

Roadless and Special Areas

This section describes the affected environment and the environmental consequences for Roadless and Special Areas. Roadless Areas are Inventoried Roadless Areas identified in the second Roadless Area Review and Evaluation (RARE II). Special Areas are Forest Plan management-area land allocations that include Research Natural Areas (RNA), Special Interest Areas (SIA), Wild and Scenic Rivers and Proposed Wild and Scenic Rivers, and Wilderness and Proposed Wilderness (USDA 2005a).

Analysis Framework: Statute, Regulation, LRMP, and Other Direction

The Forest Service conducted RARE II from 1977 to 1979, studying 201,600 acres on the Modoc National Forest for their Wilderness values. The California Wilderness Act of 1984 designated 70,385 of those acres as Wilderness, released about 201,600 acres for non-wilderness uses and identified one “further planning area” named Raider Basin (6,481 acres) for more study and future consideration as Wilderness. Since that time, Raider Basin has been designated as an RNA in the Wilderness area.

Effects Analysis Methodology

This analysis focuses on how each alternative would affect Inventoried Roadless Areas (IRAs) and Citizen-Inventoried Roadless Areas (CIRAs), and their characteristics on the Modoc National Forest. Roadless and special indicators identified in the 2001 Roadless Area Conservation Rule are listed below, along with the data sources and assumptions specific to Roadless and Special Areas.

Data Sources

- MDF Land and Resource Management Plan (LRMP)
- MDF GIS - Special Area Layers for IRAs, SIAs, RNAs, and Wild and Scenic Rivers
- GIS Layer - Citizen Inventoried Roadless Areas (Submitted by the Wilderness Society)
- MDF GIS Layer for National Forest Transportation System (NFTS) and proposed unauthorized routes

Assumptions Specific to Roadless and Special Areas

- All of the unauthorized routes considered for motorized use are currently available for motorized use because nothing prohibits such use. The effect of this motorized use is part of the existing situation.
- Actions proposed within Wilderness comply with Wilderness designations and the California Wilderness Act of 1984. Designated Wilderness is not affected by the proposed action or any alternative; motorized activity is prohibited in those areas under all alternatives.
- Outside of designated Wilderness, no forest order prohibiting motorized use or cross-country travel is in effect within Roadless and Special Areas.

Roadless Area Indicators

The environmental consequences described for the alternatives below identify only the individual roadless and Special Areas affected by that alternative using the following indicators.

Roadless Area Characteristics: The following values or features often characterize Inventoried Roadless Areas (66 Federal Register 9, January 12, 2001; p. 3245):

High-quality or undisturbed soil, water, and air: These three key resources are the foundation upon which other resource values and outputs depend. Healthy watersheds catch, store, and safely release water over time, protecting downstream communities from flooding; providing clean water for domestic, agricultural, and industrial uses; helping maintain abundant and healthy fish and wildlife populations; and form the basis for many forms of outdoor recreation.

Sources of public drinking water: National Forest System lands contain watersheds that are important sources of public drinking water. Maintaining these areas in a relatively undisturbed condition saves downstream communities millions of dollars in water filtration costs.

Diversity of plant and animal communities: Roadless areas are more likely than roaded areas to support greater ecosystem health, including the diversity of native and desired non-native plant and animal communities due to the absence of disturbances caused by roads and accompanying activities. Inventoried roadless areas also conserve native biodiversity by serving as a bulwark against the spread of non-native invasive species.

Habitat for threatened, endangered, proposed, candidate, and sensitive species and for those species dependent on large, undisturbed areas of land: Roadless areas function as biological strongholds and refuges for many species.

Primitive, Semi-Primitive Non-Motorized, and Semi-Primitive Motorized recreation opportunities: Roadless areas often provide outstanding dispersed recreation opportunities such as hiking, camping, hunting, fishing, nordic skiing, and canoeing. While they may have many wilderness-like attributes, unlike Wilderness, mountain bikes and other mechanized uses are often allowed.

Reference landscapes: Knowledge about the effects of management activities over long periods of time and on large landscapes is very limited. Reference landscapes of relatively undisturbed areas serve as a barometer to measure the effects of development on other parts of the landscape.

Natural appearing landscapes with high scenic quality: High-quality scenery, especially scenery with natural-appearing landscapes, is a primary reason that people choose to recreate.

Traditional cultural properties and sacred sites: Traditional cultural properties are places, sites, structures, art or objects that played an important role in the cultural history of a group. Sacred sites are places with special religious significance to a group. Traditional cultural properties and sacred sites may be eligible for protection under the National Historic Preservation Act. However, many of them have not yet been inventoried, especially those that occur in Inventoried Roadless Areas.

Other locally identified unique characteristics: Roadless areas may offer other locally identified unique characteristics and values. Examples include uncommon geological formations, valued for their scientific and scenic qualities, or unique wetland complexes.

Special-Area Indicators

Research Natural Area Values: RNA values are specific to each RNA and may include selected aquatic, geologic, or vegetative elements.

Special Interest Area Values: SIA values are specific to each SIA and may include unique botanical, cultural, geologic, scenic, historical, and memorial features.

Wild and Scenic River Values: For a river to be eligible for Wild and Scenic River designation, it must be free-flowing and, with its adjacent land area, must possess one or more outstandingly remarkable values (Federal Register 1982). For the purpose of this analysis, Wild and Scenic River or Outstandingly Remarkable (OR) values are interchangeable. OR values are specific to each river segment any may include cultural, ecological, fish, geological, historical, scenic, recreational, wildlife, or other special and unique features (USDA 1991b).

Wilderness Characteristics

The principal Wilderness characteristics, as described in Forest Service Handbook (FSH) 1909.12, that follow are generally, but not necessarily, listed in order of importance or desirability (USDA 2007).

Natural

Ecological systems are substantially free from the effects of modern civilization and generally appear affected primarily by forces of nature. Effects of modern civilization are—

- The presence of non-native species that alter the composition of natural plant and animal communities (such as non-native plants, animals, fish, livestock, invertebrates, and pathogens)
- Developments that degrade the free-flowing condition of rivers and streams (such as dams or other water diversions and impoundments).
- The presence of light pollution that degrades night sky quality and night sky quality related values
- The presence of pollutants that degrade water quality; and,
- The health of ecosystems, plant communities, and plant species that are rare or at risk.

Undeveloped

The degree to which the area is without permanent improvements or human habitation. A measure of undeveloped is the level of human occupation and modification including evidence of structures, construction, habitations, or other forms of human presence, use and occupation.

Outstanding Opportunities for Solitude or Primitive and Unconfined Recreation

The area provides solitude or primitive and unconfined types of recreation, including a wide range of experiential opportunities such as physical and mental challenge, adventure and self-reliance, feelings of solitude, isolation, self-awareness and inspiration. Solitude is the opportunity to experience isolation from sights, sounds, and the presence of others from the developments and evidence of humans. The opportunity to experience isolation from the evidence of humans, to feel a part of nature, to have a vastness of scale, and a degree of challenge and risk while using outdoor skills are measures of primitive and unconfined recreation.

