</i></b>	<b>Orcutt's linanthus</b>	<b>X</b>			<b>Known</b>

<i>Malaxis monophyllos</i> var. <i>brachypoda</i>	Adder's mouth		X	X	
<i>Marina orcuttii</i> var. <i>orcuttii</i>	California marina			X	
<i>Matelea parvifolia</i>	spearleaf			X	
<i>Meesia triquetra</i>	three-ranked hump moss		P	P	
<i>Meesia uliginosa</i>	Broad-nerved hump moss		P	P	
<b><i>Mimulus exiguus</i></b>	<b>San Bernardino Mountain monkeyflower</b>	<b>X</b>			<b>Known</b>
<b><i>Mimulus purpureus</i></b>	<b>purple monkeyflower</b>	<b>X</b>			<b>Known</b>
<i>Monardella macrantha</i> ssp. <i>hallii</i>	Hall's monardella		X	X	
<b><i>Monardella nana</i> ssp. <i>leptosiphon</i></b>	<b>San Felipe monardella</b>			<b>X</b>	<b>Known</b>
<i>Monardella viridis</i> ssp. <i>saxicola</i>	rock monardella		X		
<b><i>Navarretia peninsularis</i></b>	<b>Baja navarretia</b>	<b>X</b>		<b>P</b>	<b>Known</b>
<b><i>Opuntia basilaris</i> var. <i>brachyclada</i></b>	<b>Short-joint beavertail</b>	<b>P</b>	<b>X</b>		<b>Known</b>
<i>Oreonana vestita</i>	woolly mountain parsley	P	X		
<i>Orobanche valida</i> ssp. <i>valida</i>	Rock Creek broom-rape		X		
<b><i>Packera bernardina</i></b>	<b>San Bernardino butterweed</b>	<b>X</b>			<b>Known</b>
<i>Parnassia cirrata</i> var. <i>cirrata</i>	Fringed grass-of-Parnassus		X		
<b><i>Penstemon californicus</i></b>	<b>California penstemon</b>			<b>X</b>	<b>Known</b>
<b><i>Phacelia exilis</i></b>	<b>Transverse range phacelia</b>	<b>X</b>	<b>P</b>		<b>Known</b>
<b><i>Phlox dolichantha</i></b>	<b>Bear Valley phlox</b>	<b>X</b>			<b>Known</b>
<i>Potentilla glandulosa</i> ssp. <i>ewanii</i>	Ewan's cinquefoil	X	P		
<i>Potentilla rimicola</i>	cliff cinquefoil			X	
<b><i>Pyrrocoma uniflora</i> ssp. <i>gossypina</i></b>	<b>Bear Valley pyrrocoma</b>	<b>X</b>			<b>Known</b>
<b><i>Saltugilia latimeri</i></b>	<b>Latimer's woodland gilia</b>	<b>X</b>	<b>P</b>	<b>P</b>	<b>Known</b>
<i>Scutellaria bolanderi</i> ssp. <i>austromontanum</i>	southern mountain skullcap	P		X	
<i>Sedum niveum</i>	Davidson's stonecrop	X	X	X	
<i>Sidalcea hickmanii</i> ssp. <i>parishii</i>	Parish's checkerbloom	X	P		
<i>Sidothea caryophylloides</i>	Chickweed starry puncturebract	X	P	X	
<i>Sidothea emarginata</i>	white-margined puncturebract			X	
<i>Streptanthus bernardinus</i>	Laguna Mountains jewelflower	X	X	X	
<i>Streptanthus campestris</i>	southern jewelflower	X	P	X	
<i>Symphyotrichum defoliatum</i>	San Bernardino aster	X	X	X	
<i>Thelypteris puberula</i> var. <i>sonorensis</i>	Sonoran maiden fern		X	P	
<i>Viola pinetorum</i> ssp. <i>grisea</i>	grey-leaved violet	P			

Direct and indirect effects to Sensitive plants are as follows:

*Arabis johnstonii* and *Penstemon californicus*: The spur off of Forest Road 6S05, proposed under all action alternatives for addition to the transportation system as a highway legal route, could indirectly impact these species. While the alignment of the proposed spur does not intersect this plant's habitat, the route provides access to a network of unclassified routes through Quinn Flat which could further proliferate into this plant's habitat. The habitat structure is flat with a very open vegetation structure, and is vulnerable to impacts from off road motorized vehicle exploration, as well as parking along these unclassified routes. Designation of this spur could have adverse indirect effects on this species and its habitat.

*Arabis parishii*, *Packeria bernardina*, *Phlox dolicantha*, *Pyrrocoma uniflora* var. *gossypina*, and *Ivesia argyrocoma*: These endemic species occur on pebble plains and other heavy soils on the eastern half of the Mountaintop District. Many unclassified routes along these corridors are proposed for restoration. While restoration activities may have short term adverse effects on these species and plants in general, these effects will be actively avoided and minimized. Long term, restoration of these routes will be very beneficial to these species by opening up new habitat and removing/reducing the primary source of chronic disturbance to their habitat (*i.e.*, off road vehicle travel).

*Arabis shockleyi*: This species is associated with carbonate habitats of the San Bernardino Mountains, sharing the same distribution as the five federally-listed carbonate endemic plants of the San Bernardino Mountains. This species, however, is more common within the narrow distribution and also occurs in the Last Chance and Cottonwood desert mountain ranges of Death Valley national Park. Reclassification of the Mining Roads 3N88, 88B, 87, and 54, and restoration of multiple unclassified routes near these mining roads and Forest Road 3N03 will provide a benefit for this taxon by removing/reducing a primary source of chronic disturbance to its habitat.

*Astragalus bicristatus*: This species is associated with carbonate habitats in the san Bernardino and eastern San Gabriel Mountains. The largest populations occur on the dolomite derived soils of Bertha Ridge and Sugarlump, closely mirroring the distribution of the endangered *Physaria kingii*. This species occurs along forest roads 2N07 and 2N09C, which are proposed for redesignation to administrative use only. This redesignation is not expected to have any effect of these plants as use is mostly limited to administrative uses under the existing conditions. This species also occurs along an unclassified route that connects 3N08 with 3N79, which is proposed for restoration. This action may have minor short-term adverse effects but these would be offset by long-term beneficial effects related to the removal of unauthorized motorized access through this habitat.

*Astragalus lentiginosus* var. *sierrae*: This species' distribution occurs in the 6000-8000 foot elevation range of the eastern San Bernardino Mountains. This is same area as the majority of the proposed restoration of unclassified routes. These species are tolerant of, and often associated with intermediate levels of disturbance, so are often found roadside. While restoration activities may have short term adverse effects on these species and plants in general, these effects will be actively avoided and minimized. Long term, restoration of these routes will be very beneficial to these species by opening up new habitat and removing/reducing the primary source of severe and chronic disturbance to its habitat (*i.e.*, off road vehicle travel).

*Calochortus palmeri* var. *palmeri*, *Castilleja lasiorhyncha*, *Mimulus exiguus*, *Mimulus purpureus*, *Phacelia exilis*, *Navarretia peninsularis*: These species occur in montane wet meadows, seeps, springs, and vernal-wet drainages. They are part of a suite of species (collectively, the vernal wet species) that are particularly vulnerable to unauthorized off-road vehicle travel because of relatively flat topography, open vegetation structure, seasonally-wet soils that are fragile and easily rutted, and dependence on highly localized hydrological patterns. This localized hydrology is readily disrupted by vehicle tracks, which can divert and concentrate surface water flows. Plants of this habitat are also vulnerable to crushing and uprooting because the soils are

fragile and easily displaced when wet. Several occurrences of this species would benefit from the suite of transportation solutions in the North Shore Lake Arrowhead and Ash Meadows areas, and near the sections of 2N26, 2N75, and 2N25Y proposed for decommissioning. A more clear and efficient transportation system for this area is expected to reduce the likelihood that motorists will venture off-road into this plant's habitat.

*Calochortus plummerae*: This species is known from Cleghorn Ridge, the Summit Valley area, and across the cismontane foothills of the San Bernardino Mountains. The proposed actions at Cleghorn Ridge are not expected to affect this species beyond effects occurring under the existing conditions. However, the occurrence near Forest Rd 2N47 in T1NR5W sec. 2 (i.e., where the PCT crosses 2N47) warrants close monitoring. No other known occurrences are adjacent to proposed action elements under any of the alternatives.

*Canbya candida*: This species occurs in the Cajon Pass and Summit Valley areas in open-structured habitats with generally unconsolidated soils. As with other rare plants, this generally flat and open habitat association makes the species vulnerable to unauthorized motorized vehicle travel off of roads. This species will benefit from the administrative use designation of 3N66. This species also occurs along 3N22 near the PCT crossing, south of 3N66. The proposed action and alternatives would not have any effects on these occurrences, however since it is a popular non-highway legal use area, they do warrant focused monitoring efforts.

*Castilleja plagiotoma*: This species occurs on clay rich soils in the Little Pine Flat, Coxey Meadow, and Dawn o' Day canyon areas, and continuing north and east off NFS lands into the Ord Mountains. It is the larval host plant for the rare Erlich's checkerspot butterfly. *Castilleja plagiotoma* occurs on and adjacent to pebble plain habitats, and on relatively flat ground with open vegetation structure. As a hemi-parasite, it depends on host plants and does not recover well following crushing or uprooting impacts associated with off-road vehicle travel. This species will benefit significantly from the decommissioning of 3N14D, 3N95, 3N96, 3N98, 3N99, and also from the redesignation of 3N41 and 3N59B for administrative use only.

*Dudleya abramsii ssp. affinis*: This species is endemic to roughly the northeastern quadrant of the San Bernardino Mountains, on pebble plains and also on outcrops of quartzite, granite and carbonate rocks, from lower Deep Creek on the western limit of its range to the northern and eastern flanks of the range. Where this plant occurs on pebble plains it is vulnerable to unauthorized off-road vehicle travel, and will benefit from proposed transportation actions, in the same ways as *Arabis parishii* and *Castilleja plagiotoma* will. Where this species occurs within rock outcroppings, motorized vehicles are generally not a threat and effects (beneficial or adverse) from this project to these occurrences are not expected.

*Eriogonum evanidum*: This species was considered to be extinct until it was rediscovered in 2007 near Caribou Creek. This single known occurrence is within an open, sandy sagebrush flat adjacent to meadow habitat. Because of its flat and open habitat association, this species is vulnerable to impacts from unauthorized off-road vehicle travel. The proposed restoration of unclassified routes east of 3N09 and south of 3N16 is essential to the conservation of this species.

*Lepechinia fragrans*: The only known localities of this species on the SBNF are near Cucamonga canyon, along/near roads 1N34 and 1N35. These occurrences are the easternmost limit of this species' distribution. Both of these roads, where they pass through/near this plant's habitat are proposed for redesignation to administrative use only. This redesignation will be beneficial to these species to the extent that reduced public use reduces unauthorized off-road vehicle travel. In this area, the terrain is so steep that this benefit is expected to be primarily realized along canyon bottoms and ridge-top fuelbreaks.

*Linanthus killipii*, *Linanthus orcuttii* and *Saltugilia latimeri*: Habitat for these species occurs in the eastern San Bernardino Mountains, from eastern Bear Valley to the easternmost flanks of the San Bernardino Mountains. The two *Linanthus* species are notoriously difficult to tell apart, but since they are both listed as Sensitive, they are addressed here collectively. The combined

range of these species, from Nelson Ridge and Baldwin Lake, to Lone Valley (the only known locality for the *Saltugilia* on the SBNF), Arrastre Creek, Rose Mine and Rattlesnake Canyon, contains numerous unclassified road segments proposed for restoration. While restoration activities may have short term adverse effects on these species and plants in general, these effects will be actively avoided and minimized. Long term, restoration of these routes will be very beneficial to these species by opening up new habitat and removing/reducing the primary source of chronic disturbance to their habitat (*i.e.*, off road vehicle travel).

*Opuntia basilaris* var. *brachyclada*: This species occurs in the Cajon Pass and Summit Valley areas in open-structured habitats with generally unconsolidated soils. As with other rare plants, this generally flat and open habitat association makes the species vulnerable to unauthorized motorized vehicle travel off of roads. This species will benefit from the administrative use designation of 3N66.

### **1.5 Additional Impacts to Sensitive Plants Under Alternative 3**

*Acanthoscyphus parishii* var. *cienegeensis*: This species occurs along 1N02 and will likely be impacted by designation of spurs to yellow post sites in the Heart Bar to Coon Creek area. This species occurs in open-structured habitat on unconsolidated sandy soils, and is vulnerable to uprooting by vehicles venturing off-route. Defining a single access route to each of these yellow post sites, and disguising any others, may have short-term adverse effects but would be beneficial overall.

*Monardella nana* ssp. *leptosiphon*: This taxon is recorded from the Thomas Mountain ridgeline. These occurrences may be impacted by designation of spurs to yellow post sites in the Heart Bar to Coon Creek area. This species occurs in open-structured habitat on unconsolidated sandy soils, and is vulnerable to uprooting by vehicles venturing off-route. Defining a single access route to each of these yellow post sites, and disguising any others, may have short-term adverse effects but would be beneficial overall.

The exclusion of the suite of transportation actions at North Shore of Lake Arrowhead from Alternative 3 would remove substantial benefits to the following Sensitive plants, relative to Alternative 1: *Castilleja lasiorhyncha* and *Calochortus palmeri* var. *palmeri*.

### **1.6 Additional Impacts to Sensitive Plants Under Alternative 4**

Decommissioning of 1N39A may result in short-term adverse effects to *Lilium parryi*, which occurs at the road's terminus adjacent to Fish Creek. However, decommissioning of this road will have substantial benefits to this rare plant occurrence and its riparian habitat.

### **1.7 Cumulative Effects to Sensitive Species (NEPA definition)**

#### *Ongoing and Foreseeable Future Actions*

Table 7 displays current and reasonably foreseeable future projects on the SBNF. Reasonable foreseeable projects are listed in the SBNF's most recent Schedule of Proposed Actions (SOPA). All of these projects, collectively, were considered in this evaluation of cumulative effects.

#### *Cumulative effects to Sensitive Fish and Wildlife species:*

With the amount of removal of non-highway legal use, restoration, decommissioning, and making areas administrative use only, sensitive wildlife species affected by the action alternatives would experience neutral, net beneficial, or wholly beneficial effects under each of

the action alternatives. Therefore, these effects would not be cumulative to the effects of past, current, and future actions.

Cumulative effects to Sensitive Plant species: Sensitive species affected by the action alternatives would experience neutral, net beneficial, or wholly beneficial effects under each of the action alternatives. Therefore, these effects would not be cumulative to the effects of past, current, and future actions.

**Table 7. Current and Reasonably Foreseeable Future Actions**

<b>San Bernardino National Forest, Schedule of Proposed Actions, March 2008</b>
<b>Project Name</b>
Post-fire Non-native Species Eradication project
Recreation Residence Special Use Permit Analysis
Travel Management/ OHV Route Designation
Hazard Tree Removal Along Forest Roads, Trails, and Facilities
Old and Grand Prix Fire Reforestation
Rim of the World Trail
Santa Ana Landscape Fuels Reduction
Sprint Communication Sites Installation
Sugarloaf Ridge Shaded Fuel Break
Burlington Northern Santa Fe Railroad Communication Tower Replacement
Butler II/ Slide Post-Fire Fuels Reduction
Crestline Residence Conveyance
Running Springs Shaded Fuelbreak and Forest Health
Snow Valley Well
Southern California Edison Communication Tower Replacement
Sprint Tower Replacement at Snow Valley (Global)
Arrastre Mine Adit (Naked Miner Bat Gate)
Baldwin Lake Stables
Debenham Wind Test Towers
Lakeview Recreation Residence Tract, water transmission pipeline permit renewals (2)
Moonridge Animal Park Relocation Analysis
North Shore Community Protection Zone
SMI- Marble Canyon Expansion
South Big Bear Fuels Reduction and Forest Health
Team Big Bear Special Use Permit
Unavco
Baldy Mesa Recreation Trails Project
Boa Prescribed Burn
Debenham Wind Test Towers
Middle Fork Recreation Residence Tract

Unavco Tectonic Monitoring
Invasive Plant Eradication in Wilderness Areas
Angelus Oaks Understory Burn
Camp River Glen Five Year Development Project
Oak Glen Area Fuel Break Project
Santana Fuelbreak Maintenance
Anza Electric Permit Renewal
Deer Springs Hazardous Fuels Reduction Project
Idyllwild Water District Sewer Pond Permit Renewal
Keenwild Helibase Hazardous Fuels Reduction Project
May Valley Hazardous Fuels Reduction
May Valley Non-Motorized Trail System
Palm Canyon Tamarisk Removal
Ramona Road Proposal
Range Allotment NEPA
Ranger Peak Communications Site
Red Mountain Emergency Communications Antenna
San Jacinto Hazard Tree Removal
Santa Rosa Mountain Fuels Treatment Project
Saunders Meadow Road Hazardous Fuels Reduction Project
Thomas Mountain Fuels Reduction
Vista Cell Phone Tower Special Use Permit - Alandale Station
Vista Cell Phone Tower Special Use Permit - Lake Hemet
Vista Grande Road Project
Vista Grande Well Access Road

Additional ongoing actions include:

- Honda Ride for Kids – An annual one-day event staged on private land with up to 200 motorcycles using routes on the Front Country and Mountaintop Districts.
- Mountain Bike races occur twice a year in the Big Bear area utilizing roads on the Mountaintop District.

Additional actions that are reasonably foreseeable in the future:

- The Forest may analyze site-specific projects for the designation of OHV staging areas (parking areas with minimal facilities) at Miller Canyon, Big Pine Flat, Crab Flat, Summit, and Vista Grand.

## **2.0 DETERMINATION OF EFFECTS**

These determinations are based on the complete proposed action as defined in Part 1 of this document, including all net-adverse and net-beneficial elements under each action category, and all listed design features.

Forest Service Sensitive species: It is our determination that each action alternative, as described, may affect individuals, but is not likely to result in a trend toward Federal listing for any Sensitive species. The project will not interfere with maintaining viable and well-distributed populations for any of these Sensitive species.

## **PART IV: BIOLOGICAL ASSESSMENT OF IMPACTS TO THREATENED, ENDANGERED, PROPOSED, AND CANDIDATE SPECIES**

### **1.0 CONSULTATION TO DATE**

The Endangered Species Act requires that federal agencies evaluate effects to federally-listed species and consult with USFWS when considering federal actions. The quarterly species list request was sent to USFWS on May 2, 2008. All of the species listed in the letter are included in this evaluation.

Incorporation of many of the unclassified routes proposed for restoration under all action alternatives was a conservation measure committed to under consultation on the Pebble Plains Plants (1-6-99-F-25, BO Date 2/14/2001), Carbonate Plants (1-6-99-F-26, BO Date 2/5/2001) and the Southern California Province LRMP Consultation (1-6-00-F-773.2, BO Date 2/27/2001). These commitments later became part of a settlement package regarding the lawsuit that brought about the Southern California Conservation Strategy. This unclassified road restoration is one of the last major unimplemented commitments under the SCCS.

Under agreement with USFWS, the Forest Service only consults on Candidate species in programmatic consultations. Because this is a project-level analysis, Candidate species are addressed as Sensitive Species under the BE and not addressed in the Biological Assessment.

### **2.0 AFFECTED ENVIRONMENT AND EFFECTS FOR THREATENED, ENDANGERED, AND PROPOSED SPECIES**

#### **2.1 TEP Animals - Impacts of No Action**

The discussions in Part II, Section 2 are applicable for any TEP species that occur in the project area.

#### **2.2 TEP Animals - Affected Environment and Direct and Indirect Impacts of the Action Alternatives**

Part I contains descriptions of the methods/evaluation process, proposed action, alternatives, and habitat for this project. Table 8 contains the current Threatened, Endangered, or Proposed (TEP) animals for the SBNF. The species in the following table were all considered during this evaluation of potential effects for this project. Detailed species accounts for all of the TEP species are contained in the SBNF Land Management Plan (LMP) from 2005 (USDA Forest Service 2005) <http://www.fs.fed.us/r5/scfpr/projects/lmp/read.htm>.

The following discussions focus on TEP animals known to occur in the vicinity of project area, or those that have a high likelihood of occurrence based on proximity to the project area. The discussion also discusses critical habitat where activities overlap.

Southwest willow flycatcher habitat is present near some of the proposed project areas as well as designated critical habitat. The crossing of Holcomb Creek between Crab Creek and Big Pine Flat is designated critical habitat. The designation of 3N16 as open for non-highway legal vehicles will not result in any change to southwestern willow flycatcher designated critical habitat at Holcomb Creek. This area has been open to non-highway legal vehicles for some time under temporary designation and is already heavily impacted by the road and high public recreational use. Habitat right at the crossing is marginal for flycatcher breeding. There is

already a heavily used stream crossing with recreation use at this location and permanent designation for non-highway legal use will not have additional impacts on this crossing.

Yellow post access routes in the upper Santa Ana/Coon Creek area are adjacent to Southwest willow flycatcher critical habitat, but this designation was improperly mapped and is actually too dry to support this species.

Officially removing non-highway legal use from the Coxey Creek area will potentially improve the situation for southwestern willow flycatcher. Although this area has not been surveyed, there is a considerable amount of suitable habitat present. This route was closed years ago because of severe resource damage and the inability to manage vehicles. 3N95 paralleled and crossed Coxey Creek multiple times with major negative impacts.

Proposed changes at the Junction of 3N34, 3W12, and 2N26 will benefit riparian habitat and potential southwestern willow flycatcher habitat by moving designated non-highway legal routes away from Willow Creek.

Arroyo toad habitat is adjacent to some of the proposed activities around Cleghorn Ridge, Silverwood Lake and Little Horsethief Creek. Proposed activities are approximately ½ mile away from the suitable breeding habitat and not in highly suitable upland habitat areas. The measures that are proposed in these areas will not impact new ground and will reduce sedimentation to suitable and occupied habitat. Formally designating 3N66 and 3N66A as administrative use only will formalize this designation which is already gated to prevent human disturbance of breeding habitat in Little Horsethief Creek. Making 1N35 west of Cucamonga Creek administrative use only will be beneficial for the arroyo toad by reducing traffic on the road and the potential for crushing any toads that could potentially be there.

Shay Creek stickleback are present in Sugarloaf Pond and the road to Sugarloaf which is already gated to protect Sugarloaf Meadow and Pond will be officially designated administrative use only. This will not change the on-the-ground situation because access to this area has been gated for some time.

Making 1N34 administrative use from the Cucamonga side to Day Canyon will reduce the disturbance to the Designated Critical Habitat for mountain yellow-legged frog in Day Creek.

There are some areas at the north edge of the City of San Bernardino which has historically supported California gnatcatcher. The proposed elimination of non-highway legal use on the Cloudland Fuelbreak/Marshall Peak system could benefit California gnatcatcher if the habitat was allowed to recover without frequent wildfire. However, this area has had the chaparral and coastal sage scrub habitat severely degraded by too frequent fire and lack of scrub regeneration. Nonnative invasive grasses are increasing with every fire and continue to degrade the scrub habitat. The majority of the habitat currently open to non-highway legal use is higher elevation than gnatcatcher habitat, so the potential benefits of eliminating non-highway legal use are very small.

California condors have been sighted on the Forest several times in the last couple of years. One sighting was over the Cloudland fuelbreak area where several birds were soaring in and around hang gliders using the site. This was the only known observation that we have there. Removal of GS use could benefit condors in the long run, but at this time with the very infrequent use, there is no impact. An additional sighting was made at the Keller Peak lookout

which is near areas that have yellow post site access roads proposed for designation. The birds were observed soaring along the ridgeline. The work that is proposed to identify a single route to these existing camping spots will not affect condors.

**Table 8. THREATENED, ENDANGERED, PROPOSED, AND CANDIDATE WILDLIFE SPECIES**

COMMON NAME	LATIN NAME	OCCURRENCE INFORMATION*			HABITAT TYPE**	CRITICAL HABITAT ON SBNF	KNOWN FROM PROJECT AREA
		Mountain-top	Front Country	San Jacinto			
<b>ENDANGERED SPECIES</b>							
Quino checkerspot butterfly	<i>Euphydryas editha quino</i>	N	N	Y	c	Designated	N
unarmored threespine stickleback	<i>Gasterosteus aculeatus williamsoni</i>	N	H	N	aq		N
mountain yellow-legged frog	<i>Rana muscosa</i>	N	Y	Y	r, aq	Proposed	N
arroyo toad	<i>Bufo californicus</i>	Y	Y	Y	d, aq, r	Designated	Y
California brown pelican	<i>Pelecanus occidentalis californicus</i>	U	U	N	aq		N
California condor	<i>Gymnogyps californianus</i>	H	H	H	mc, g, c, a, rk, wo		Y
southwestern willow flycatcher	<i>Empidonax trailii extimus</i>	Y	Y	Y	r, m	Proposed	P
least Bell's vireo	<i>Vireo bellii pusillus</i>	N	Y	P	r, m		N
San Bernardino kangaroo rat	<i>Dipodomys merriami parvus</i>	N	Y	Y	w	Designated	N
Stephens' kangaroo rat	<i>Dipodomys stephensi</i>	N	N	P	g, sage scrub		N
Peninsular bighorn sheep	<i>Ovis canadensis cremnobates</i>	N	N	Y	wo, rk, d	Designated	N
<b>THREATENED SPECIES</b>							
Santa Ana sucker	<i>Catostomus santannae</i>	N	H	N	aq		N
California red-legged frog	<i>Rana aurora draytonii</i>	H	H	N	r, aq		N
desert tortoise	<i>Gopherus agassizii</i>	Y	P	Y	d		N
coastal California gnatcatcher	<i>Polioptila californica californica</i>	N	Y	P	c	Designated & proposed	P
<b>FEDERAL CANDIDATE SPECIES</b>							
Western yellow-billed cuckoo	<i>Coccyzus americanus occidentalis</i>	U	P	P	r	N/A	N
*Occurrence Information: N = Outside known distribution/range of the species. U = Occurrence of the species is unlikely based on habitat present. P = Occurrence of the species is possible; suitable habitat exists. L = Occurrence of the species is likely; suitable habitat exists and the species is known from nearby locations. Y = Species is known to occur. H = Part of the historical range but the species has been extirpated. B = Species is known or likely to nest in the area. M = The species uses the area during migration as a stopover.		**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					

## 2.3 TEP Plants

### 2.3.1 Impacts of No Action

The discussions in Part II, Section 2 are applicable for any TEP species or critical habitat that occur in the project area.

### 2.3.2 TEP Plants - Affected Environment and Direct and Indirect Impacts Common to All Action Alternatives

Table 9 contains the current TE plants for the SBNF. All species listed in Table 9 were considered in this analysis and those shown in bold are those known to occur in or very near the project area. It is likely that Sensitive plant occurrences are present but undetected/unmapped within the project area.

See the Forest Plan for complete species accounts with citations. The earlier discussion in Part II, Section 2 also applies to TE plants known to occur as well as any that were undetected during surveys.

Direct and indirect effects to Threatened and Endangered plants and their designated or proposed critical habitat are as follows:

*Acanthoscyphus parishii* var. *goodmaniana*: This taxon is endemic to carbonate-derived soils of the northeastern San Bernardino Mountains. It usually occurs on fine to medium grained, unconsolidated soils and often (though not exclusively) on flat to gentle slopes. Carbonate habitats are generally open in structure because carbonate soils are poor in nutrients and have low water-holding capacity. Where this species occurs on relatively flat and open habitat, it is vulnerable to crushing and uprooting by motorized vehicles traveling off-route. The decommissioning of the northern loop of 3N11, north of 3N17, is extremely important for the conservation of this species. This section of road passes directly through the heart of this population, and many plants grow in the roadbed and suffer chronic disturbance from vehicle use. This action element is included in Alternatives 1A and 4, but not Alternative 3. Reclassification of roads 3N88, 3N88B, 3N87, and 3N54 to administrative use only will be wholly beneficial for this species by reducing travel on and adjacent to these roads. The restoration of multiple unclassified routes in the Holcomb Valley, Burnt Flats, Tip Top Mountain and Rattlesnake Canyon areas, included under all action alternatives, will also be very important for the conservation of this species. Redesignating 2N90A to Tip Top Mountain for non-highway legal use should be closely monitored if included. If vehicles venture off the road near the top of Tip Top Mountain, individuals of this species will likely be crushed and/or uprooted. Each action alternative provides wholly beneficial effects to this species and its critical habitat.

*Astragalus albens*, *Erigeron parishii*, and *Eriogonum ovalifolium* var. *vineum*: These taxa are also endemic to carbonate-derived soils of the northeastern San Bernardino Mountains, and are also vulnerable to crushing and uprooting by motorized vehicles traveling off-route. Reclassification of roads 3N88, 3N88B, 3N87, and 3N54 to administrative use only will be wholly beneficial for this species by reducing travel on and adjacent to these roads. The restoration of multiple unclassified routes in the along the 3N03 and 2N02 corridors will be very important for the conservation of these species. Each action alternative provides wholly beneficial effects to these species and their critical habitat.

*Poa atropurpurea* and *Taraxacum californicum*: These species occur within and on the margins of montane wet meadow habitat in the eastern San Bernardino Mountains. The primary threats to these species include roads (and their associated effects to meadow hydrology) and motorized vehicle travel off route into the meadows themselves. Off-route vehicle travel through meadow habitat can uproot and crush plants, and also creates deep ruts that divert and channelize water and often have long-lasting adverse effects. The restoration of multiple unclassified routes in the Holcomb Valley and Broom Flats areas will be very important for the conservation of these species. Each action alternative provides wholly beneficial effects to these species and their proposed critical habitat.

*Arenaria ursina*, *Castilleja cinerea*, and *Eriogonum kennedyi* var. *austromontanum*: These species occur on pebble plains and are endemic to the eastern San Bernardino Mountains. Pebble plains are extremely susceptible to damage by off-route vehicle travel. The habitat is flat and open, offering virtually no resistance to motorized travel. However, the diminutive shallow rooted plants typical of pebble plains are very susceptible to crushing and uprooting, and the clay soils that in part define this habitat are susceptible to deep rutting and compaction. The restoration of multiple unclassified routes in the Holcomb Valley, Sugarloaf, and Broom Flats areas will be very important for the conservation of these species. Decommissioning of roads in the Sugarloaf and Broom Flats (Juniper Springs) areas will also provide important conservation benefits. Each action alternative provides wholly beneficial effects to these species and their critical habitat.