Special Features and Values

The area provides other values such as those with ecological, geological, scientific, educational, scenic, historical, or cultural significance. Examples include unique fish and wildlife species, unique plants or plant communities, connectivity, potential or existing research natural areas, outstanding landscape features, and significant cultural resource sites.

Roadless and Special-Areas Methodology by Action

The effects of each alternative are described below according to three actions common to all alternatives:

1. Cross-country travel: Prohibition of cross-country motor vehicle travel is included in all alternatives except Alternative 1 (No Action).
2. Additions to the NFTS: No unauthorized routes would be added to the NFTS in IRAs or Special Areas in any alternative.

3. Changes to the Existing NFTS: This includes changes to vehicle class and season of use on the existing NFTS. Impacts caused by changes to vehicle class and season of use on the existing NFTS are described generally by alternative. MDF Inventoried Roadless Areas Affected Environment Both RARE II and the California Wilderness Act of 1984 resulted in several decisions for designation, based on issues and resource values, resulting in the now 20 specific, named IRAs listed in Table 3-160, along with the Forest Plan management area allocations. The Inventoried Roadless Areas are listed in the table below.

Table 3-162. Inventoried Roadless Areas: Categories, Acres, and NFTS Road Miles

Inventoried Roadless Area (IRA)	ID# (Map)	IRA Category*	Acres	LRMP Acres +	Existing System (NFTS) Road Miles
Bear Camp Flat	1	1C	2,477	2,300	6.44
Big Canyon	2	1C, 1B	6,615	6,400	3.2
Burnt Lava Flow	3	1B	8,387	8,800	.90
Callahan Flow	4	1B, 1C	6,574	8,000	6.25
Crane Mountain (600)**	5	1C	1,255	2,400	0.27
Damon Butte	6	1C	25,022	24,700	50.85
Dobie Flat	7	1C	15,078	12,900	28.88
Dry	8	1B,1C	7,726	7,100	1.33
Hat Mountain	9	1C	9,475	9,900	25.64
Knox Mountain (200)**	10	1C	5,976	5,900	13.22
Lavas	11	1B, 1C	25,864	25,400	37.74
Mount Bidwell	12	1C	11,657	11,600	18.17
Mount Hoffman (200)**	13	1B,1C	9,780	10,800	2.35
Mount Vida (80)**	14	1B, 1C	7,770	9,100	5.99
Parsnip	15	1B, 1C	8,485	8,200	5.57
Powley	16	1C	6,268	6,200	0.26
Sears Flat (500)**	17	1C	12,957	12,500	19.51
Soldier	18	1B, 1C	10,095	9,400	4.63
Steele Swamp	19	1C	18,958	20,000	26.39
Mill	20	1C	315	315	1.04
Total*			200,734	201,600	258.63

*1B: Inventoried Roadless Area where road construction or reconstruction is not allowed

*1C: Inventoried Roadless Area where road construction or reconstruction is allowed

** Numbers in parentheses are private acres included in total acreage for the roadless area

+ Since the time the LRMP was created, GIS technology has advanced and allows for a more accurate measurement of acres. The boundaries of the IRA have not changed but the ability to measure more accurately has.

The information about the Roadless Areas is summarized from appendix E of the Modoc National Forest Land and Resources Management Plan Environmental Impact Statement (LRMP FEIS) prepared in 1991.

Review of the LRMP Roadless Areas and transportation maps indicate that the LRMP FEIS published in 1991 underestimated the number and amount of roads contained in many of the areas. In addition, the descriptions identify those areas that do not have water resources within the boundaries.

After the 1978 Roadless Area Review and Evaluation, the Forest Service recommended adding 1,940 acres to the South Warner Wilderness. On September 28, 1984, The California Wilderness Act (Public Law 98-425) amended the boundary of the South Warner Wilderness to include those recommendations and released the remaining Inventoried Roadless Areas from wilderness consideration for this planning period.

Inventoried Roadless Areas

Bear Camp Flat – 2,300 acres

Bear Camp Flat adjoins the South Warner Wilderness. The terrain is gently sloping until it approaches the Wilderness, where it steepens sharply to the ridge tops that form the boundary on the west, north, and east sides of Bear Camp Flat. Lodgepole pine, mahogany, and meadows dominate the landscape. Primary uses include hunting and cattle grazing. Current uses include livestock watering ponds and drift fences, and approximately six miles of primitive road.

Big Canyon – 6,400 Acres

Big Canyon is located in the central portion of the Forest and is bisected by the Pit River. The terrain is mountainous and extremely steep along the sides of the river. Elevations range from 4,320 feet to 5,730 feet at the summit of Noble Bluff to the west. The boundary is irregular and ill-defined. Roads surround the area.

Big Canyon to the west is a long, narrow, moderately sloped canyon, with scattered ponderosa pine with dense pockets of timber at the head of the canyon. Pit River Canyon is extremely steep, dominated by large rocky outcrops. A major feature is Hanging Rock. The east side of the canyon contains numerous steep sided draws which contain scattered, dense pockets of ponderosa pine. The canyon walls are vegetated with sagebrush and grass. Current uses include cattle grazing, hunting, and fishing.

Burnt Lava Flow – 8,800 Acres

Burnt Lava Flow is located on the western portion of the Forest and extends onto the Shasta-Trinity National Forest. The configuration is generally oval with the boundary following the lava flow.

The flow consists of a recent flow of jumbled, black lava surrounding three large islands of timber on old cinder cones that protrude above the flow, as well as several small islands of timber in depressions caused by lava dividing and flowing around them. The prominent feature is High Hole Crater at the north, a semi-barren cinder cone rising 386 feet above the flow, with a crater approximately 150 deep. Several ice caves are located at the northern edge of the flow and others probably exist in the largely unexplored interior region. Well-traveled roads are visible from most points within the area. There is no water source.

The Burnt Lava Flow was withdrawn from mineral entry in 1967, following its original classification as a Virgin Area in 1957. On May 21, 1982, the area was classified as a Geological Area by the Pacific Southwest Regional Forester. This classification requires that the area remain in as near natural condition as possible.

Callahan Flow – 8,000 Acres

The Callahan Flow is located in the northwestern portion of the Forest and rests against the south and west boundaries of the Lava Beds National Monument. The configuration is long and narrow. The north, west, and south boundaries meander along the Callahan Lava Flow.

The topography is formed by two major lava flows and is characterized by broken rough lava, gently flowing into two wavy fan shapes. The oldest flow to the north is extensively covered by native bunchgrass, while the southern area is rugged and difficult to travel. No water exists.

Current uses are principally cattle grazing, occasional sightseeing, hunting, and educational and scientific study. An historic logging railroad grade parallels the southern boundary.

Crane Mountain – 2,400 Acres

Crane Mountain is located in the north Warner Mountain Range, extending into Oregon on the Fremont National Forest. This discussion is confined to the 10 percent portion in California. The south boundary parallels the road north of Cave Lake and Lily Lake campgrounds.

The topography is steep and mountainous, ranging from 5,000 feet along the west boundary to 7,000 feet at the summit of an unnamed peak near the Oregon border.

Mixed conifer, white fir, juniper, lodgepole pine, and mountain mahogany dominate the area. Primary uses include a little cattle grazing and sightseeing. Non-conforming uses include two miles of primitive roads providing access into private property, and remnants of past gold mining activity.

Damon Butte - 24,700 Acres

Damon Butte is located in the western portion of the Forest. The area nestles between the Burlington Northern Railroad to the west and State Highway 139 to the east. Beyond the boundary to the north and south projects Timber Mountain and Damon Butte.

The terrain is defined by vast expansions of relatively rough lava. Large areas of juniper and sagebrush to the north and established timber stands to the south provide some variety. Current uses include sheep grazing, hunting, and wood gathering.

Nearly 10,000 acres of the area was burned in the 1996 Damon-Long Fire. Over 65 miles of dozer lines were established during this 23,373 acre fire, many in the Damon Butte area. Timber salvage occurred on the scattered timber stands over 2,600 acres. Much of the area is in plantations and managed for timber production. Over 48 miles of roads are contained in the area.

Dobie Flat – 12,900 Acres

Dobie Flat is located in the western portion of the Forest. The boundary runs parallel to the Southern Pacific Railroad, a 500-kilovolt power line on the east, and the Burlington Northern Railroad (BNR) on the west. The Lavas Roadless Area lies across the tracks to the west of the BNR. The terrain consists of expansive areas of flat, broken, rough lava. Grasses, interrupted by extensive stands of sagebrush and juniper, dominate the landscape. The predominant feature of the area is Casuse Mountain, a barren hill. The climate is generally windy year-round. The topography provides little available refuge. Wildfires are common.

Dry – 7,100 Acres

Dry is located in the central portion of the Warner Mountain range, adjacent to the Forest boundary, and north of the Parker Creek Road. Terrain is mountainous and steep, ranging from 5,200 feet to 6,840 feet at the summit of an unnamed peak east of Dry Creek Basin.

Vegetation consists of heavy timber in the canyons with juniper on the ridges. Primary uses include hunting and cattle grazing. Non-conforming uses include livestock ponds scattered throughout the area, and a fence which borders the private land to the north.

The area contains habitat for mule deer winter and summer range, fawning areas, and prairie falcon nest sites.

Hat Mountain – 9,900 Acres

Hat Mountain is located at the extreme southern end of the Warner Mountains adjacent to the Forest boundary. The terrain is generally mountainous, ranging from 7,000 feet to 8,700 feet at the summit. Lodgepole pine and mixed conifers, mountain mahogany, and grasses dominate the landscape.

Hunting and livestock grazing are primary uses. Non-conforming uses including livestock watering ponds, approximately 27 miles of primitive road and 2.5 miles of road providing logging truck access to a 730-acre commercial firewood cutting area.

Wildlife habitat consists of mule deer summer range and fawning areas; existing and potential goshawk habitat; potential for pileated woodpecker, osprey, and prairie falcon; and nesting and brood rearing sites for waterfowl.

Knox Mountain – 5,900 Acres

Knox Mountain is located at the southern edge of the Forest and straddles the Modoc-Lassen County line. Sears Flat Roadless Area is located to the east. The west boundary follows a ridge, but the northwest and eastern boundaries lack definition. Knox Mountain, the prominent feature, runs north and south through the central part. The eastern slopes of Knox Mountain are dominated with open stands of ponderosa pine. Wildfires are typical. The western slopes of Knox Mountain are dominated with sagebrush and scattered young juniper, with large stands of mountain mahogany.

Primary uses of the area include hunting and cattle grazing. Suitable wildlife habitat consists of summer range for pronghorn, and winter and summer range for mule deer with localized areas used for fawning.

Lavas – 25,400 Acres

Lavas is located in the western portion of the Forest. The boundary runs parallel to the Lava Beds National Monument on the west, and the BNR on the east. Dobie Flat roadless area lies across the tracks to the east of the BNR. The terrain consists of expansive areas of flat, broken, rough lava.

Grasses interrupted by extensive stands of sagebrush and juniper dominate the landscape. The climate is generally windy year-round. The topography provides little available refuge. Wildfires are common.

Primary uses of the area are sheep grazing and big-game hunting. The area provides key winter range for deer and pronghorn.

Mount Bidwell – 11,600 Acres

Mount Bidwell is located north of the Warner Mountain Range, extending into Oregon on the Fremont National Forest. This discussion is confined to the 72 percent portion in California. This roadless area is bordered on the east by the Forest boundary, and the road from Fort Bidwell to New Pine Creek forms most of the western boundary. About 620 acres of private land are located within the area.

Topography is generally mountainous and extremely steep, ranging from 5,400 feet to 8,290 feet high at the summit of Mount Bidwell, the dominant feature. Vegetation consists of lodgepole pine and

mixed conifer at higher elevations, giving way to mountain mahogany, aspen, willows, and grasses at the lower elevations.

Primary uses include hunting and livestock grazing. Non-conforming uses include fences and primitive roads. Old mining cabins, related facilities, and mine tailings are visible along the northwestern boundary.

Mount Hoffman – 10,800 Acres

Mount Hoffman is located in the western portion of the Forest to the north and northeast of Medicine Lake recreational complex. The area consists of two distinct contrasting features - forested slopes of Mount Hoffman to the west and Glass Mountain volcanic glass flow to the east. The configuration is wide and narrow and generally surrounded by primitive logging and mining roads. The western portion extends into the Klamath National Forest.

The gentle slopes of Mount Hoffman sweep upward, rising to a peak of 7,913 feet where the surrounding area, including Mount Shasta and Lassen Peak, can be viewed. Over 5,000 acres of fir, lodgepole pine, and mixed conifer cover the landscape in an unbroken pattern.

To the east, in stark contrast, is Glass Mountain, which is devoid of vegetation. Formed through the accumulation of three independent lava flows, the area displays a great mass of volcanic extrusion and a wide variety of obsidian, pumice, and minerals. Glass Mountain is a monolith reaching to 7,622 feet, the highest elevation of any lava flow in the Medicine Lake Highlands. Visitation to the area is generally confined to the exterior because of the rough, rugged lava terrain. There is no water.

Mount Vida – 9,100 Acres

Mount Vida is located on both sides of the main crest in the north Warner Mountains. It is bordered on the west by the Forest boundary and meanders in a southeasterly direction. Its configuration is long and narrow, and its boundary difficult to locate on the ground. The topography is mountainous with steep canyons. Elevations range from 5,200 feet along the western boundary to 8,200 feet at the summit, the dominant feature. Mount Vida provides an excellent vista of California, Nevada, and Oregon.

Vegetation consists of scattered mixed conifer stands at the higher elevations, giving way to sage and grasses at the lower elevations. Primary uses are cattle grazing and hiking. Non-conforming uses include livestock water developments and fences associated with grazing. The Highgrade National Recreation Trail bisects the area in a southwest to northeast direction, passing immediately west of the Mount Vida summit.