Based on habitat models finalized in 2003 in coordination with U. S. Fish and Wildlife Service, modeled habitat is present for all 12 listed plant species of the mountain meadows, pebble plains and carbonates of the San Bernardino Mountains. Individual occurrences of listed plant species may occur undetected in these areas. No new construction is proposed within occupied or modeled TE plant habitat. A short segment of unclassified road in modeled habitat is proposed for designation at Cactus Flats. This route was surveyed and found not to be suitable habitat because the route is well-established, frequently used, and without evidence of points of departure from the route or need for maintenance outside the existing prisms. Adjacent habitat was found to be suitable for listed carbonate species. The remainder of elements within modeled habitat common to all action alternatives are many roads to be decommissioned and unclassified routes to be rehabilitated. Based on Design Feature B-3, these will be planned to avoid adverse effects to TE plant species. If TE species occur undetected in modeled habitat in the project area, effects to these occurrences are expected to be wholly beneficial.

### **2.3.3 Additional Impacts to TE Plants and Critical Habitat Under Alternative 3**

Alternative 3 would not add any impacts to known occurrences of TE plants or critical habitat. However, it would exclude the important protection for *Acanthoscyphus parishii* var. *goodmaniana* provided under the other action alternatives by decommissioning the northern section of 3N11 north of 3N17.

The terminal loop on 3N03A at Horsethief Flat proposed under alternative 3 is within modeled carbonate and meadow habitat. This loop and adjacent habitat was surveyed and found not to be suitable for listed meadow or carbonate species (although known occurrences of the listed carbonate species *Erigeron parishii* do occur nearby). Modeled habitat could incur additional impacts under Alternative 3 where unclassified routes into the following Yellow Post sites are proposed for designation: Big Bear South Shore 27, Apple Canyon 1&3, 5S09 1&2, Mission Springs 1, Fawnskin 6&7, South Lake Hemet 1, and Coon Creek 9&15. None of these were surveyed for this project. If listed species were to occur undetected along any of these routes, it is presumed that no additional impacts would occur (as the unclassified routes are in existence

and frequently used). Designating a single route in to these sites and disguising others could have beneficial effects on these modeled habitats. Finally, if TE plants are subsequently found along any of these routes and conflicts are identified, Forest Plan standard S- and Appendix D would be invoked. Ultimately, if conflicts can not be resolved through less restrictive methods, the yellow post sites can be closed.

#### **2.3.4 Additional Impacts to TE Plants and Critical Habitat Under Alternative 4: None.**

#### **2.4 Cumulative Effects to TEP Species (ESA Definition)**

This section addresses two legal definitions for cumulative effects/impacts analysis. Under NEPA, “cumulative impacts” are those impacts caused by past, present, and future federal, state, and private activities within or onto special status species and their habitats. Under the Endangered Species Act (ESA), “cumulative effects” only consider future non-federal activities. Future federal activities or activities permitted by federal agencies are not included under ESA “cumulative effects” because any proposed future federal activities or federally permitted activities must undergo Section 7 consultation with the USFWS.

#### **2.4.1 Past and Current Actions/Activities Contributing to the Existing Condition**

See Part II, Section 2.1 Affected Environment and Part III Section 1.7 for a discussion and list of past, present, and foreseeable future projects.

#### **2.4.2 Cumulative Effects to TEP Animals**

There are no adverse effects to listed plants expected from this project; thus, there are no cumulative effects to listed animals.

#### **2.4.3 Cumulative Effects to TEP Plants**

There are no adverse effects to listed plants expected from this project; thus, there are no cumulative effects to listed plants.

**Table 9. THREATENED, ENDANGERED, PROPOSED, AND CANDIDATE PLANT SPECIES**

SPECIES NAME	COMMON NAME	OCCURRENCE INFORMATION			CRITICAL HABITAT ON SBNF	HABITAT TYPE	KNOWN FROM PROJECT AREA
		Mountain-top	Front Country	San Jacinto			
<b>ENDANGERED SPECIES</b>							
<i>Acanthoscyphus parishii</i> var. <i>goodmaniana</i>	Cushenbury puncturebract	X			Designated	Carbonate soils	Known
<i>Arenaria paludicola</i>	marsh sandwort				None	Freshwater marsh	N
<i>Astragalus albens</i>	Cushenbury milk vetch	X			Designated	Carbonate soils	Known
<i>Astragalus brauntonii</i>	Braunton's milk-vetch		P		Des, not on SBNF	Limestone soils in chaparral	N
<i>Astragalus lentiginosus</i> var. <i>coachellae</i>	Coachella Valley milk vetch			P	Des, not on SBNF	Sandy Sonoran desert scrub	N
<i>Astragalus tricarinatus</i>	triple-ribbed milk-vetch		P	P	None	Sandy/gravel, desert margin	N
<i>Berberis nevinii</i>	Nevin's barberry		P	P	Prop, not on SBNF	Clay soils/vernally wet areas	N
<i>Docecahema leptoceras</i>	slender-horned spineflower		X	X	None	Alluvial scrub	N
<i>Eriastrum densifolium</i> ssp. <i>sanctorum</i>	Santa Ana River woollystar		P		None	Alluvial scrub	N
<i>Eriogonum ovalifolium</i> var. <i>vineum</i>	Cushenbury buckwheat	X			Designated	Carbonate soils	Known
<i>Nasturtium gambelii</i>	Gambel's water cress				None	Freshwater marsh	N
<i>Poa atropurpurea</i>	San Bernardino bluegrass	X	P	P	Proposed	Meadows	Known
<i>Physaria kingii</i> ssp. <i>bernardina</i>	San Bernardino Mtns. bladderpod	X			Designated	Carbonate soils	Modeled
<i>Sidalcea pedata</i>	bird's foot checkerbloom	X	P		None	Meadows	Modeled
<i>Taraxacum californicum</i>	California taraxacum	X	X		Proposed	Meadows	Known
<i>Thelypodium stenopetalum</i>	slender-petaled mustard	X			None	Meadows	Modeled
<b>THREATENED SPECIES</b>							
<i>Arenaria ursina</i>	Bear Valley sandwort	X			Designated	Pebble plain	Known
<i>Brodiaea filifolia</i>	thread-leaved brodiaea		P	P	Des, not on SBNF	Clay soils/vernally wet areas	N
<i>Castilleja cinerea</i>	ash-gray Indian paintbrush	X	X		Designated	Pebble plains; openings in conifer forest	Known
<i>Erigeron parishii</i>	Parish's daisy	X			Designated	Carbonate soils	Known
<i>Eriogonum kennedyi</i> var. <i>austromontanum</i>	southern mountain buckwheat	X			Designated	Pebble plain	Known

### **3.0 DETERMINATION OF EFFECTS FOR TEP SPECIES AND CRITICAL HABITAT**

Threatened or Endangered plant species and designated critical habitat: It is my determination that implementation of any action alternative as described will not adversely affect listed threatened or endangered plant species or designated critical habitat. All expected effects to threatened and endangered species and designated critical habitat will be wholly beneficial. While wholly beneficial effects are normally subject to informal consultation requirements, the effects under this action are in response to conservation measures addressed under prior consultations. Endangered Species Act Section 7 consultation is not required for this project.

Plant species proposed for federal listing or proposed critical habitat: There are no plants proposed for listing under the Endangered Species Act within the project area. There is proposed critical habitat for *Poa atropurpurea* and *Taraxacum californicum* within the reach of direct and indirect effects of this project. These effects are expected to be wholly beneficial.

Threatened or Endangered animal species and designated critical habitat: It is my determination that implementation of any action alternative as described will not adversely affect listed threatened or endangered fish or wildlife species or designated critical habitat. All expected effects to threatened and endangered species and designated critical habitat will be wholly beneficial.

Wildlife species proposed for federal listing or proposed critical habitat: There are no animals proposed for listing under the Endangered Species Act, nor proposed critical habitat, within the project area.

## **PART V: PROJECT-LEVEL ASSESSMENT OF MANAGEMENT INDICATOR SPECIES**

### **1.0 INTRODUCTION**

Management indicator species (MIS) are selected because their population changes are believed to indicate the effects of management activities (36 CFR [Code of Federal Regulations] 219.19(a) (1), 1982) and to serve as a focus for monitoring (36 CFR 219(a)(6), 1982). The regulation (1982 Planning Rule) required the selection of vertebrate and/or invertebrate species as MIS but did not preclude the selection of other life forms. Vascular plants are included as MIS because these species are often wide-ranging and responsive to landscape-level stressors.

The purpose of this assessment is to evaluate the potential impacts of the proposed project on the Management Indicator Species (MIS) identified in the LMP. The rationale for MIS species selection is presented in Appendix B of the Forest Plan FEIS.

MIS accounts (<http://www.fs.fed.us/r5/sanbernardino/projects/ohv.shtml>) incorporated by reference into this document are based on the most current information on life history, habitat relationships, past and present suitable habitat, and population information. The MIS accounts contain information about habitat status and trend, and population status and trend. They also discuss the methodology used for assessing status and trends (e.g., breeding bird surveys, Forest Inventory Assessment data).

### **2.0 MIS SELECTED FOR PROJECT ANALYSIS**

A review was conducted to determine whether the project area was within known or potential habitat for each MIS. Table 10 displays the wildlife MIS that were selected for analysis for this project due to the presence of suitable habitat that may be affected.

**TABLE 10. MIS ON THE SAN BERNARDINO NATIONAL FOREST AND SO. CAL. PROVINCE**

<b>Management Indicator Species</b>	<b>Habitat Type</b>	<b>Issue</b>	<b>Objectives</b>	<b>Monitoring Method</b>	<b>Measure</b>	<b>Occurrence in Project Area</b>
Mule Deer	All	Vegetation Diversity and Age Class Mosaics; Roads and Recreation Effects	Stable or increasing well-distributed populations	Herd composition in cooperation with CDFG; habitat condition	Trend in abundance and/or habitat condition	Y
Mountain Lion	All	Habitat Linkages/Habitat Fragmentation	Functional landscape linkages; species well-distributed	Studies in cooperation with CDFG and USGS	Trend in distribution, movement, and/or habitat conditions	Y
Arroyo Toad	Aquatic and Riparian	Ground Disturbance including trampling and compaction; spread of invasive nonnative species; mortality from collision; altered stream flow regimes	Properly functioning streams; stable or increasing populations	Population abundance and/pr habitat condition in selected locations	Trends in abundance, distribution, and/or habitat condition	Roads and trails within 1/2 mile of breeding habitat. Y
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	Y
Blue Oak	Oak Woodlands and Savannas	Oak Regeneration	Perpetuate habitat type	FIA data	Trend in sapling abundance	N
Engelmann Oak	Oak Woodlands and Savannas	Oak Regeneration	Perpetuate habitat type	FIA data	Trend in sapling abundance	N

Valley Oak	as Oak Woodlands and Savannas	Oak Regeneration	Perpetuate habitat type	FIA data	Trend in sapling abundance	N
Coulter Pine	Chaparral/Conifer Ecotone	Drought/beetle-related mortality and lack of fire	Maintain Coulter pine habitat	FIA data; aerial photo-monitoring	Trend in age/size class distribution	Y
Bigcone Douglas-fir	Chaparral/Conifer Ecotone	Altered fire regimes (fire severity and/or fire return interval)	Maintain bigcone Douglas-fir stands	FIA data; photo-monitoring	Trend in extent of vegetation type	Y
California spotted owl	Mixed Conifer Forests	Altered fire regimes (fire severity and/or fire return interval)	Maintain/increase numbers and distribution	FS Region 5, CDFG protocol	Occupied territories and/or habitat condition	Y
California black oak	Mixed Conifer Forests	Altered fire regimes (fire severity and/or fire return interval)	Maintain or increase numbers	FIA data	Trend in abundance, size class distribution	Y
White fir	Mixed Conifer Forests	Altered fire regimes (fire severity and/or fire return interval)	Pre-settlement age/size class distribution	FIA data	Trend in size class distribution	Y

**Occurrence Key for Tables 1, 2, and 3**  
N = outside known distribution/range of the species and/or no suitable habitat exists  
P = potential to occur based on presence of suitable habitat in the project area and within known range of species  
Y = known occurrence in project area

### **3.0 MIS ENVIRONMENTAL BASELINE AND EFFECTS ANALYSIS**

Life history and general habitat requirements for MIS are presented in the Reading Room species accounts accompanying the Forest Plan (USDA Forest Service 2006).

Baseline information for each of the MIS is contained in the LMP EIS (page 123 and Table 433 on p. 177) and in the more detailed MIS accounts (USDA Forest Service 2006), <http://www.fs.fed.us/r5/sanbernardino/projects/ohv.shtml>. These other documents are incorporated by reference and the information within them is the basis for the following discussions and analyses. Citations are not repeated here.

#### **3.1 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 (LMP, Part 1 p.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 CDFG or by habitat condition (LMP FEIS, Vol. 1. p. 177, Table 433).

See the MIS account for this species for more detailed information regarding life history, habitat conditions, and population trends on the SBNF and in the National Forest southern province. References and literature citations are found in the MIS accounts and are not generally repeated in the following discussions.

##### 3.1.1 Potential Impacts to Mule Deer – General

Mule deer are especially sensitive to roads and accompanying human use and seem to be more sensitive during hunting season. This is largely due to the fact that they are hunted on the National Forests and they develop a fear of being shot at. Experiences and administrative evaluations on the southern California national forests have demonstrated that as road densities increase, mule deer numbers decrease (Loe personal observation and 1989 LRMP Analysis). This is especially true where road densities exceed two to three miles of road per square mile. Areas with the highest mule deer numbers on the San Bernardino National Forest, where this issue has been studied, are generally unroaded or have very low road density. Some unroaded areas on the San Bernardino National Forest have had greater than 20 mule deer per square mile in the winter, while moderately roaded areas with comparable habitat have less than five. Some relatively gentle, open areas on the desert side of the San Bernardino Mountains have up to 10 miles of authorized and unauthorized roads per square mile, and there is virtually no mule deer use of that area. Some mule deer are killed each year by vehicle collisions on roads running through the National Forests, but this is generally on the paved, higher-speed roads, not typical National Forest System roads.

##### 3.1.2 Potential Impacts to Mule Deer – No Action

The No Action alternative would maintain the existing condition for deer on the San Bernardino National Forest.

##### 3.1.3 Potential Impacts to Mule Deer – Alternatives 1a, 3 and 4

All of the action alternatives have portions of the alternative that will benefit and harm deer. The effects of the various actions which vary by alternative are discussed below.

#### 3.1.4 Add Non-highway legal Use

Adding non-highway legal use to an existing road may increase the disturbance to mule deer. In general, non-highway legal vehicles must comply with noise requirements similar to highway legal vehicles. However, some of these vehicles are modified from the factory standards and can be louder. A loophole in the State system allows for Red Sticker vehicles to be used on public lands and to be louder. Some of the use on the Forest is Red Sticker use and thus there would be increased noise effects from present highway legal routes. In addition, the increased volume of traffic by adding non-highway legal use would have some increased disturbance effects. Alternative 1 and 3 add the most non-highway legal use, and Alternative 4 the least. However, in many cases, this adding of non-highway legal use is only making something permanent that has been used by non-highway legal vehicles for many years. In those cases, there will be no change for deer.

#### 3.1.5 Remove Non-highway Legal Vehicle Use

Removing non-highway legal use from roads where it is currently allowed would reduce the amount of disturbance to mule deer for the reasons described above. Alternatives 1a and 4 remove non-highway legal use from the largest mileage and Alternative 3 the least.

#### 3.1.6 Decommissioning Roads

Decommissioning roads would benefit deer. It would reduce the disturbance from vehicles, and allow the denuded roadbeds and shoulders to revegetate to provide food and cover. The greatest benefit would be where decommissioning substantially reduces the road density in an area. Alternative 4 decommissions the greatest mileage followed by Alternative 1 and then Alternative 3.

#### 3.1.7 Make Administrative Use Only

Making a road administrative use only would generally benefit deer. It would greatly decrease the disturbance caused by higher levels of public vehicle use, and would significantly reduce the amount of shooting from the road and poaching. Deer would be much more likely to be active near the road. Alternatives 1a and 4 make the greatest mileage administrative use only and Alternative 3 the least.

#### 3.1.8 New Construction

Construction of new roads and trails can be very damaging to mule deer habitat. This is especially true when done near riparian and fawning areas, winter concentration areas and areas with no roads currently. It is less of a problem where there are already high road densities and deer are already avoiding the area due to disturbance. Of the action alternatives, Alternative 3 has the least mileage of new construction and 1a and 4 have the most. However, the new construction being planned is very minor and is being done to correct problem areas which will reduce the impacts of roads and trails.

#### 3.1.9 Open Unclassified Routes

Opening Unclassified Routes will generally have a negative effect on deer. This is because of the increased use a route will get when designated and made known to users. This would be the greatest problem if the area had little vehicle use before the opening. Of the action alternatives, Alternative 3 opens the most unclassified routes and Alternative 1 and 4 open the least. However, under all alternatives, the unclassified routes being opened are already heavily used for non-highway legal use and access to Yellow Post Sites. Therefore the opening being planned will have little effect on deer.

#### 3.1.10 Cumulative Effects for Mule Deer

The biggest impact to deer in this area is likely the human development and disturbance by roads, people, and dogs. Several other non-habitat factors, such as hunting, poaching, traffic, and diseases affect mule deer population numbers. Fuels treatment projects within the SBNF have likely had short-term negative effects and longer term beneficial effects on this deer population. Because of the way

these treatments have been and will be spread spatially across the landscape, the impacts of the projects cumulatively are not likely to result in long-term negative impacts to the deer population. In fact, by changing the vegetation to earlier successional stages in some of the project areas and creating openings, it is likely that there have been some longer-term improvements in habitat for deer.

Riparian and meadow habitat within the San Bernardino National Forest on federal and non-federal lands has been affected by development and water diversions and extractions over the years, reducing the amount and quality of this habitat type. As such, impacts to mule deer populations likely have occurred due to reduction in habitat quality and quantity for fawning, water sources, and movement corridors. Demands on water, and thus riparian/meadow habitat, will likely continue to increase with increasing human populations.

Proposed and planned housing developments within and adjacent to the San Bernardino National Forest will result in increased recreational uses in the project area, particularly in some of the more accessible areas and along Forest System roads, especially in riparian habitats. Hunting and poaching pressures in the area may also increase as human populations increase with development.

Additionally, associated increases in vehicle traffic on existing routes will likewise result in more injuries and deaths of deer and mountain lions while also reducing the quality of movement corridors that are bisected by busier roadways. This route designation project will have some benefits where roads are decommissioned, designated for administrative use, have non-highway legal use removed, or are rehabilitated. On the other hand, routes that have non-highway legal use added, there is new construction, or unclassified routes become classified will adversely affect deer to some extent. Overall, the route designation process will not add significantly to the cumulative effects to this species or its habitat in the project area or Province because of the small amount of land being affected and the amount of habitat that is being rehabbed as a part of the project.

#### 3.1.11 Summary for Mule Deer

The proposed project is expected to move the habitat in the project area toward the desired conditions for this species by improving the road and trail system on the Forest while rehabbing and decommissioning a significant amount of roads and trails. In the long-term, developing a logical user supported transportation system should benefit deer. Short-term impacts would be expected to result from some temporary disturbance and designation of some routes as open to non-highway legal use, but are not expected to alter population trends when combined with the benefits of removing non-highway legal use from some areas, rehabilitating unclassified routes, making some routes administrative use only, and decommissioning existing routes of travel. This project will be neutral or positive relative to the desired condition for deer and deer habitat on the SBNF and in the Southern Province.

#### **3.2 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 functions are maintained or improved, including primary feeding areas, winter ranges, breeding areas, birthing areas, rearing areas, migration corridors, and landscape linkages (LMP, Part 1 p.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 CDFG, USGS and other agencies (LMP FEIS, Vol. 1. p. 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.

See the MIS account for this species for more detailed information regarding life history, habitat conditions, and population trends on the SBNF and in the National Forest southern province. References and literature citations are found in the MIS accounts and are not generally repeated in the following discussions.

### 3.21 Potential Impacts to Mountain Lion – General

Because mountain lions prey primarily on mule deer, areas with low mule deer populations would support fewer mountain lions. Mountain lions are also susceptible to being shot illegally from vehicles traveling on the roadways (Bancroft 1990, Tsukamoto 2001). In general, motorized vehicle use effects as described above for mule deer would be applicable to mountain lion. If healthy deer herds are maintained within the Forest, there will be healthy lion populations.

### 3.22 Potential Impacts to Mountain Lion – No Action

The No Action Alternative would have no effect on the mountain lion. Baseline conditions would remain the same.

### 3.23 Potential Impacts to Mountain Lion –Alternatives 1a, 3 and 4

Since deer are so important to mountain lions as their primary food source, the above discussion of effects of this project on deer largely describes the impact on lions.

Studies of mountain lion movements in the Santa Ana Mountains found that riparian vegetation and other vegetation types that provide horizontal cover are important features in movement corridors. In addition, dirt roads did not impede use of these corridors. Implementation of any of the action alternatives would have very little effect on riparian and other vegetation corridors. Some key riparian areas are being protected with the proposed projects. Activities associated with restoration, new construction, and decommissioning could cause short-term disturbance and displacement of mountain lion (and prey species), but because lions are such a wide-ranging species, the effects of disturbance would not be significant. Following the activity, conditions for lion and deer would improve. Increased vehicle activity may increase the probability of a collision and resulting mortality, but this would be expected to be rare. It is most likely to occur on State and County roads within the Forest boundary. Mountain lions would experience increased disturbance where new non-highway legal activity is allowed, but since they are most active at night, this would not be as significant. The new areas opened to non-highway legal and other motorized vehicle use will be more than made for with the amount of decommissioning, changing to administrative use only and restoration.

### 3.24 Cumulative Effects for Mountain Lion

Fuels treatment projects within the San Bernardino Mountains have likely had some impact on mountain lion population. Because of the way these treatments have been and are planned to be spread spatially across the landscape, the impacts of the projects cumulatively are not likely to result in long-term negative impacts to the mountain lion population in the San Bernardino National Forest.

In fact, by changing the vegetation to earlier successional stages in some of the project areas and creating openings, it is likely that there have been some short-term improvements in habitat for deer,

and thus resulted in increases in the prey base for mountain lions in multiple project areas. None of the recently-implemented projects or currently-planned vegetation treatment projects are expected to adversely affect mountain lion corridors.

The widening of Highway 138 both east and west of Interstate 15 will reduce the permeability of Cajon Pass for mountain lions. The addition of a new BNSF rail line will also have an impact on this critical landscape linkage. There is potential for a high speed train project through the pass as well as additional widening of I-15. Additional powerlines and pipelines are being planned. Even though the SBNF is working with the involved agencies to maintain corridors and linkages and valuable underpasses through the pass, the cumulative effect is a reduction in permeability for wildlife.

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 discussion above). Increasing urbanization and agricultural pressure outside the SBNF boundary may reduce deer populations on the surrounding lands off of the SBNF. As a result, mountain lions may attack more pets and livestock or otherwise threaten local communities, leading to more depredation permits issued to kill lions.

Proposed and planned housing developments in and around the San Bernardino Mountains will result in increased recreational uses in the project area, particularly in some of the more accessible riparian zones that are likely used as movement corridors by mountain lions. Hunting and poaching pressures in the area may also increase as human populations adjacent to the project area increase with development, affecting both deer and mountain lion populations. Additionally, associated increases in vehicle traffic will result in more injuries and deaths of deer and mountain lions and reduce the quality of movement corridors that are bisected by busier roadways.

This overall project should not increase fragmentation and should not add significantly to cumulative effects to this species on the Forest or Province.

### 3.25 Summary for Mountain Lion

Short-term impacts may result in some temporary disturbance but they are not expected to alter population trends. Rehabilitating 84 miles of unclassified routes and decommissioning routes will improve the habitat conditions. New non-highway legal designations will increase disturbance somewhat in those areas, but it will be outweighed by the benefits of the project. The proposed project is not expected to further fragment mountain lion populations through corridor alteration. This project will be neutral or positive relative to the desired condition for mountain lion on the SBNF and in the National Forest Southern Province.

### **3.3 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 (LMP, 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 (LMP, 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 (LMP, 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 (LMP FEIS, Vol. 1. p. 177, Table 433).

See the MIS account for this species for more detailed information regarding life history, habitat conditions, and population trends on the SBNF and in the National Forest southern province. References and literature citations are found in the MIS accounts and are not generally repeated in the following discussions.

### 3.4 Potential Impacts to Song Sparrow – No Action

The No Action alternative will not change the existing situation for song sparrows.

### 3.5 Potential Impacts to Song Sparrow – Action Alternatives

Roads in or near riparian areas can negatively affect song sparrows, and other riparian-dependent species. The noise from road use and maintenance can cause birds to abandon nests or to not attempt nesting at all. In addition, roads provide access for recreation use in streams and riparian habitats. Under all alternatives, new proposals for roads or incorporation of unclassified roads in riparian areas are subject to standards and guidance for riparian conservation areas (see Part 3 of the revised forest plans), which should minimize future new impacts on aquatic and riparian habitats.

Some routes that are being closed to non-highway vehicle use and rehabilitated, or made administrative use cross riparian areas and impact them to varying extents. Some very important riparian areas (Coxey Creek and Arrastre Creek) will receive increased long term protection in all alternatives as will Willow Creek under Alternative 1 and 4. No new routes (off of existing system travel routes) are being proposed that will impact riparian habitat. Routes that are being made legal for non-highway legal use through this decision cross some riparian and chaparral habitat suitable for song sparrows. This will potentially increase disturbance slightly due to increased traffic, noise and overall disturbance. Removing non-highway legal use will have the opposite effect and improve conditions for song sparrows and other riparian dependent species.

### 3.6 Cumulative Effects – Song Sparrow

Recent and planned vegetation treatments on NFS lands throughout the San Bernardino National Forest have and will have the potential to affect song sparrows. However, each one of those projects also include measures to protect riparian habitat, riparian-dependent T/E species, and water quality, thus effectively reducing the degree and duration of potential impacts to song sparrows within those project areas.

Similar vegetation projects on private lands, however, do not generally carry the same levels of riparian protection as those on the SBNF and likely have resulted in disturbance to song sparrows, in short-term and, potentially, in long-term alterations of habitat.

Riparian habitat within the San Bernardino National Forest on federal and non-federal lands has been affected by water diversions and extractions over the years, reducing the amount and quality of this habitat type. As such, impacts to song sparrow populations likely have occurred due to reduction in

habitat quality and quantity. Demands on water, and thus riparian habitat, are likely continue to increase.

Proposed and planned housing developments in the San Bernardino Mountains will result in increased recreational uses in the project area, particularly in some of the more accessible areas along Forest System roads. Increasing population in southern California is putting more pressure on the few perennial streams for recreation. This can impact song sparrows and other riparian dependent birds when use gets so heavy that there is too much disturbance for nesting.

### 3.7 Summary for Song Sparrow

The proposed project is not expected to result in long-term changes to the existing habitat conditions for song sparrow. Short-term impacts may result from some temporary disturbance associated with decommissioning and restoration but they are not expected to alter population trends. Short-term habitat impacts may also occur but they are not expected to influence distribution of this species over the long-term. Permanent protection of important parts of Coxey Creek, Willow Creek and Arrastre Creek will benefit song sparrows. This project will be beneficial overall relative to the desired condition for song sparrows and their habitat on the SBNF and in the National Forest Southern Province.

### **4.0 California Spotted Owl**

The California spotted owl was chosen as the MIS for mature, large diameter, high canopy closure conditions of montane conifer forest. Monitoring the California spotted owl and its habitat will indicate the effectiveness of management activities in achieving maintenance and restoration of montane conifer forest habitat. The desired condition for California spotted owls is that its habitats are managed to prevent downward trends in populations or habitat capability, and to prevent federal listing (LMP, Part 1, p. 45).

Additionally, the desired condition is that wildlife habitat conditions sustain healthy populations 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 (LMP, Part 1 p.45).

The objective for spotted owl is to maintain/increase numbers and distribution. The number of occupied territories and/or habitat condition is to be used as measurements for evaluation. The monitoring method is to follow Forest Service Region 5, CDFG protocol (LMP FEIS, Vol. 1. p. 177, Table 433). See the MIS account for this species for more detailed information regarding life history, habitat conditions, and population trends on the SBNF and in the National Forest southern province. References and literature citations are found in the MIS accounts and are not generally repeated in the following discussions.

### 4.1 General Impacts of Roads and Motorized Trails

California spotted owls are relatively tolerant of roads and trails except during the nesting season, where disturbance at nest sites from vehicles or humans can result in nest abandonment. The effects of motorized trail use on spotted owls would be essentially the same as for roads. Animals can adapt somewhat to properly designed and located authorized routes if they are in low density and riders stay on the trails. Because motorcycles and all-terrain vehicles (ATVs) can cross terrain too rugged or gaps too narrow for street vehicles, user-created trail networks can affect somewhat more habitat. For many years, the San Bernardino National Forest has been working to locate hiking and motorized trails away from spotted owl nest sites. This has been successful in reducing disturbance. Hiking trails have generally just been moved out of site of nest trees. Motorized routes with the increased

noise have been located up to ¼ mile away depending on cover and topography. Noise effects can extend up to ¼ mile.

#### 4.2 Potential Impacts to California Spotted Owl – No Action

The No Action Alternative would not change the baseline condition for the spotted owl.

#### 4.3 Potential Impacts Alternatives 1a, 3 and 4

The following table helps display the potential effects of the various alternatives on California spotted owl nest stands, Protected Activity Centers (PAC) and Home Range Cores based on miles within each category by alternative.