Suitable habitat for bald eagles has been identified in the area. Other habitat includes mule deer, summer and winter range, existing and potential habitat for goshawk, and potential nesting sites for prairie falcon and peregrine falcon.

Parsnip – 8,200 Acres

Parsnip is located in the southwest corner of the Warner Mountain range adjacent to the Forest boundary. Blue Lake is located just east of the area, with West Valley Reservoir to the west, outside the Forest boundary.

Terrain is gently sloping in the western portion, becoming gradually steeper in the eastern portion with elevations ranging from 5,000 feet to 7,000 feet. Vegetation consists of mixed conifer at the higher elevations, giving way to juniper and mahogany at the lower elevations.

Primary uses include hunting and cattle grazing. Non-conforming uses include livestock ponds, trails, fences, a water diversion ditch not currently in use, and four miles of primitive roads.

Portions of three cattle allotments and one special-use pasture exist within the area, producing approximately 650 AUMs annually.

Powley – 6,200 Acres

Powley is located in the north-central portion of the Warner Mountain range between Lake City Canyon on the south and Heath Creek on the north. The area is contiguous to the eastern boundary of the Forest. The community of Lake City is located to the east in Surprise Valley. The Lake City Canyon road separates this area from the Soldier Roadless Area to the south.

Situated on the eastern facing escarpment of the Warner Mountains, Powley is mountainous and extremely steep. Elevations range from 5,000 feet to 7,600 feet at the crest of the Warner Mountains.

Vegetation in the area consists of lodgepole pine, mixed conifer, white fir, and ponderosa pine at the higher elevations, giving way to bitterbrush, mahogany, sage, and grasses at the lower elevations.

Primary use is limited by the steep terrain and consists of hunting and cattle grazing. There are no physical improvements within the area.

Sears Flat – 12,500 Acres

Sears Flat is located at the southeastern edge of the Forest and straddles the Modoc and Lassen County lines. The Knox Mountain roadless area is positioned to the west. Likely Mountain and a major ridge running north and south dominate the eastern landscape.

The topography is characterized by moderate terrain dominated by sage, juniper, and mountain mahogany. Several small pockets of ponderosa pine are located in the western portion.

Primary use of the area is cattle grazing and big-game hunting.

Wildlife habitat consists of pronghorn summer range and kidding grounds, and mule deer intermediate and summer range.

Soldier – 9,400 Acres

Soldier is located in the central portion of the Warner Mountain range between Lake City Canyon on the north and Highway 299 on the south. The area is contiguous to the eastern boundary of the Forest. The communities of Lake City and Cedarville are immediately east in Surprise Valley. The Lake City Canyon Road separates this area from Powley Roadless Area to the north.

Situated on the eastern facing escarpment of the Warner Mountains, Soldier is mountainous and extremely steep. Elevations range from 5,000 feet to 8,270 feet at the summit of Bald Mountain.

Vegetation consists of lodgepole pine, mixed conifer, white fir, and ponderosa pine at the higher elevations, giving way to mountain mahogany, sage, and grasses at the lower elevations.

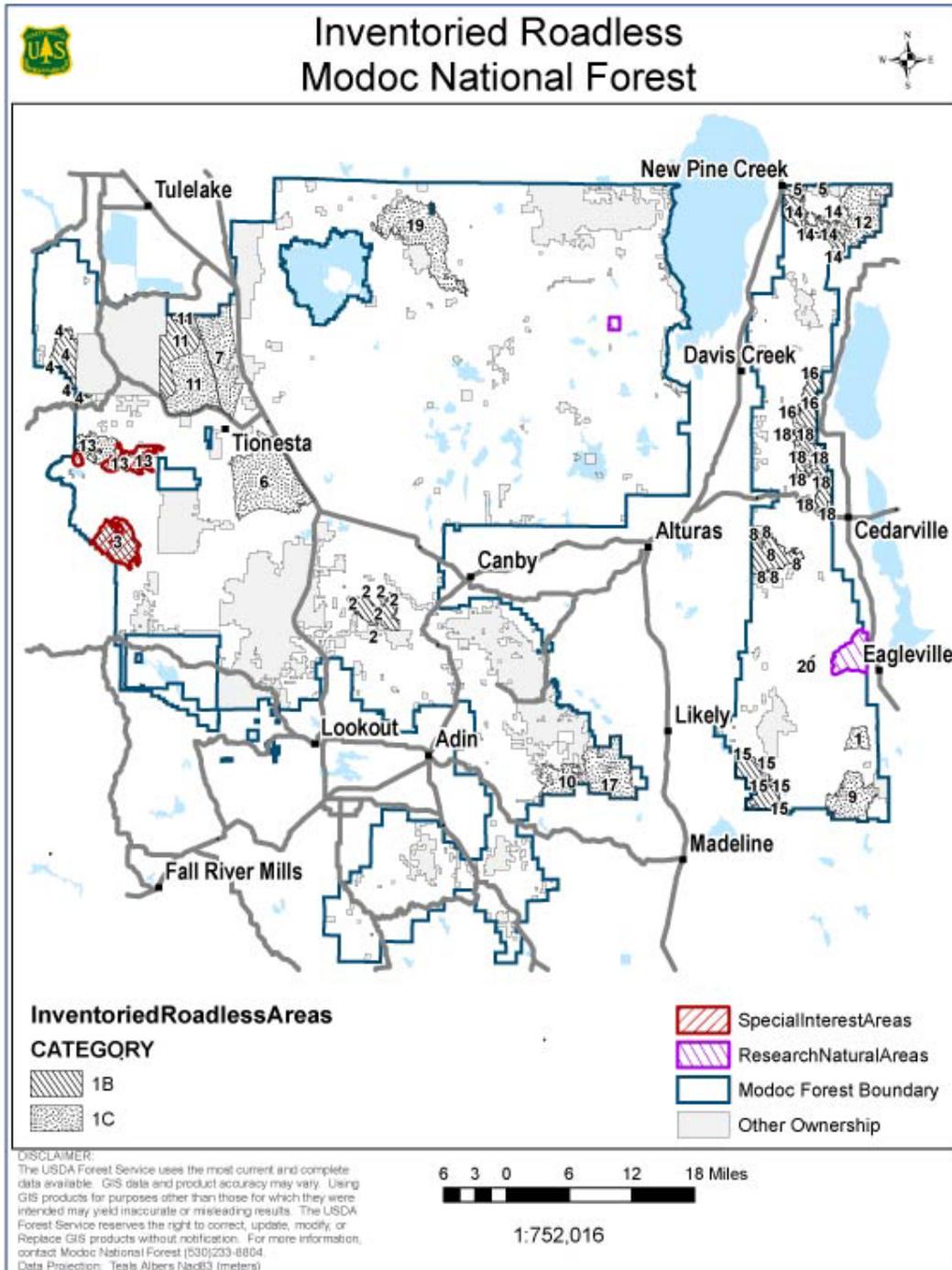
Primary use is limited by the steep terrain and consists of hunting and cattle grazing. There is evidence of past logging on some of the lower slopes (abandoned road, mill site, old stumps) but the area has almost returned to a natural state. There are no other improvements existing in the area.