Table 11	mi.	mi.	mi.
Alternative 1	Nest Stand	PAC - NS	HRC
Add Non-highway legal use	0.00	0.46	0.00
Decommission	0.00	1.40	0.00
Make Administrative	0.79	2.23	2.21
New Construction	0.05	0.15	0.00
Rehabilitate Unauthorized Route	0.31	3.33	5.08
Remove Non-highway legal use	0.00	0.21	0.00

Alternative 3	Nest Stand	PAC - NS	HRC
Add Non-highway legal use	0.00	0.46	0.00
Decommission	0.00	0.06	0.00
Make Administrative	0.75	1.86	2.21
Open Unclassified Route	0.10	0.16	1.07
Rehabilitate Unauthorized Route	0.31	3.33	5.08

Alternative 4	Nest Stand	PAC - NS	HRC
Add Non-highway legal use	0.00	0.46	0.00
Decommission	0.00	1.40	0.42
Make Administrative	0.79	2.23	2.21
New Construction	0.05	0.15	0.00
Rehabilitate Unauthorized Route	0.31	3.33	5.08
Remove Non-highway legal use	0.00	0.21	0.00

All Alternatives are fairly similar in potential effects on spotted owls. Very little activity is planned in spotted owl habitat. The work that is planned is almost all located on an area north of Lake Arrowhead where some minor adjustments to the non-highway legal system are proposed to make it more compatible with the community, users, OHV managers and the environment. The small amount of new construction and adding non-highway legal use, are being done in the same area where decommissioning, rehabilitating, removing non-highway legal use, and making administrative use only are occurring to make a better system. All alternatives add the same amount of non-highway legal use. Alternative 1 and 4 decommission the most acreage in PACs and HRCs. Alternatives 1a and 4 make more mileage administrative use only. Alternative 3 opens a small amount of unclassified route where Alternative 1 and 4 do not. This is all related to designating the access routes to Yellow Post sites so that access can be better managed. All of the alternatives rehabilitate a substantial amount of habitat. A small amount of non-highway legal use is removed in Alternative 1 and 4.

#### 4.4 Cumulative Effects for California Spotted Owls

The cumulative effects analysis area for this species is the San Bernardino National Forest. There are 182 known territories on the SBNF; of those, 150 are in the San Bernardino Mountains (plus 10 in the San Gabriel Mountains and 22 in the San Jacinto Mountains).

SBNF vegetation management projects in the recent past and foreseeable future have and will continue to affect spotted owls to some degree. All of the recent fuels reduction projects on the SBNF have used avoidance/minimization measures and treatment guidelines in project design in an attempt to preserve important spotted owl habitat qualities and limit disturbance during implementation.

Because of the way these treatments have been and are planned to be spread spatially across the landscape, the impacts of the SBNF fuels projects cumulatively are not likely to result in long-term negative impacts to spotted owl population in the San Bernardino Mountains. Due to the concern about viability of this species, it is likely that future Forest Service projects will focus on incorporating protection and restoration measures into project designs to ensure long-term viability.

However, the same emphasis on ensuring long-term viability for this species may not be true for projects on non-SBNF lands. Similar vegetation/fuels projects on private lands do not generally carry the same levels of spotted owl habitat protection as those on the SBNF and have likely resulted in disturbance to spotted owls, in short-term and, potentially, in long-term alterations of habitat. Because the California spotted owl is not protected under the state Endangered Species Act, Natural Resources Conservation Service (NRCS), Caltrans, Southern California Edison (SCE), and the California Department of Forestry (CDF) do not afford it the same level of protection that the Forest Service does (as a Forest Service Sensitive species). As such, those agencies do not necessarily avoid disturbance during nesting season or protect the habitat when working on non-NFS lands.

Some spotted owl habitat, including nest stands, on private lands has been treated over the past couple of years, possibly to a degree that makes it unsuitable. In particular, fuels and salvage treatments have occurred in a couple of territories on the Lake Arrowhead Boy Scout camp east of Lake Arrowhead and territories south of Silverwood Lake. We do not have data or an assessment of those treatments and their impacts to those owls and their habitat.

Additionally, SCE and Caltrans have conducted hazard tree removal efforts on federal and non-federal lands to protect state highways and powerlines. These efforts increased substantially in 2003 and have continued due to continued mortality of trees. In 2006, NRCS and Caltrans partnered to remove hazard trees along the state highways. Due to the need to protect powerlines and roads from falling trees, they have not had the flexibility of retaining high value spotted owl trees. Thus, some impacts to owl habitat have occurred by removal of snags and logs in those corridors.

The level of impacts and habitat alteration/losses from hazard tree removal is unknown and likely varies by land ownership. When removing hazard trees on the SBNF, NRCS, Caltrans, and SCE comply with the LOPs and other guidelines provided by the SBNF to protect owl habitat and nest stands in particular. However, even with the guidelines, some impacts occur on NFS lands. One known nest tree (Willow Creek territory) was cut by NRCS in 2006. The tree was dropped after the territory was determined to be vacant so no direct impacts to owls occurred. While the territory has been vacant for at least three years, removal of a nest tree for a species that has a high fidelity to nest sites is undesirable. However, dead nest trees naturally fall over time and owls do find other nest sites. It is unlikely that removal of one of the two nest trees known for that territory would result in abandonment of the territory or decrease the habitat value.

LaHaye *et al.* (1997) found that 39% of the owls in the San Bernardino Mountains nest in high elevation mixed conifer, 41% nest in oak/big cone Douglas-fir and 20% nest in mixed hardwood/conifer (USDA Forest Service 2004). Oak/big cone Douglas-fir habitats appear to be the most productive, maybe because of higher wood rat densities, and the lower elevations are less susceptible to spring snow storms during the breeding season (Stephenson and Calcarone 1999). They note that with increasing urbanization and increased human disturbance at the lower elevations, oak/big cone Douglas-fir habitats will be negatively affected.

Riparian and meadow habitat within the San Bernardino Mountains on federal and non-federal lands has been affected by development and water diversions and extractions over the years, reducing the amount and quality of this habitat type. Many owl territories, especially nest stands, are associated with drainages and riparian habitats. These drainages appear to be important for supporting high quality nesting, roosting, and foraging habitat as well as being suspected in providing movement corridors for foraging. As such, impacts to spotted owl populations likely have occurred due to reduction in habitat quality and quantity as a result of dewatering, especially during drought periods. Demands on water, and thus riparian/meadow habitat, will likely continue to increase with increasing human populations.

Proposed and planned housing developments in the mountain and nearby desert areas will certainly result in increased recreational uses in the project area, particularly in some of the more accessible riparian zones. Poaching pressures and disturbance in the area may also increase as human populations adjacent to the project area increase with development. Additionally, associated increases in vehicle traffic will increase the potential for collision-related injuries and death of owls.

With the SBNF small amount of habitat impacting proposals in this project and the amount of work being done to decommission or reclaim roads and trails protecting this species, the proposed project is not expected to contribute substantial impacts to the current cumulative effects for spotted owls on the SBNF.

4.5 Determination of Effects: It is my determination that implementation of the action alternatives, as described, may affect individuals, but is not likely to result in a trend towards federal listing for California spotted owls. Additionally, this project is not likely to have any measurable effect on the spotted owl population or habitat on the San Bernardino National Forest or the southern California Province.

## **5.0 Arroyo Toad**

The arroyo toad was selected as an MIS for low-elevation riparian and aquatic ecosystems. The desired condition for federally-listed species, such as arroyo toad, is that their habitats are conserved and that the species are conserved or moving toward recovery. Additionally, 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 (LMP, 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 (LMP, Part 1, p. 41).

The desired condition for arroyo toad is that habitat functions 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 (LMP, Part 1 p.45).

The desired condition for watersheds is that they are healthy, dynamic and resilient, and are capable of responding to natural and human-caused disturbances while maintaining the integrity of their biological and physical processes (LMP, Part 1, p. 40). Long-term trends in population abundance, stream occupancy, and habitat condition are expected to reflect the effectiveness of management actions in protecting low-elevation riparian and aquatic habitat from disturbance and habitat degradation.

The objectives for arroyo toad are that there are properly-functioning streams and stable or increasing populations. Trends in abundance, distribution, and/or habitat conditions are to be used as measurements for evaluation. The monitoring method is population abundance and/or habitat condition in selected locations (LMP FEIS, Vol. 1. p. 177, Table 433). See the MIS account for this species for more detailed information regarding life history, habitat conditions, and population trends on the SBNF and in the National Forest southern province. References and literature citations are found in the MIS accounts and are not generally repeated in the following discussions.

### 5.1 Potential Impacts to Arroyo Toad

Activities are planned in arroyo toad habitat within ½ mile of Cajon Wash, Little Horsethief Creek, and Cucamonga Creek. Proposed activities are approximately ½ mile away from the suitable breeding habitat in these locations and not in highly suitable upland habitat areas. The actions that are proposed in these areas will not impact new ground and will reduce sedimentation to suitable and occupied habitat. Rehabbing eroding sections of the Cleghorn Ridge trail is included in all alternatives and should benefit Little Horsethief habitat. Formally designating 3N66 and 3N66A leading to Little Horsethief Creek as administrative use only will help prevent human disturbance in the habitat. It is already gated to prevent human disturbance of breeding habitat in Little Horsethief Creek. Changing route 2N87 near Cajon Creek to administrative use only could help reduce erosion, sedimentation and potential crushing of toads.

Making 1N35 west of Cucamonga Creek administrative use only will be beneficial for the arroyo toad by reducing traffic on the road and the potential for crushing any toads that could potentially be there. This is proposed in Alternative 1 and 4. Several design features have been developed and incorporated as part of the proposed action to minimize impacts to riparian and aquatic habitats.

### 5.2 Cumulative Effects for Arroyo Toad

Recent droughts, fires, and floods have probably adversely affected arroyo toad on the SBNF. Some known occupied habitat has gone for several years with no surface water for breeding during the breeding season. In addition to the fires and floods, the areas that were impacted have had considerable emergency repair work done to roads, railroads, and utilities. Drainages that have been impacted the most are Cajon Wash and Bautista Canyon. Beaver dams in lower Deep Creek behind Mojave Forks dam were recently blown out from the flooding. This should improve the habitat for toads by restoring sandy benches and islands, as well as reducing the bullfrog population which thrives in beaver dam ponds.

Two large-scale housing developments adjacent to Lake Silverwood and the Mojave River (in the Los Flores Ranch and Little Horsethief areas) are in the midst of the approval process. Combined, they are projected to result in an additional 19,000 new house in the area. The Los Flores Ranch area of the Mojave River just north of the Silverwood Lake dam contains important occupied habitat for arroyo toads. Housing development in these areas will increase levels of human disturbance to arroyo toads by increasing human disturbance, including off-road vehicle use, impacts from pet dogs and cats, and injury/death caused by people picking up and/or collecting toads.

Bautista Canyon Road improvement project has been abandoned by Riverside County. This road improvement was predicted to be a problem for toads. Unauthorized cross country vehicle use if not adequately controlled is a problem for toads in lower Deep Creek, Horsethief Creek, and Cajon Wash. Dispersed recreation (especially illegal camping) is a problem in Deep Creek at the Hot Springs. Illegal campfires and dispersed recreation are a problem in Bautista Canyon.

"This species has disappeared from 76 percent of its total historic range in the United States (California). Populations have disappeared entirely from the northern, central, and eastern parts of its range; the extreme habitat specialization of arroyo toads coupled with the fact that most factors that undoubtedly contributed to the extirpation of most populations are still impacting or threaten the few (less than 25) remaining small (30-100 adults) populations" (Sweet 1991,1993). "Coupled with requirements of relatively large, streamside flats with scattered vegetation (juvenile-adult habitat) adjacent to shallow pools with open sand or gravel bars place significant constraints where arroyo toads may occur. Development and alteration of streamside flats (particularly by changing the natural hydrologic regime) may have been the crucial factors contributing to the extirpation of historic populations".

While there is occupied arroyo habitat in the project action areas, potential impacts to suitable habitat and individuals are very low (some changes in water quality and reduced disturbance in upland areas). This project can be implemented with minimal affects by following mitigation measures, RCA standards, and BMPs. This project, if implemented as described, is not expected to add to the cumulative effects of this species.

### 5.3 Summary for Arroyo Toad

Design features and RCAs in the proposed action will help reduce risk to arroyo toad and suitable habitat. The only thing proposed for riparian areas is rehab and decommissioning. There will be general, however slight, improvement to toad habitat from this project. This project will not measurably effect arroyo toad populations or habitat on a Forest or Province scale.

## **6.0 MIS Tree Species**

Coulter pine, bigcone Douglas fir, black oak, and white fir are all tree species that were selected as Management Indicator Species. In every case they were chosen to monitor and guide vegetation treatments and habitat management to achieve desired conditions for the ecosystems and wildlife habitats on the Forest. See the MIS account for these species for more detailed information regarding life history, habitat conditions, and population trends on the SBNF and in the National Forest southern province. References and literature citations are found in the MIS accounts and are not generally repeated in the following discussions.

In all cases, they are measured and will be monitored at a much larger scale than that impacted by this project. Most of the routes are already in existence and there will be little new ground disturbance. Effects on these species would have to be measured by the numbers of stems affected rather than as landscape effects (in acres for instance) which was intended in their selection as MIS. The primary intention of their selection was to monitor and influence such things as forest health treatments, fuels treatments, prescribed fire, reforestation, wildfire suppression, air pollution, and climate change.

The actions proposed in all alternatives will not have measurable effects on these vegetation types. This project will not affect their distribution or abundance at the Forest or Province level. A few stems may be affected by the small amounts of new construction (.25-.5 mi.), but will be more than compensated for by the large amount of decommissioning (13.5 mi.- 20.75) and restoration (84 mi).

### 6.1 Cumulative Effects for MIS Tree Species

As discussed in the California Spotted Owl MIS write-up, Stephenson and Calcarone (1999) modeled montane conifer habitat across southern California habitat and found that 30 percent of mixed-conifer and pine stands are at risk due to stand densification. Since 2003 considerable acreage of Forested habitat has been burned.

The San Bernardino has been conducting a substantial amount of fuels treatment in these forest types. Most of the work has been in the mixed conifer surrounding communities to help protect them from wildfire. Some of the work has been done away from communities to provide diversity in the vegetation to help reduce the effects of wildfire and restore more natural conditions. The work has generally involved thinning from below.

In addition, the mountain communities continue to be rapidly developing. The Forest is working to acquire as many of the inholdings within the Forest in attempt to conserve as much National Forest quality habitat as possible for future generations.

### 6.2 Summary for MIS Tree Species

The actions proposed in all alternatives will not have measurable effects on these vegetation types. This project will not affect their distribution or abundance at the Forest or Province level.

A few stems may be affected by the small amounts of new construction (.25-.5 mi.), but will be more than compensated for by the large amount of decommissioning (13.5 mi.- 20.75) and restoration (84 mi).

### **7.0 Summary for MIS**

The analysis of effects of the alternatives on MIS species does not indicate a significant concern for any MIS potentially affected by the Route Designation project. The conservation measures incorporated into project design will effectively reduce potential impacts to the MIS present in the project area. The scope of this project is too small relative to the landscape to have a measurable effect on MIS populations or their habitat across the SBNF. The project will have no effect on the MIS populations or habitat at the Province scale.