Steele Swamp – 20,000 Acres

Steel Swamp is located east of Clear Lake Reservoir, approximately three miles south of the Oregon border. It is a remote area, and seldom visited except for occasional recreational hunting and livestock operations. Most of the land is open; topography is flat. Regular patterns of juniper and grass dominate the landscape. The boundary is not well defined by topographic or readily identifiable land features.

Wet meadows exist on about 30 percent of the area. Current uses in the area include livestock watering tanks, fences, an old telephone line right-of-way, and approximately 15 miles of primitive road. The historic Applegate Trail crosses the southwest portion.

Figure 3-24. Inventoried Roadless Areas on the Modoc NF



Special Areas Affected Environment

These areas consist of Research Natural Areas (RNAs), Special-Interest Areas (SIAs), Wild and Scenic Rivers, and National Natural Landmarks (NNLs). Both SIAs and NNLs are of special interest because of unusual scenic, historic, prehistoric, cultural, scientific, natural, or other values, excluding wilderness values. RNAs are designated for research, study, observation, monitoring and non-destructive, non-manipulative educational activities. They provide for genetic diversity of flora and fauna, and protection of threatened and endangered species and their habitat. There are no designated Wild and Scenic rivers on the Forest. In the Modoc Land and Resource Management Plan (LRMP) Willow and Boles Creeks were recommended for possible recommendation. Upon closer examination it was determined that these creeks are not suitable candidates for recommendation.

Size and configuration of the areas vary. Some are large, contiguous areas, while others may be isolated, small inclusions. Acreage for the Raider Basin Research Natural Area is included in the South Warner Wilderness. All of the IRAs contain existing NFTS roads. There are no proposed additions of unauthorized roads in any of the IRAs or Special Areas in any of the alternatives.

The currently designated RNA and SIA areas are as follows:

- Devil's Garden Research Natural Area
- Burnt Lava Flow Geologic Area
- Glass Mountain Lava Flow Geologic Area
- Medicine Lake Lava Flow Geologic Area
- Raider Basin Research Natural Area

LRMP Direction for Managing Special Areas

- Special Areas Management Prescription Standards and Guidelines (facilities), p. 4-81 – 1 (S): “Roads required for administrative or scientific purposes will be controlled by locked gates. Other roads will be closed or obliterated.”
- Special Areas Management Prescription Standards and Guidelines (facilities), p. 4-81 – 2 (S): “Return obliterated roads to resource production and barricade them where necessary.”
- Special Areas Management Prescription Standards and Guidelines (recreational areas), p. 4-82, 1a (G): “Sign or fence RNAs as necessary to discourage general recreational use and especially restrict off-highway vehicle use.”

Research Natural Areas

Research Natural Areas (RNAs) are typical and distinctive natural ecosystems and habitats that are generally retained in an unmodified condition. They provide unique opportunities for scientific research on plant and animal communities, and associations in environments free of human intervention. RNAs provide a baseline for comparison with ecosystems that have been disturbed. They also serve as gene pools and preserve endangered natural components of our environment.

Table 3-163. Existing Research Natural Areas and Size (in acres)

Research Natural Area	Type of RNA	Acres	Existing NFTS Road Miles
Devil's Garden RNA	Approved	800	0

Research Natural Area	Type of RNA	Acres	Existing NFTS Road Miles
Raider Basin RNA	Approved	6,481	0

RNAs are managed to maintain select vegetative, aquatic, or geologic elements in natural conditions. Forest Service Manual (FSM) 4063.3 provides protection against any activities that directly or indirectly modify ecological processes (USDA 2005b). RNAs, established for research and study purposes, are a discrete land area large enough to represent a specific natural ecosystem. RNAs are important because they provide benchmarks for comparison of present and future management of the national forests and are an invaluable asset. There are no proposed additions of unauthorized roads in the Research Natural Areas, in any of the alternatives.

Modoc LRMP Standards and Guidelines for RNAs

Facilities

(S) “Roads required for administrative or scientific purposes will be controlled by locked gates. Other roads will be closed or obliterated (p. 4-81).”

(S) “Return obliterated roads to resource production and barricade them where necessary.” (p. 4-81)

Recreation

1. a. (S) “Sign or fence RNAs as necessary to discourage general recreational use and especially restrict off-highway use.” (p. 4-82)

Special-Interest Areas

Special Interest Areas (SIAs) are those recognized by the Forest Service as having special significance for recreational, scientific, cultural, or educational use. These areas are set aside and protected for their scenic, historical, geological, botanical, zoological, paleontological or other special characteristics with an emphasis on public use, study, and enjoyment.

Table 3-164 : Geologic Special-Interest Areas

Special Interest Area		Type of SIA	Status	Acres	Existing NFTS Road Miles
Glass Mountain Glass Flow	1B	Geologic SIA	Approved	4,210	0
Burnt Lava Flow	1B	Geologic SIA	Approved	8,387	0.9
Medicine Lake Glass Flow	1B	Geologic SIA	Approved	570	0

Officially designating an SIA begins with the Forest Supervisor's recommendation. The Regional Forester's approval of the Forest Land Management Plan signifies approval of recommended SIAs. Each formally designated area is managed with its own set of standards and guidelines which may range from no special management, to seasonal restrictions on certain activities to year-round

prohibitions on all activities. There is one botanical SIA on the Forest called Dismal Swamp. There are no proposed additions of unauthorized roads in the Research Natural Areas, in any of the alternatives.

Wilderness Areas

The Modoc National Forest manages the 70,385 acres of the South Warner Wilderness. Actions proposed comply with Wilderness designations and the California Wilderness Act of 1984. Designated Wilderness is not affected by the proposed action or any alternative. Motorized activity is prohibited in those areas under all alternatives.

The Wilderness areas are managed as Primitive ROS class, and motorized vehicle use is prohibited both on and off road.

Citizen-Inventoried Roadless Areas (CIRA)

This analysis also considers twelve areas recommended as Citizen-Inventoried Roadless Areas. These areas were submitted by a coalition of environmental groups that advocate the expansion of roadless areas. They provided us with a GIS layer containing these areas. Unfortunately, the creator of the layer is no longer with the organization that provided us the data. Therefore, we have no way of knowing how accurate these layers are. Furthermore, we have found discrepancies in the data and cannot vouch for its accuracy.

The CIRAs provided to us are primarily expansions of the existing Inventoried Roadless areas. Only the Fandango Peak area is not an expansion. All of the CIRAs contain existing NFTS roads.

The following table displays the Citizen’s Roadless Proposal. It contains a list of the proposed roadless areas, together with a crosswalk to the Forest Service Inventoried Roadless Areas.

Table 3-165. Citizen-Inventoried Roadless Areas

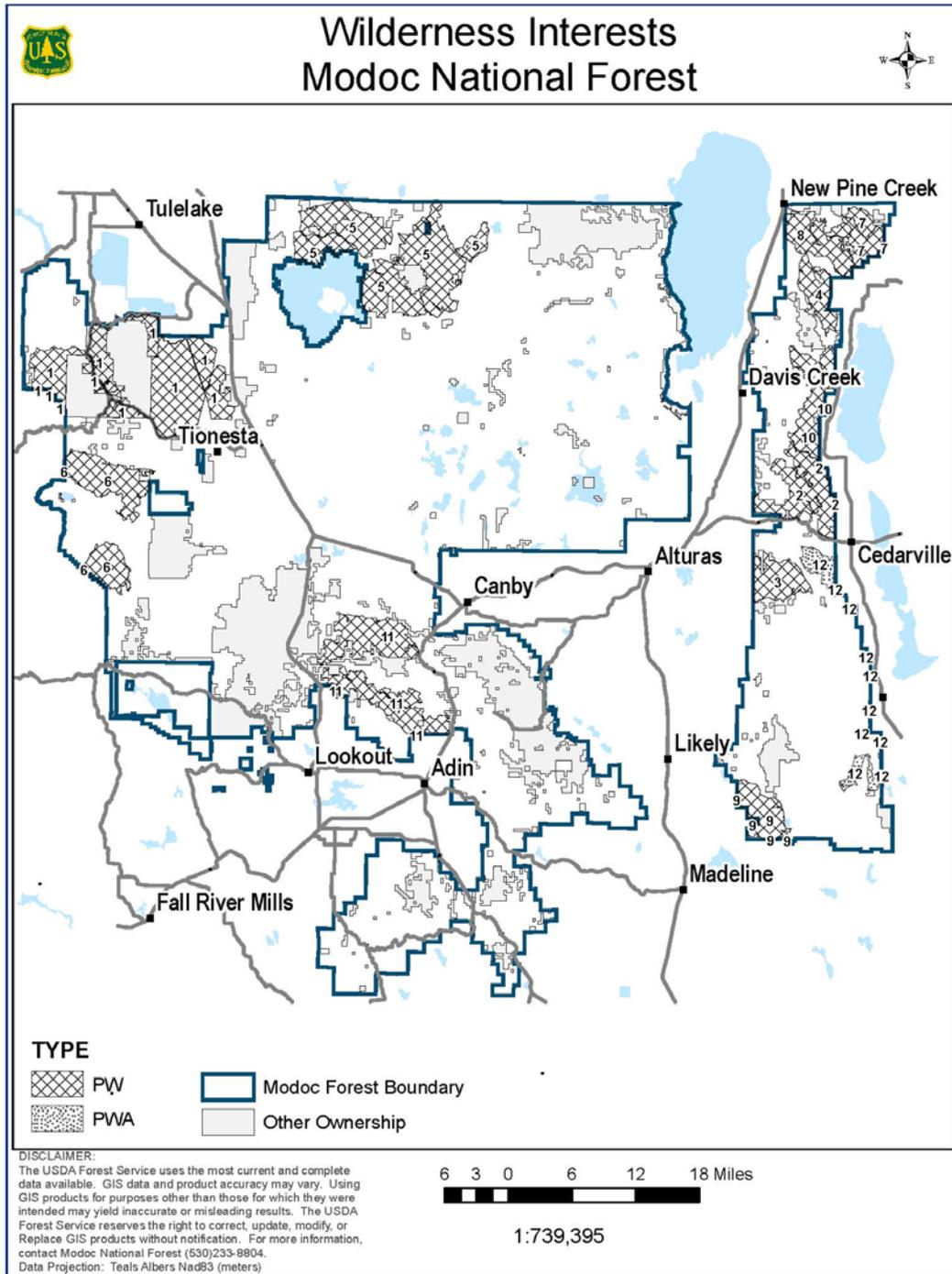
Citizens' Proposed Wilderness Name	Number of Individual and Separate Units (Area divided by roads or land mass)	Corresponding Forest Service Inventoried Roadless Area Name	ROS Class	Acres of FS Ownership only	Existing System Road Miles
Captain Jack	12	Lavas, Dobie Flat, Callahan Flow	SPNM, RN	3,851	11.02
Cedar Mountain	3	Soldier	SPNM, RN	10,053	3.43
Dry Creek	1	Dry	SPNM, RN	3,118	3.86
Fandango Peak	2		RN	8,732	7.85
Lost River	12	Steele Swamp	SPM, RN	47,037	33.83
Medicine Lake	3	Burnt Lava, Mt. Hoffman	SPNM, RN	6,994	18.01
Mt Bidwell	2	Mt Bidwell	SPM, RN	150	.22
Mt. Vida	3	Mt. Vida	RN, SPNM	5,690	4.70
Parsnip	2	Parsnip	RN, SPNM	2,315	3.02
Powley Creek	1	Powley	SPNM, RN	9,216	19.36

Citizens' Proposed Wilderness Name	Number of Individual and Separate Units (Area divided by roads or land mass)	Corresponding Forest Service Inventoried Roadless Area Name	ROS Class	Acres of FS Ownership only	Existing System Road Miles
Signal Rattlesnake	2	Big Canyon	SPNM, RN	26,270	33.43
South Warner	3	Bear Camp	RN	6,360	4.28
Total				129,786	143.01

All of the CIRAs contain existing NFTS roads. The proposed additions of unauthorized roads range from 0.22 to 33.83 miles per unit, with a total of 14.82 miles across all of the units (see next table). This is a very small number of miles compared to the very large total acreage (129,786) covered.

PW and PWA are abbreviations for Potential Wilderness and Potential Wilderness Additions, respectively. Years ago, the California Wilderness Coalition inventoried all roadless areas with the qualities of Potential Wilderness. Potential Wilderness was used to describe areas would be new to the wilderness system, while Potential Wilderness Additions was used to describe lands that would be added to already existing wilderness areas (Example: Death Valley PWAs would be contiguous to existing Death Valley wilderness areas). This information was then put into a GIS data base. Acreages were then determined and added to the Citizens' Wilderness Inventory Data Attribute Table. (Personal communication, Julia Kernitz, California Wilderness Coalition, August 2009).

Figure 3-25. Wilderness Interests on the Modoc NF



The following table contains the miles and number of proposed unauthorized routes, by alternative, for each CIRA.

Table 3-166. CIRAs: Miles of Proposed Road for Each Alternative

Name	Alternatives (Miles of Unauthorized Routes Proposed for Addition in CIRAs)				
	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5
Captain Jack	0	0	0	0	0
Cedar Mountain	0	0.54	0	0.11	0.54
Dry Creek	0	0	0	0	0
Fandango Peak	0	1.03	0	0.11	1.03
Lost River	0	5.64	0	0.72	5.64
Medicine Lake	0	2.97	0	0.14	2.97
Mt Bidwell	0	0	0	0	0
Mt. Vida	0	1.19	0	0.56	1.19
Parsnip	0	0	0	0	0
Powley Creek	0	3.03	0	0.06	3.03
Signal Rattlesnake	0	0.17	0	0	0.17
South Warner	0	0.25	0	0.09	0.25
Total	0	14.82	0	1.79	14.82

Environmental Consequences

This section describes the environmental consequences on Inventoried Roadless Areas and the area of the Citizens’ Wilderness Proposal.