## **PART VI: NOXIOUS AND INVASIVE WEEDS RISK ASSESSMENT**

### **1.0 INTRODUCTION**

This Weed Risk Assessment has been prepared to evaluate the effect of the SBNF Route Designation project on California Department of Food and Agriculture (CDFA) listed noxious weeds and other invasive non-native plant species. The overall purpose of this assessment is to identify risks of weed invasion and spread within/along the project area and to recommend measures to offset these risks. The primary focus for noxious and other invasive plant management is on prevention of introduction, establishment, and spread.

This assessment is in compliance with the Forest Plan and the direction in the Forest Service Manual (FSM) section 2080, Noxious Weed Management, which includes a policy statement calling for a risk assessment for noxious weeds to be completed for every project. Specifically, the FSM states:

2081.03 - Policy. When any ground disturbing action or activity is proposed, determine the risk of introducing or spreading noxious weeds associated with the proposed action.

1. For projects having moderate to high risk of introducing or spreading noxious weeds, the project decision document must identify noxious weed control measures that must be undertaken during project implementation.
2. Use contract and permit clauses to prevent the introduction or spread of noxious weeds by contractors and permittees. For example, where determined to be appropriate, use clauses requiring contractors or permittees to clean their equipment prior to entering National Forest System lands.

2081.2 - Prevention and Control Measures. Determine the factors that favor the establishment and spread of noxious weeds and design management practices or prescriptions to reduce the risk of infestation or spread of noxious weeds.

Where funds and other resources do not permit undertaking all desired measures, address and schedule noxious weed prevention and control in the following order:

1. First Priority: Prevent the introduction of new invaders,
2. Second Priority: Conduct early treatment of new infestations, and
3. Third Priority: Contain and control established infestations.

### **1.1 Project Description**

See proposed action under Part I of this combination document.

### **2.0 INVENTORY RESULTS AND RISK ASSESSMENT**

An inventory for noxious and other invasive plant species was performed concurrently with focused rare plant surveys and floristic inventories for the new construction and new designation portions of Alternative 1. The surveys that were performed had a high likelihood of not detecting target species (including weeds) due to the exceptionally dry conditions. The majority of the

project area was not surveyed, nor were additional areas of route designation associated with Yellow Post Sites under Alternative 3. The project surveys are described in Part I of this document. The only weed recorded in the surveyed area was cheatgrass (*Bromus tectorum*).

Surveys were not sufficient to likely detect all noxious weeds present within the project area. Therefore, the risk associated with undetected weeds is considered high.

### **2.1 Known Noxious and Other Invasive Weeds**

Table 16 displays noxious and other invasive plants addressed in the EIS for SBNF land management Plan (2006, Table 463). All of these species were considered in this analysis.

TABLE 16. NOXIOUS AND INVASIVE PLANT SPECIES OF THE SBNF				
SPECIES NAME	COMMON NAME	HABITATS	CALIPC LISTING*	CFDA PEST RATING*
<b>RED ALERT: Potential to spread explosively</b>				
<i>Centaurea stoebe</i> ssp. <i>micranthos</i>	spotted knapweed	riparian, grassland, meadows, forest	red-alert	A
<i>Linaria genistifolia</i> ssp. <i>dalmatica</i>	Dalmatian toad flax	mountain meadows, forest floor	red-alert	A
<b>LIST A-1&amp;2: Most Invasive</b>				
<i>Ailanthus altissima</i>	tree of heaven	riparian, grasslands, oak woodlands	A-2	C#
<i>Arundo donax</i>	giant reed	riparian	A-1	C#
<i>Atriplex semibaccata</i>	Australian saltbush	grasslands, shrublands, alkali wetlands	A-2	
<i>Brassica tournefortii</i>	African mustard	washes, alkaline flats, Sonoran desert scrub	A-2	
<i>Bromus madritensis</i> ssp. <i>rubens</i>	red brome	shrublands, grasslands, desert scrub	A-2	
<i>Bromus tectorum</i>	cheatgrass	sagebrush, pinyon juniper woodlands, etc.	A-1	
<i>Centaurea solstitialis</i>	yellow star thistle	grasslands	A-1	C
<i>Cortaderia selloana</i>	pampas grass	grasslands, wetlands, etc.	A-1	
<i>Delairea odorata</i>	German ivy	coastal shrublands, riparian	A-1	C#
<i>Eichhornia crassipes</i>	water hyacinth	waterways	A-2	
<i>Elaeagnus angustifolius</i>	Russian olive	interior riparian	A-2	
<i>Eucalyptus globulus</i>	Tasmanian blue gum	riparian, grasslands	A-1	
<i>Ficus carica</i>	edible fig	riparian woodlands	A-1	
<i>Foeniculum vulgare</i>	wild fennel	grasslands, shrublands	A-1	
<i>Pennisetum setaceum</i> (A)	fountain grass	roadsides, grasslands, etc	A-1	
<i>Rubus discolor</i>	Himalayan blackberry	riparian, marshes, woodlands	A-1	
<i>Saponaria officinalis</i>	bouncing bet	meadows, riparian	A-2	
<i>Tamarix chinensis</i> , <i>T. gallica</i> , <i>T. parvifolia</i> , <i>T. ramosissima</i>	tamarisk, salt cedar	desert washes, riparian, seeps and springs.	A-1	C#
<b>LIST B: Lesser Invasives</b>				
<i>Ageritina adenophora</i>	eupatory	coastal slopes and canyons, riparian	B	
<i>Bassia hyssopifolia</i>	bassia	alkaline habitats	B	
<i>Brassica nigra</i>	black mustard	coastal grasslands, disturbed areas	B	
<i>Centaurea militensis</i>	tocolote	widespread	B	C#
<i>Cirsium vulgare</i>	bull thistle	riparian, marshes, meadows	B	C#
<i>Conium maculatum</i>	poison hemlock	riparian, oak woodlands	B	
<i>Festuca arundinacea</i>	tall fescue	coastal scrub, grasslands	B	
<i>Hedera helix</i> (A)	English ivy	coastal and mountain forests, riparian	B	
<i>Holcus lanatus</i>	velvet grass	coastal grasslands, wetlands	B	
<i>Olea europaea</i>	olive	riparian	B	
<i>Phalaris aquatica</i>	harding grass	coastal, mesic soils	B	
<i>Potamogeton crispus</i>	curlyleaf pondweed	ponds, lakes, streams	B	

<b>TABLE 16. NOXIOUS AND INVASIVE PLANT SPECIES OF THE SBNF</b>				
<b>SPECIES NAME</b>	<b>COMMON NAME</b>	<b>HABITATS</b>	<b>CALIPC LISTING*</b>	<b>CFDA PEST RATING*</b>
<i>Ricinus communis</i>	castor bean	coastal and interior, widespread	B	
<i>Robinia pseudoacacia</i>	black locust	riparian, canyons	B	
<i>Schinus molle</i>	Peruvian pepper tree	riparian, canyons	B	
<i>Spartium junceum</i>	Spanish broom	roadsides, canyons, widespread	B	C#
<i>Verbascum thapsus</i>	woolly mullein	widespread	B	
<i>Vinca major</i>	periwinkle	riparian, oak woodland	B	
<b>Need more info, and other weeds of note</b>				
<i>Asphodelus fistulosus</i>	asphodel	highways		
<i>Convolvulus arvensis</i>	field bindweed	disturbed areas		
<i>Descurainia sophia</i>	tansy mustard	Mojave desert scrub		
<i>Dimorphotheca sinuata</i>	cape marigold	sage scrub, alluvial fan scrub		
<i>Dipsacus fullonum</i>	Fuller's teasel	roadsides and other disturbed sites		
<i>Dipsacus sativus</i>	wild teasel			
<i>Euphorbia lathyris</i>	gopher plant	interior sage scrub		
<i>Lathyrus latifolius</i>	sweetpea	many habitat types		
<i>Nicotiana glauca</i>	tree tobacco	coastal scrub		
<i>Lepidium perfoliatum</i>				
<i>Lunaria annua</i>	dollar plant	riparian, forest, woodland		
<i>Medicago polymorpha</i>	California bur-clover	many habitat types		
<i>Medilotus albus</i>	white sweet-clover	many habitat types		
<i>Melilotus officinalis</i>	yellow sweet-clover	many habitat types		
<i>Nerium oleander</i>	oleander	persists/naturalizes in riparian		
<i>Oxalis pes-caprae (A)</i>	Bermuda buttercup	disturbed grasslands		
<i>Pennisetum clandestinum</i>	Kikuyu grass	disturbed sites, roadsides		
<i>Picris echinoides</i>	bristly ox-tongue	disturbed sites, near Lake Silverwood		
<i>Piptatherum miliaceum</i>	smilo grass	creeks and canyons		
<i>Poa bulbosa</i>	bulbous bluegrass	conifer forest and grassy mountain areas		
<i>Prunus cerasifera</i>	cherry plum	oak woodland, riparian		
<i>Ranunculus testiculatus</i>				
<i>Salsola tragus</i>	Russian thistle	many habitats		
<i>Salsola paulsenii</i>	barbwire Russian thistle	Mojave desert scrub, disturbed sites		
<i>Silybum marianum</i>	milk thistle	pasturelands, disturbed grasslands		
<i>Sisymbrium altissimum</i>	Tumble mustard	disturbed places, mainly transmontane		
<i>Tribulus terrestris</i>	puncture vine	dry disturbed areas		
<i>Xanthium spinosum</i>	spiny cocklebur	riparian and other wetlands		
<b>Annual grasses that pose significant threats</b>				

TABLE 16. NOXIOUS AND INVASIVE PLANT SPECIES OF THE SBNF				
SPECIES NAME	COMMON NAME	HABITATS	CALIPC LISTING*	CFDA PEST RATING*
<i>Avena barbata</i>	slender wild oat	coastal slopes, coastal sage scrub, disturbed		
<i>Avena fatua</i>	wild oat	coastal slopes, coastal sage scrub, disturbed		
<i>Bromus diandrus</i>	ripgut brome	many habitat types		
<i>Lolium spp.</i>	ryegrass	meadows and other wetlands, persistent where applied post-fire		
<i>Schismus barbatus</i>	Mediterranean grass	coastal and desert shrublands		

**\*California Exotic Pest Plan Council (CEPPC) List Categories:**

List A: Most Invasive Wildland Pest Plants; documented as aggressive invaders that displace natives and disrupt natural habitats. Includes two sub-lists; List A-1: Widespread pests that are invasive in more than 3 Jepson regions, and List A-2: Regional pests invasive in 3 or fewer Jepson regions  
List B: Wildland Pest Plants of Lesser Invasiveness; invasive pest plants that spread less rapidly and cause a lesser degree of habitat disruption; may be widespread or regional.

Red Alert: Pest plants with potential to spread explosively; infestation currently small or localized. If found, alert Cal IPC, County Agricultural Commissioner or California Department of Food and Agriculture.

Need More Information: Plants for which current information does not adequately describe nature of threat to wildlands, distribution or invasiveness. Further information is requested from knowledgeable observers.

Annual Grasses: A preliminary list of annual grasses, abundant and widespread in California, that pose significant threats to wildlands. Information is requested to support further definition of this category in next list edition.

**\*California Dept. of Food and Agriculture Pest Ratings:**

All weeds on California's 130 plus noxious weed list have a rating. The overall rating system is NOT based on how bad a weed is-all weeds are considered "bad"- but rather on overall distribution throughout the state. Ratings and formal definitions by the CDFA are:

A=rated weeds are normally limited in distribution throughout the state. Eradication, containment, rejection or other holding action at the state-county level.

Quarantine interceptions to be rejected or threat at any point in the state.

B=rated weeds are more widespread. Eradication, containment, control or other holding action at the discretion of the commissioner. State endorsed holding action and eradication only when found in a nursery.

C=rated weeds are generally widespread throughout the state. Action to retard spread outside of nurseries at the discretion of the commissioner. Reject only when found in a cropseed for planting or at the discretion of the commissioner.

Q=rated species are treated as temporary "A" weeds. Denoting action outside nurseries at the state-county level pending determination of permanent rating.

D=rated weeds are organisms considered to be of little or no economic importance. No action. Anything not rated as "A", "B", "C", or "Q" is given a "D" rating.

#= plant added to CDFA noxious weed list 8/2003, pest rating not finalized but "C" rating expected.

## **2.2 Risk Assessment for Soil Disturbance Impacts**

The weeds risk from soil disturbance associated with all action alternatives was determined to be high throughout the project area. Soil disturbance associated with construction (in the case of new construction) and long-term maintenance of all routes added to the system will likely lead to a maintained or increased prevalence of cheatgrass and the other federal weeds, as well as a long-term risk of new introductions through the use and maintenance of roads and motorized trails.

## **2.3 Risk Assessment for Travel Routes**

The weeds risk from use and maintenance of travel routes is determined to be high overall, and increased by this project to the extent that new routes are added to the system.

## **2.4 Risk of Transporting New Infestations into Project Area**

The risk of transporting new weed infestations into the project area was determined to be **high**.

## **2.5 Weeds Risk Checklist**

Are there known infestations in the project area (check noxious weed atlas)? Yes.

Have weed surveys been conducted in the project area? Yes (limited).

If so, when were the surveys conducted? See Part 1, Section 2.3.

And what found? See 2.0, above.

## **2.6 Measures to Reduce Weed Risk**

The alternatives include Design Features intended to reduce the potential for establishment and/or spread of invasive weeds during implementation of this project: The applicable Design Features are: IP-1 through IP-4 (Part 1, Section 4.0, Table 2). The elements of decommissioning and restoration under each action alternative pose a short term risk of weed introduction and spread via heavy equipment use and ground disturbance, but are expected to result in a net long-term reduction of weed risk due to removal of vectors for introduction and dispersal (i.e., the routes themselves and their associated use and maintenance) from the landscape.

Application of the Design Features and incorporation of decommissioning and restoration elements of the action alternatives 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.

## **3.0 RISK DETERMINATION**

With the incorporation of the Design Features and monitoring measures into the decision, the risk of noxious weed introduction and spread of weeds would be reduced from a high level of risk to a moderate level of risk. Without the Design Features and monitoring measures, the risk would remain high.

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## **APPENDIX A: Original Proposed Action**

### **Background**

On November 2, 2005, the Forest Service announced final travel management regulations governing Off-Highway Vehicles (OHVs) and other motor vehicle use on national forests and grasslands (Travel Management; Designated, Routes and Areas for Motor Vehicle Use, Federal Register / Vol. 70, No. 216 / Wednesday, November 9, 2005; 36 CFR Parts 212, 251, 261, and 295). The new rule provides a national framework for local units to use in designating a sustainable system of roads, trails, and areas for motor vehicle use. The rule's goal is to secure a wide range of recreation opportunities while ensuring the best possible care of the land. The rule requires each national forest or ranger district to designate those roads, trails, and areas open to motor vehicles. Designation will include class of vehicle and, if appropriate, time of year for motor vehicle use. Designation decisions will be made locally, with public input and in coordination with state, local, and tribal governments.

It is Forest Service policy to provide a diversity of road and trail opportunities for experiencing a variety of environments and modes of travel consistent with the National Forest recreation role and land capability (FSM 2353.03(2)). Modes of travel include hiking, horseback riding, bicycling, motor vehicle use, and so forth (FSM 2353.2).

On the San Bernardino National Forest, there is already a designated system for non-highway legal vehicle and other motor vehicle use, and travel off of designated routes is already prohibited and enforced by Forest Order. The existing designated non-highway legal system was reconfirmed, with public input, through the LMP process and Record of Decision of September 2005. The San Bernardino National Forest Land Management Plan (SBNF LMP) prohibits motor vehicle travel off designated National Forest System roads and trails and limited areas that are designated for vehicle use (SBNF LMP, Part 3, S35, pp 8-9). The Forest will be implementing the Travel Management Rule in 2007 with publication of a Motor Vehicle Use Map (MVUM) based on the existing, designated system.

### **Purpose and Need for Action**

Motor vehicle use across the San Bernardino National Forest has increased substantially in recent years. This increased use has led to the proliferation of user-created unauthorized routes; increased conflict between motorized and non-motorized uses; complaints about noise, trespass, and dust from adjacent landowners; and areas of degraded soil, water, vegetation, and wildlife habitat conditions. The purpose and need of this project is to designate changes to the established forest-wide system of routes for public motor vehicle use, particularly non-highway legal vehicle use, on the San Bernardino National Forest in order to address the changes in vehicle use and resource conditions. Improvements to the system will be developed from existing National Forest System (NFS) trails; NFS maintenance level (ML) -1, -2, and -3 system roads, and Non-NFS (unauthorized) routes identified in SBNF Route Inventory finalized in 2006. SBNF ML-3, -4, and -5 surfaced system roads subject to the Federal Highway Safety Act are currently designated open to licensed motor vehicles and are already part of this forest-wide system.

Improvements to the designated route system shall achieve the following purposes:

## Compliance with the National Travel Management Rule

- In designating NFS roads, trails, and areas on NFS lands for motor vehicle use, the responsible official shall consider effects on NFS natural and cultural resources; public safety; provision of recreation opportunities; access needs; conflicts among uses of NFS lands; the need for maintenance and administration of roads, trails, and areas that would arise if the uses under consideration are designated; and the availability of resources for that maintenance and administration;
- Minimize damage to soil, watershed, vegetation, and other forest resources;
- Minimize harassment of wildlife and significant disruption of wildlife habitats;
- Minimize conflicts between motor vehicle use and existing or proposed recreational uses of NFS lands or neighboring Federal lands;
- Consider compatibility of motor vehicle use with existing conditions in populated areas, taking into account sound, emissions, and other factors;
- Consider the speed, volume, composition, and distribution of traffic on roads;
- Consider the compatibility of vehicle class with road geometry and road surfacing;
- Recognize valid existing rights of access and the rights of use of NFS roads and trails under 36 CFR part 212.6(b); and
- NFS roads, trails, and areas on NFS lands in wilderness areas or primitive areas shall not be designated for motor vehicle use, unless, in the case of wilderness areas, motor vehicle use is authorized by applicable enabling legislation for those areas.

## Compliance with Standards in the SBNF LMP, September 2005

Numerous goals, strategies, and standards apply to the designation and use of routes for motor vehicles. However, the following standards are those directly applicable to the purpose and need for this proposal and apply forest wide.

- **SBNF LMP, Part 1, Goal 3.1, pp 34-35: 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. Facilities that provide access to the OHV system are developed in conjunction with the development of the overall OHV system. Conflicts between OHV enthusiasts and other recreationists with private lands, and homeowners adjacent to national forest land and with resource issues are addressed and resolved in a timely manner. Resolutions are consistent with area objectives and management direction.**
- **SBNF LMP, Part 2, TRANS 1 - Transportation Management, p. 149: 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.
- SBNF LMP, Part 3, S34, p 8: Where a threatened, endangered, proposed, candidate, or sensitive species occurs in a recreation site or area, take steps to avoid or minimize negative impacts to the threatened, endangered, proposed, candidate or sensitive species and its habitat. Use the least restrictive action that will effectively mitigate adverse impacts to the species and habitat (refer to Appendix D).
- SBNF LMP, Part 3, S35, pp. 8-9: Manage dispersed recreation activities to ensure that environmental sustainability is maintained by utilizing the following measures:
  - Motorized and non-motorized vehicle travel is restricted to National Forest System roads and trails and limited areas that are designated for vehicle use.
- **SBNF LMP, Part 3, S50, p. 11: Mitigate negative long-term impacts from recreation use to soil, watershed, riparian or heritage resources (refer to Appendix D-Adaptive Mitigation for Recreation Uses)**

**Consistency with the USDA Forest Service National Strategic Plan Fiscal Years 2004-2008**

- SBNF LMP, Part 1, p. 51, National Strategic Goal 3: Provide high-quality outdoor recreational opportunities on forests and grasslands, while sustaining natural resources, to help meet the Nation's recreational demands.
  - Improve public access to NFS land and water and provide opportunities for outdoor health-enhancing activities.
  - Improve the management of off-highway vehicle use to protect natural resources, promote safety of all users, and minimize conflicts among various uses through the collaborative development of locally based travel management plans.

**Consistency with the Memorandum of Intent (MOI) Between USDA Forest Service and Off-Highway Motor Vehicle Recreation Commission, and Division of Off-Highway Motor Vehicle Recreation of the Department of Parks and Recreation for the State of California**

- Designate OHV roads, trails, and specifically defined open areas for motorized wheeled vehicles on maps of 19 National Forests in California; and
- Improve management of OHV use on NFS lands in California by accomplishing the following: (3) designated roads, trails, and specifically defined open areas for OHV use.

### **Decision to Be Made**

Given the purpose and need, the responsible official will decide whether to adopt and implement the proposed action, an alternative to the proposed action, or take no action to:

- designate a portion of the inventoried unclassified routes on the San Bernardino National Forest for public motor vehicle use,
- assign the type of use(s) and season(s) of use allowed on each newly designated road and trail or portion thereof, and
- make other improvements to the designated system.

New designations and prohibitions will be implemented upon their publication in the Motor Vehicle Use Map (MVUM).

The following are not affected by this decision and are outside the scope of the project: (1) Licensed vehicle use of NFS Maintenance Level 4 and 5 roads subject to the Federal Highway Safety Act, as well as State and county roads; (2) snowmobiles; (3) aircraft; (4) watercraft; (5) non-motorized uses (e.g. hiking, equestrian); (6) search and rescue operations; (7) firefighting and other emergency incident operations; (8) law enforcement operations; (9) special events (event only trails); (10) authorized uses (e.g. livestock herding/ fence maintenance); (11) administrative access; (12) government contractors (e.g. construction and service contractors); (13) access by wheelchairs (motorized or non-motorized); (14) legal ingress and egress to private land; (15) the designation of inventoried roadless areas or proposed wilderness additions; (16) restoration of unauthorized routes, except for limited segments done in conjunction with changes to the system, or where existing analysis can be incorporated from previous project efforts. The Forest will continue to target areas of unauthorized routes for restoration subject to separate project level analysis and available funding; (17) the project area currently being studied under the Baldy Mesa Recreation Trails project, and (18) significant changes to SBNF LMP land use allocations.

### **Proposed Action**

The proposed action is to designate changes to the SBNF transportation system through

- incorporation of some unauthorized routes (URs) and staging areas into the official transportation system;
- restoration of some URs, reclassification of existing, designated system routes;
- permanent designation of some routes that were previously established as temporary designations;
- construction of some short (less than 0.5 mile) segments of 50" wide routes, and construction of two OHV staging areas; and
- decommissioning of some system routes.

This proposed action results in an addition of 56 miles of system routes open to green/red sticker vehicle use, a removal of 25 miles of system routes open to green/red sticker vehicle use (some of which is already closed to public access), a removal of 57 miles of system routes open to highway legal vehicles (most of which is already closed

to public access), designation of five staging areas, and restoration of approximately 67 miles of unauthorized routes.

The project study area includes the entire San Bernardino National Forest. The proposed action, however, includes only the following topographic quad maps: Big Bear City, Butler Peak, Cajon, Cucamonga, Fawnskin, Lake Arrowhead, Lake Fulmor, Idyllwild, Moonridge, Mount Baldy, Onyx Peak, Rattlesnake Canyon, San Bernardino North, and Silverwood Lake. None of the proposed changes occurs in an Inventoried Roadless Area.

Specifically, the Forest Service proposes to make the following changes to the transportation system. Detailed maps are available on the project website at <http://www.fs.fed.us/r5/sanbernardino/projects/ohv.shtml>.

**Unauthorized Routes (URs)**

- Adding Unauthorized Routes for green/red sticker vehicles up to 50” wide. The following URs would be added to the SBNF transportation system and designated as open for motorized green/red sticker vehicles up to 50” wide:

District	Route Identifier	Approximate Mileage
Front Country	Cleghorn Ridge fuelbreak (along 2N47)	3.88
Mountaintop	Pilot Rock Ridge route (along 2N33)	3.99
	U2000 (Connection between 3N03 and 3N07Y)	0.11
	U10039	0.21
San Jacinto	None	0.00
TOTAL		8.19

- Adding Unauthorized Routes for highway legal vehicles. The following URs would be added to the SBNF transportation system and designated as open to highway legal vehicles:

District	Route Identifier	Approximate Mileage
Front Country	None	0.00
Mountaintop	None	0.00
San Jacinto	U2938	0.30
TOTAL		0.30

- Adding Staging Areas – The following OHV staging areas would be added to the SBNF transportation system. The majority of these are user-created and do not require new construction:

District	Route Identifier	Approximate Acreage
Front Country	Summit staging area (off Hwy 138 and 3N22)	3

Mountaintop	Miller Canyon (new construction to move existing one out of riparian area)	3
	Big Pine Flats	3
	Crab Flats	3
San Jacinto	Vista Grande off of 4S06 (new construction)	3
TOTAL		15

- Restoration of Unauthorized Routes. The following unauthorized routes would be closed and restored to natural habitats using a variety of methods. These routes would be closed to vehicle travel only and restored to natural condition by using a combination of methods, including subsoiling (a decompaction technique) with equipment, disguising with slash, reseeding, planting, and placement of barriers such as boulders or fencing. Use by hikers will continue to be permitted. The type of method would depend on the topological, geological, and natural resource conditions present for each unauthorized route.

District	Route Identifier	Approximate Mileage
Front Country	Portions of X2W47 (Cleghorn Ridge fuelbreak)	2.12
Mountain Top	Routes identified in a legal settlement agreement through the Southern California Conservation Strategy where field surveys are already complete (S. Baldwin Ridge, Arrastre/ Union Flat, Broom Flats, Holcomb Valley, Cactus Flats, Sugarloaf)	65.0
San Jacinto	None	0.00
TOTAL		67.12

### Forest System Routes

- Reclassification for green/red sticker vehicles up to 50" wide. The following Forest System roads would be reclassified to allow motorized green/red sticker vehicles up to 50" wide, pending outcome of a mixed use analysis:

District	Route Identifier	Approximate Mileage
Front Country	None	0.00
Mountaintop	3N03 between east end of Cactus Flats loop to 3N03F (through Lone Valley)	2.48
	3N03, south of 3N03F (Cactus Flats - currently a temporary designation)	3.39
	2N02 (Cactus Flats - currently a temporary designation)	3.59
	2N71Y (Cactus Flats - currently a temporary designation)	1.33
	2N69Y (Cactus Flats - currently a temporary designation)	0.21
	2N61Y (Cactus Flats - currently a temporary designation)	3.31
	2N89Y (Cactus Flats - currently a temporary designation)	0.25

	2N01 (Cactus Flats - currently a temporary designation)	0.43
	2N31Y (Crab Flats)	0.57
	3N14 between 3N59 and Forest boundary	1.76
	3N14 between Big Pines and 4N16	5.22
	3N14 (portion that is currently a temporary designation between 3N59 and 4N16)	2.25
	3N16 between Big Pines and 3N17	3.37
	3N16 (currently a temporary designation between Crab Flats and Big Pine Flats)	3.26
	4N16 between 3N17 and Forest boundary	0.55
	4N16 (currently a temporary designation between 3N14 and 3N17)	1.28
	3N56	0.20
	3N59A (currently a temporary designation)	1.86
	2N25 (Rouse Meadow Road)	1.19
	2N75 (Ash Meadows Road)	1.55
	3N34 (portion south of 3N34X)	1.78
	2N02 from 2N61Y to Forest boundary	1.67
	2N90 to Tip Top	1.68
San Jacinto	4S06 (Indian Creek Road)	6.20
	4S19 (Angelus Hill, aka Poppet Divide Road)	2.58
TOTAL		51.96

- Widening for green/red sticker vehicles up to 50" wide. The following Forest System routes would be reclassified and widened from non-highway legal motorcycle (20" wide) to green/red sticker ATV trail (50" wide):

District	Route Identifier	Approximate Mileage
Front Country	None	0.00
Mountaintop	2W01 between Devil's Hole and Carbine Flats	2.52
San Jacinto	None	0.00
TOTAL		2.52

- Decommissioning. The following Forest System roads would be decommissioned (removed from the SBNF transportation system and stabilized/restored to a more natural state):

District	Route Identifier	Approximate Mileage
Front Country	None	0.00
Mountaintop	3N95 (currently no public access)	3.43
	3N98 (portion south of 3N99 junction – currently no public access)	2.25
	3N99 (portion south of 3N98 junction – currently no public access)	1.33
	3N14D	0.43
	Admin 1 and Admin 2 trails (east of North	0.53

	Shore Work Center)	
	2N25Y (Rouse Meadow)	0.62
	3W12 south end	1.32
	3W13 south of 2N28Y	0.28
	3W12 north end to 3N34	0.34
	3W13, south of 3N34	0.43
	2N26 (North Shore Lake Arrowhead)	0.97
	2N26A	0.14
	3N11 (portion north of 3N17)	1.09
	2N64Y	0.96
	2N20Y (Sugarloaf)	0.42
	2N60Y (Sugarloaf)	0.45
	2N14Y (Sugarloaf)	1.07
	2N15Y (Sugarloaf)	0.79
	2N19Y	0.58
	3N96	0.60
San Jacinto	None	0.00
TOTAL		18.03

- Reclassification for highway legal vehicles only. The following Forest System routes would be reclassified to no longer permit motorized green/red sticker vehicles up to 50" wide, but they would remain open to highway legal vehicles:

District	Route Identifier	Approximate Mileage
Front Country	3N22 from Summit staging area to Hwy 138	0.47
	3N53 (along railroad)	3.59
	2N30 (to Marshall Peak)	2.90
	2N40 (Cloudland truck trail to Marshall Peak)	6.39
Mountaintop	3N10 (John Bull Trail)	5.44
	2N28Y (from 2N29Y west to Bampf Rd.)	0.47
	4,000 foot road (2N59, 2N43, 2N42/2N03, 2N13Y, 2N63) (already managed as highway legal only)	5.67
San Jacinto	None	0.00
TOTAL		24.93

- Reclassification for administrative use only. The following Forest System routes would be reclassified as administrative routes and designated for administrative use only. These roads will be gated and closed to the public. They will be maintained only on an as needed basis to a level that can be driven by FS fire vehicles. Note: most of these are already gated and closed to the public so there is little loss of existing use.