Alternative 1: No Action

Direct and Indirect Effects of the Prohibition of Cross-country Motor Vehicle Travel

There would be no prohibition of cross-country travel under this alternative. Present miles of routes, both within the NFTS and unauthorized, as well as density of routes within the roadless areas, are shown in Table 3-164 for the short term. Non-vegetative areas, due to cross-country travel routes, may continue to be non-productive because of potential compaction or soil loss. Further routes may be created and the overall condition in roadless areas may deteriorate. At the same time, routes may become disused and in the long term, overall condition may improve as ground re-vegetates and de-compacts. Hydrologic function would generally recover in the long term.

The diversity of plant and animal species and habitat for threatened and endangered species (TES) dependant on undisturbed areas would continue in the present condition or, with the possibility of new routes being pioneered, may continue to degrade.

Recreational activities, such as hiking, backpacking, and wildlife viewing that benefit from a degree of isolation, could be further degraded by creation of new routes. Other pursuits such as

fishing and hunting would continue to be better served by continuation of present access routes, and the ability to create new ones.

Direct and Indirect Effects of Adding Facilities (presently unauthorized roads and trails) to the NFTS, Including Identifying Seasons of Use and Vehicle Class

There would no unauthorized routes added into the NFTS under this alternative. Miles of available NFTS routes within the roadless areas and density of routes would be unchanged from values shown in Table 3-165 for the short term. Present extent of access for recreation, and conversely disturbance, or intrusiveness, of motor vehicles on some qualities of roadless areas (Table 3-165) would continue. Present seasons of use and vehicle class on NFTS routes would continue.

Direct and Indirect Effects of Changes to the Existing NFTS (Changes in Vehicle Class)

There would be no changes in vehicle class for any route currently in the NFTS under this alternative.

Alternative 2: The Proposed Action

Direct and Indirect Effects of the Prohibition of Cross-Country Motor Vehicle Travel

The prohibition of cross-country travel would result in a long term reduction of fine sediment production that could be transported by surface flow into channels from unauthorized routes. There would also be immediate benefits with reduction of noise, dust, and intrusiveness of motor vehicles. Hydrologic function would probably return in the long term with reestablishment of ground cover. Over the long term, soil productivity would improve because of natural re-vegetation and de-compaction of unauthorized routes.

Plant and animal diversity or TES habitat, when dependent on undisturbed areas, should improve for some species and some areas in the short term. Some degree of intrusiveness might continue because of non-motorized passage by bike riders, backpackers, and hikers, depending on cover type or terrain (for example, dense brush is less likely to be crossed than forest), as well as pioneering by these visitors.

Some recreational access would decrease, especially for fishing and hunting. However, the isolation incurred by the travel prohibition is generally beneficial to backpackers, picnickers, wildlife viewers and other pedestrian pursuits. There would be a decrease in trammeling of natural areas by vehicles, and unintentional impacts such as spread of noxious weeds along roads or trails. Recovery of natural vegetation would occur along with the reduction in motor vehicle activities. Because no roads would be built, there would no addition or improvement in structures construed with roadways, such as drainage features.

Direct and Indirect Effects of Adding Facilities (Presently Unauthorized Roads and Trails) to the NFTS, Including Identifying Seasons of Use and Vehicle Class

No routes would be added to the NFTS within any of the IRAs, and 14.82 miles total would be added in eight CIRAs (Table 3-164). These slight increases would result in minor to immeasurable change overall to soil and water resources of the affected areas, as well as minimal changes in animal and plant diversity, or TES habitat dependant on undisturbed areas.

CIRAs overlap and extend beyond the boundaries of IRAs; therefore, the routes are shared between them. Also, added routes within a CIRA may not be counted as added to the IRA because the segments are outside the IRA.

This portion of the analysis—of the area adjacent to the roadless area—is concerned primarily with the intrusiveness of motor vehicle travel, noise, and dust on primitive and semi-primitive qualities, and on animal habitat that depends on a degree of non-disturbance. The added routes are mostly small segments that connect an access point on an IRA boundary. Therefore, the disturbance these additional routes cause to primitive qualities and animal habitat are considered minor or insignificant. Vehicle class and season of use for added routes would be the same as connecting system roads.

Parking and dispersed camping would be allowed within 30 feet of a designated route. In regards to characteristics of solitude or primitiveness in roadless or wilderness areas, or wildlife habitat, the effect would be minimal. There could be some resource damage to soil, trammeling of vegetation, and increased erosion from ground disturbance. The scope of damage is uncertain and would depend largely on hill slope gradient conducive to parking and camping. Hence, damage may be considered minimal because the most erodible and thinnest soils are on steep slopes that would be largely unaffected by the proposal.

Direct and Indirect Effects of Changes to the Existing NFTS (changes in vehicle class)

The proposal to allow motorized mixed use exists on some NFTS roads. None of the routes is within either an IRA or CIRA. Change in vehicle class may or may not induce a change in traffic volume. No significant effect is therefore expected to those characteristics previously identified for Roadless or Wilderness areas.

Alternative 3

Direct and Indirect Effects of the Prohibition of Cross-County Motor Vehicle Travel

Cross-country travel would be prohibited under this alternative. Within the long term there would be a reduction of fine sediment production that could be transported by surface flow into channels. There would also be immediate benefits with reduction of noise, dust, and intrusiveness of motor vehicles. Hydrologic function would probably return with reestablishment of ground cover in the long term. Over the long term, soil productivity would improve because of natural re-vegetation and de-compaction of routes.

Plant and animal diversity or TES habitat, when dependant on undisturbed areas, should improve, for some species and some areas in the short term. Some degree of intrusiveness might continue because of non-motorized passage by bike riders, backpackers, and hikers, probably depending on cover type or terrain (for example, dense brush is less likely to be crossed than forest), as well as pioneering by these visitors.

Recreational access would decrease, especially for fishing and hunting. However, the isolation incurred by the travel prohibition would be generally beneficial to backpackers, picnickers, wildlife viewers, and other pedestrian pursuits. There would be a decrease in trammeling of natural areas, and unintentional impacts such as spread of noxious weeds along travel routes, resulting in a proportional potential recovery of natural vegetation.

Direct and Indirect Effects of Adding Facilities (Presently Unauthorized Roads and Trails) to the NFTS, Including Identifying Seasons of Use and Vehicle Class

There would no unauthorized routes or areas added to the NFTS under this alternative.

Direct and Indirect Effects of Changes to the Existing NFTS (Changes in Vehicle Class)

There would no change in vehicle class under this alternative.

Alternative 4

Direct and Indirect Effects of the Prohibition of Cross-Country Motor Vehicle Travel

With the prohibition of cross-country travel there may be reduction of fine sediment production that could be transported by surface flow into channels. There would also be short-term benefits with reduction of noise, dust, and intrusiveness of motor vehicles. Hydrologic function would probably return, in the long term, with reestablishment of ground cover of at least 50 percent on disused routes. Over the long term, soil productivity would improve because of re-vegetation and de-compaction of routes.