District	Route Identifier	Approximate Mileage
Front Country	3N66 (Little Horsethief)	1.16
	3N66A	1.11
	1N35, ½ mi. west of Cucamonga Crossing to Forest boundary	0.42
	1N34 east of Day Canyon	7.73

	2N87	3.07
	2N49A	1.40
	3N44/ 3N44A	3.21
Mountaintop	2N47A	1.35
	2N12X (Green Valley to Crab Flats)	0.54
	2N12 (portion, to Crab Flats)	0.63
	3N03D	0.66
	3N59B (Lion Canyon)	2.66
	3N41 (Little Pine Flats)	0.45
	2N06Y	0.56
	2N09C (Holcomb Valley)	1.65
	2N07	0.23
	3N38B	1.00
	2N61B	1.67
	1N03	1.30
	1N04A	0.78
	2N92	2.04
	2N48Y (Sugarloaf)	0.96
	2N48YA (Sugarloaf)	0.30
	2N27A	0.43
	2N77	0.92
	2N46Y	1.33
	2N93A	0.37
	2N96 (north of North Shore Campground)	1.09
	3W12	0.44
	2N18Y (Sugarloaf)	0.81
San Jacinto	None	0.00
TOTAL		40.27

- Reclassification for authorized use only. The following Forest System routes would be reclassified as routes under special use permits or mining plans for specific purposes. These include access routes for commercial uses, private lands, ROWs, easements, mining claims, etc. These routes will be maintained by a permittee and access is generally restricted to the permittees, for uses outlined in their Special Use Permits or mining Plans of Operations with the SBNF. Note: all of these routes are already closed to public access so there is no loss of access.

District	Route Identifier	Approximate Mileage
Front Country	None	0.00
Mountaintop	3N54	4.46
	3N87	1.31
	3N88	6.79
	3N88A	0.30
	3N88B	1.07
San Jacinto	None	0.00
Total		13.93

- New Construction. The following routes would be constructed for green/red sticker use up to 50 " wide and added to the transportation system to create necessary linkages.

District	Route Identifier	Approximate Mileage
Front Country Mountaintop	None	0.00
	Connection between 3W12 and 3W13	0.05
	Reroute portion of 3W13 south of 3N34 to avoid archaeological impacts	.27
	Bypass difficult curve on 3W14 near sewage treatment plant for consistency with designation as an easy route	0.17
	Admin use only link between North Shore Work Center and 2N25	0.23
San Jacinto	None	0.00
Total		0.72

**APPENDIX B  
Watchlist Animals for SBNF**

COMMON NAME	LATIN NAME	OCCURRENCE INFORMATION*			HABITAT TYPE**
		Mountaintop	Front Country	San Jacinto	
Springsnails	<i>Pyruglopsis sp.</i>	Y	Y	L	aq – seeps and springs
simple hydrophorus diving beetle	<i>Hydrophorus simplex</i>	Y	?	?	aq
greenest tiger beetle	<i>Cicindela tranquebarica viridissima-</i>	?	P	Y - Hemet	r, w
Dorhn's elegant eucnemid beetle	<i>Palaeoxenus dorhni</i>	Y	Y	Y	mc
Pratt's blue butterfly	<i>Euphilotes enoptes cryptorufes</i>	N	N	Y	
San Bernardino Mountains silk moth	<i>Coloradia velda</i>	Y	N	N	wo (pj), mc
August checkerspot butterfly	<i>Euphydryas editha augustina</i>	Y	N	N	mc
bicolored rainbeetle	<i>Pleocomma bicolor</i> )	Y – endemic to Crestline, BlueJay, Arrowhead	N	N	mc, wo (oaks)
California diplectronan caddisfly	<i>Diplectrona californica</i>	N	Y	N	aq
Dammer's blue butterfly	<i>Euphilotes enoptes dammersi</i> )	N?	Y?	N?	wo (pj), Pebble plain
(Baldwin Lake) blue butterfly	Baldwin Lake <i>Euphilotes enoptes</i> near <i>dammersi</i> ssp.	Y	N	N	Pebble plain
(Arrastre Creek) blue butterfly	Arrastre Creek <i>Euphilotes enoptes</i> near <i>dammersi</i> ssp.	Y	N	N	Pebble plain
Andrew's marble butterfly	<i>Euchloe hyantis andrewsi</i>	Y	N	N	m, r

vernal blue butterfly (Coxey Meadow)	<i>Euphilotes baueri (battoides) vernalis</i>	Y	N	N	Pebble plain
San Gabriel Mountains blue butterfly	<i>Plejebus saepiolus aureolus</i>	N	P	N	m
San Gabriel Mountains elfin	<i>Incisalia mossii hidakupa</i>	N	?	N	rk, on <i>Sedum spathulifolium</i>
Ehrlich's checkerspot butterfly	<i>Euphydryas editha ehrlichi</i>	Y	N	N	d, c, Pebble plain
desert monkey grasshopper	<i>Psychomastax deserticola</i>	Y	N	N	d, wo (pj)
Monterey ensatina salamander	<i>Ensatina eschscholtzii eschscholtzii</i>	Y	Y	L	wo (oaks), mc, r
arboreal salamander	<i>Aneides lugubris</i>	N	Y	Y	wo (oaks), c, r
garden slender salamder	<i>Batrachoseps major</i>	N	Y	P	r, wo, g, meadow, c
Red spotted toad	<i>Bufo punctatus</i>	Y	L	P	r
western spadefoot toad	<i>Spea hamondii</i>	N	Y	Y	w, r
common chuckwalla	<i>Sauromalus obesus</i>	Y	N	Y	d, wo (pj)
granite night lizard	<i>Xantusia henshawi</i>	P	P - maybe SG Pass	Y – Indian Vista	rk,
Desert night lizard	<i>Xantusia vigilis</i>	P	P	Y	d
Collared lizard	<i>Crotaphytus vestigium</i>	Y	Y	Y	d
Zebra-tail lizard	<i>Callisaurus draconiodes rhodostictus</i>	L	Y	Y	d, sandy washes
Coronado skink	<i>Eumeces skiltonianus interparietalis</i>	N	P – SG Pass	Y	c, wo, r, mc – sea level to 1675 meters
Belding's orange-throated whiptail	<i>Aspidoscelis hyperthrus beldingi</i>	N	Y	N	w, rk, c, wo (oaks)

coast patch-nosed snake	<i>Salvadora hexalepis virgultea</i>	L	Y	Y	c, d, w, rk, coastal sage, alluvial fan scrub
mountain garter snake	<i>Thamnophis elegans elegans</i>	Y	Y	N	m, r
red diamond rattlesnake	<i>Crotalus ruber ruber</i>	N	Y	Y	c, wo, d, rk
southwestern speckled rattlesnake	<i>Crotalus mitchellii pyrrhus</i>	L	Y	Y	c, wo, d, rk
common snipe	<i>Gallinago gallinago</i>	Y	P	Y	m, aq
white-faced ibis	<i>Plegadis chihi</i>	Y	U	Y	aq
American bittern	<i>Botaurus lentiginosus</i>	P	P	Y	aq
western least bittern	<i>Ixobrychus exilis hesperis</i>	L	P	Y	aq
turkey vulture (breeding)	<i>Cathartes aura</i>	Y	Y	Y	a, g, c, wo, d, rk
osprey	<i>Pandion haliaetus</i>	Y	P	Y	aq, r
white-tailed kite	<i>Elanus leucurus</i>	Y	Y	Y	r, wo
northern harrier	<i>Circus cyaneus</i>	Y	Y	Y	g, m
sharp-shinned hawk (breeding)	<i>Accipiter striatus</i>	Y	Y	Y	r, mc
Cooper's hawk (breeding)	<i>Accipiter cooperii</i>	Y	Y	Y	r, mc
zone-tailed hawk	<i>Buteo albonotatus</i>	Y	Y	Y (nest @ SJ in Santa Rosa Mtn)	mc, wo (pj)
ferruginous hawk	<i>Buteo regalis</i>	Y	Y	Y	g, d
golden eagle	<i>Aquila chrysaetos</i>	Y	Y	Y	g, d, wo (pj, oak)
merlin	<i>Falco columbarius</i>	Y	Y	Y	g, mc
prairie falcon	<i>Falco mexicanus</i>	Y	Y	Y	g, d
mountain quail	<i>Oreortyx pictus</i>	Y	Y	Y	mc, wo, r
band-tailed pigeon	<i>Columba fasciata</i>	Y	Y	Y	mc, wo

Western yellow-billed cuckoo	<i>Coccyzus americanus occidentalis</i>	U	P	P	r
flammulated owl	<i>Otus flammeolus</i>	Y	Y	Y	mc
western screech owl	<i>Otus kennicottii</i>	Y	Y	Y	r, mc, wo
northern pygmy owl	<i>Glaucidium gnoma</i>	Y	Y	Y	r, mc, wo
burrowing owl	<i>Athene cunicularia hypogaeae</i>	P	Y	Y	d
long-eared owl	<i>Asio otus</i>	Y	Y	Y	r, mc
northern saw-whet owl	<i>Aegolius acadicus</i>	Y	Y	Y	wo, mc, pine
common nighthawk	<i>Chordeiles minor</i>	Y	P	U	a, pine, mc
whip-poor-will	<i>Caprimulgus vociferus</i>	Y	Y	Y	wo, mc
black swift	<i>Cypseloides niger</i>	Y	Y	Y	a, r (waterfalls)
calliope hummingbird	<i>Stellula calliope</i>	Y	Y	Y	r
Lewis' woodpecker	<i>Melanerpes lewis</i>	Y	Y	Y	wo (oak), r
Williamson's sapsucker	<i>Sphyrapicus thyroideus</i>	Y	Y	Y	mc
Nuttall's woodpecker	<i>Picoides nuttallii</i>	Y	Y	Y	r, c, wo, mc
southern white-headed woodpecker	<i>Picoides albolarvatus</i>	Y	Y	Y	mc
gray flycatcher	<i>Empidonax wrightii</i>	Y	P	P	wo (pj), c
California horned lark (breeding)	<i>Eremophila alpestris actia</i>	Y	Y	Y	g, d
purple martin	<i>Progne subis</i>	Y	Y	Y	a, r, mc, wo
tree swallow	<i>Tachycineta bicolor</i>	Y	Y	Y	a, r, wo, mc
pinyon jay	<i>Gymnorhinus cyanocephalus</i>	Y	Y	Y	wo (pj), mc
oak titmouse	<i>Parus inornatus</i>	Y	Y	Y	c, mc, r, wo
American dipper	<i>Cinclus mexicanus</i>	Y	Y	Y	streams
Swainson's thrush	<i>Catharus ustulatus</i>	Y	Y	Y	r, mc
hermit thrush (breeding)	<i>Catharus guttatus</i>	Y	Y	P	pine, mc
Bendire's thrasher	<i>Toxostoma bendirei</i>	Y	N	N	c, wo, r, d
LeConte's thrasher	<i>Toxostoma lecontei</i>	Y	Y	P	d
American pipit (water pipit)	<i>Anthus rubescens</i>	Y	Y (San	P	alpine, talus

(breeding)			Gorgonio )		& sand slopes
loggerhead shrike	<i>Lanius ludovicianus</i>	Y	Y	Y	c, wo, r, d, mc
gray vireo	<i>Vireo vicinior</i>	Y	Y	Y	wo (pj), ch
Cassin's vireo (solitary)	<i>Vireo cassinii</i>	Y	Y	Y	mc, wo (oak), r
plumbeus vireo (solitary)	<i>Vireo plumbeus</i>	Y	P	P	wo (pj), mc
warbling vireo	<i>Vireo gilvus</i>	Y	Y	Y	r, wo, mc
Virginia's warbler (breeding)	<i>Vermivora virginiae</i>	Y	P	N	wo (pj), c
yellow warbler	<i>Dendroica petechia brewsteri</i>	Y	Y	Y	mc, wo, r
MacGillivray's warbler	<i>Oporornis tolmiei</i>	Y	Y	Y	r, m
common yellowthroat	<i>Geothlypis trichas</i>	Y	Y	Y	r
Wilson's warbler	<i>Wilsonia pusilla</i>	Y	Y	Y	r
yellow-breasted chat	<i>Icteria virens</i>	P	Y	P	r
hepatic tanager	<i>Piranga flava</i>	Y	Y	Y	wo
summer tanager	<i>Piranga rubra</i>	P	Y	Y	r
southern California rufous-crowned sparrow	<i>Aimophila ruficeps canescens</i>	Y	Y	Y	c
black-chinned sparrow	<i>Spizella atrogularis</i>	Y	Y	Y	d, c, wo (pj)
Bell's sage sparrow	<i>Amphispiza belli belli</i>	Y	Y	P	c
Lincoln's sparrow	<i>Melospiza lincolni</i>	Y	Y	N	r, mc, wo
tri-colored blackbird	<i>Agelaius tricolor</i>	Y	P	Y	r, m
Lawrence's goldfinch	<i>Carduelis lawrencei</i>	Y	Y	Y	r, c
Yuma myotis	<i>Myotis yumanensis</i>	Y	Y	Y	d, wo
long-eared myotis	<i>Myotis evotis</i>	Y	Y	L	c, wo, mc
fringed myotis	<i>Myotis thysanodes</i>	Y	Y	Y	r, wo, m, g, mc
long-legged myotis	<i>Myotis volans</i>	Y	Y	L	wo, mc, c
occult little brown bat	<i>Myotis lucifugus</i>	L	N	Y	c, m, g, wo
western small-footed myotis	<i>Myotis ciliolabrum</i>	Y	Y	L	wo, r, mc

spotted bat	<i>Euderma maculatum</i>	L	L	L	d, rk
pocketed free-tailed bat	<i>Nyctinomops femerosaccus</i>	L	N	Y	wo (pj), d
western mastiff bat	<i>Eumops perotis californicus</i>	Y	Y	Y	mc, wo, c, g, d, u
San Diego black-tailed jackrabbit	<i>Lepus californicus bennettii</i>	Y	Y	Y	c, wo
golden-mantled ground squirrel	<i>Spermophilus lateralis bernardinus</i>	Y	Y	N	mc, rk
lodgepole chipmunk	<i>Tamias speciosus speciosus</i>	Y	Y	H	mc
San Diego pocket mouse	<i>Chaetodipus fallax fallax</i>	N	Y	Y	d, c
southern grasshopper mouse	<i>Onychomys torridus ramona</i>	P	L	Y	d, c
San Diego desert woodrat	<i>Neotoma lepida intermedia</i>	N	Y	Y	d, c, rk
porcupine	<i>Erethizon dorsatum</i>	Y	H	N	mc, wo
ringtail	<i>Bassariscus astutus</i>	Y	Y	Y	mc, wo, rk, r
American badger	<i>Taxidea taxus</i>	Y	Y	Y	wo, mc, c, d, g
western spotted skunk	<i>Spilogale gracilis</i>	P	P	P	mc, wo, r, c
mountain lion	<i>Felis concolor</i>	Y	Y	Y	mc, wo, c, d
Nelson's bighorn sheep	<i>Ovis canadensis nelsoni</i>	Y	Y	N	c, d, rk, wo (pj), mc,