Plant and animal diversity or TES habitat, when dependent on undisturbed areas, should improve for some species and some areas in the short term. Some degree of intrusiveness might continue because of non-motorized passage by bike riders, backpackers, and hikers, probably depending on cover type or terrain (for example, dense brush is less likely to be crossed than forest), as well as pioneering by these visitors. Recreational access would decrease, especially for fishing and hunting. However, the isolation incurred by the travel prohibition is generally beneficial to backpackers, picnickers, wildlife viewers, and other pedestrian pursuits. There would be a decrease in trammeling of natural areas, and unintentional impacts such as spread of noxious weeds along roads and trails. A concomitant and proportional potential recovery of natural vegetation would occur on unused roads and trails. Because no new roads would be built, there would be no improvement or addition of structures, such as roadway drainage features.

Direct and Indirect Effects of Adding Facilities (presently unauthorized roads and trails) to the NFTS, Including Identifying Seasons of Use and Vehicle Class

No routes would be added to any IRAs, and only 1.79 miles would be added in seven of the CIRAs with this alternative. The unauthorized routes proposed to be added are in seven units totaling 94,082 acres. All of the proposed routes would be spurs that come off existing NFTS roads. The small number and miles of routes, compared to the existing NFTS roads and the amount of acreage, would not result in the Wilderness characteristics of these areas being diminished.

Direct and Indirect Effects of Changes to the Existing NFTS (changes in vehicle class)

Under this alternative there would be no changes to vehicle class on any routes within an IRA or CIRA.

Alternative 5

Direct and Indirect Effects of the Prohibition of Cross-County Motor Vehicle Travel

The prohibition of cross-country travel would result in a reduction of fine sediment production that could be transported by surface flow into channels. There would also be short-term benefits with reduction of noise, dust, and intrusiveness of motor vehicles. Hydrologic function would probably return over the long term with reestablishment of ground cover. Over the long term, soil productivity would improve because of re-vegetation and de-compaction of routes.

Plant and animal diversity or TES habitat, when dependant on undisturbed areas, should improve for some species and some areas in the short term. Some degree of intrusiveness might continue because of non-motorized passage, by bike riders, backpackers and hikers, probably depending on cover type or terrain (for example, dense brush is less likely to be crossed than forest), as well as pioneering by these visitors.

Motorized recreational access would decrease, especially for fishing and hunting with the prohibition of cross country travel. However, the isolation incurred by the travel prohibition is generally beneficial to backpackers, picnickers, wildlife viewers and other pedestrian pursuits. There would be a decrease in trammeling of natural areas, and unintentional impacts such as spread of noxious weeds along transportation routes. Concomitant with reduction of intrusive motor vehicle activities would be a recovery of natural vegetation. As no new roads would be built, there would be no improvement or addition of structures, such as roadway drainage features.

Direct and Indirect Effects of Adding Facilities (presently unauthorized roads and trails) to the NFTS, Including Identifying Seasons of Use and Vehicle Class

There would be no routes added in any of the IRAs; 14.82 miles, would be added to eight CIRAs. These routes would add about 10 percent of the total motorized routes to the combined CIRAs. Vehicle class and season of use for added routes would be same as connecting system roads, and a continuation of current condition.

These values, miles of added roads, and total road densities, would result in minor to immeasurable change overall to soil and water resources of the affected areas. As well, changes in animal and plant diversity, or TES habitat dependant on undisturbed areas are expected to be insignificant or minor.

This portion of analysis, of the adjacent area to the roadless, is concerned with the intrusiveness of motor vehicle travel, noise, and dust, on primitive and semi-primitive qualities, and on animal habitat that depends on a degree of non-disturbance. The added routes are mostly small segments that connect an access point on an IRA boundary. Insofar as these routes are not within The Roadless Areas themselves, and the total increase is minor, the effects are expected to be minimal.

Parking and dispersed camping would be allowed within 30 feet of a designated route. In regards to characteristics of solitude or primitiveness in roadless or wilderness areas, or wildlife habitat the effect is most probably minimal. There might be some resource damage to soil, trammeling of vegetation, and increased erosion from ground disturbance. The scope of damage is uncertain and would depend largely on hill slope gradient conducive to parking and camping. In this regard, damage may be considered minimal because the most erodible and thinnest soils are on steep slopes that would be largely unaffected by the proposal.

Direct and Indirect Effects of Changes to the Existing NFTS (Changes in

Vehicle Class)

There would be no changes in vehicle class in this alternative.

Cumulative Effects for All Alternatives

Table 3-162 displays the miles of existing NFTS roads and NFTS additions within IRAs for each alternative. None of the alternatives proposes new road construction or other development in IRAs.

Motor vehicle use has historically taken place in IRAs, resulting in the existing network of 258.63 miles of NFTS roads. Records indicate that motor vehicle use (of NFTS roads and unauthorized routes) was occurring at the time IRA boundaries were established during the RARE II evaluations in 1978.

The greatest potential threats to maintaining roadless characteristics, as described in the 2001 Roadless Rule, are road construction, reconstruction, and timber harvesting (USDA Forest Service 2000). These activities pose disproportionately greater risks of altering and fragmenting natural landscapes at regional and national scales (Roadless Area Conservation Rule Final Environmental Impact Statement, Vol. 1, p. 1-15 to 1-16). Therefore, consideration of cumulative effects resulting from present and foreseeable future activities (see appendix E) was limited to proposals to construct or reconstruct roads or harvest timber within IRAs. There are no proposals to harvest timber in the Schedule of Proposed Actions (the agency schedule for land-management activities).

For CIRAs, the action alternatives are expected to result in extremely minor adverse direct and indirect effects to semi-primitive motorized recreation experiences. Semi-primitive motorized experiences are characterized by the presence and use of primitive roads and trails. Primitive roads are not constructed, and are used by vehicles not primarily intended for highway use (ROS Users' Guide, p. 16). All unauthorized routes in CIRAs (and Forest-wide) are considered to be primitive roads or trails.

No present or reasonably foreseeable actions are known that would increase semi-primitive motorized experiences by constructing new primitive roads within CIRAs. As a result, the action alternatives would have the cumulative effect of reducing semi-primitive motorized experiences in CIRAs by decreasing the miles of primitive roads and trails available for motor vehicle use from existing conditions. This effect is expected to be most pronounced in Alternative 3, which would not add any unauthorized routes to the NFTS, followed by alternatives 4, 2, and 5. For all other characteristics, direct and indirect effects are either not expected or are expected to be beneficial overall. Therefore, adverse cumulative effects to these characteristics are not expected.

Compliance with the Modoc LRMP and Other Direction

Alternative 1 does not meet the requirements of the Modoc LRMP as amended, nor does it meet the requirements of the Sierra Nevada Forest Plan Amendment (SNFPA) or the Travel Management Rule. All action alternatives are consistent with the Modoc LRMP, as amended, and the Travel Management Rule.

