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3.05 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, Forest Plan and Other Direction

The Forest Service conducted RARE II from 1977 to 1979 studying 13 roadless areas (236,100 acres) on the Stanislaus for their Wilderness values. The California Wilderness Act of 1984 designated 100,000 of those acres as Wilderness, released about 100,000 acres for non-wilderness uses and identified three “further planning areas” for more study and future consideration as Wilderness: Tryon Peak (3,400 acres), Bald Peak (20,500 acres) and Pacific Valley (10,300 acres). The Forest addressed the “further planning areas” through the land management planning process in 1991 by recommending Wilderness designation for Tryon Peak and Bald Peak (USDA 1991a).

Both RARE II and the California Wilderness Act of 1984 made several roadless area boundary splits based on issues and resource values, resulting in the now 17 specific named IRAs listed in Table 3.05-1 along with the Forest Plan management area allocations. The Forest Plan allocates Wilderness, Wild Rivers, Near Natural and RNA to non-motorized uses while all other allocations allow motorized use. (USDA 2005a, p. 63-164).

Table 3.05-1 Forest Plan Management Area Allocations: Roadless Areas

Roadless Area	Management Area										acres
	Wilderness	Wild and Scenic		Near Natural	Wildlife	SIA	RNA	Scenic Corridor	General Forest	Winter Sports	
		Wild	Other								
Arnot Creek			100								100
Bald Peak	20,500	(1500)					(360)				20,500
Bell Meadow				5,700	1,500		500	250	250		8,200
Carson-Iceberg		1,700		8,900	2,700			1,200	400		14,900
Cherry Lake					1,000						1,000
Dome			950	4,500	3,500	50		2,200	200		11,400
Eagle				14,300	700			700	300		16,000
Mt. Reba				2,900	900					300	4,100
Night			1000	2,100							3,100
North Mountain		1,600		5,600					900		8,100
Pacific Valley			1000	9,300							10,300
Raymond Peak		500		2,100	600						3,200
Trumbull Peak			600	5,250		50			400		6,300
Tryon Peak	3,400	(900)									3,400
Tuolumne River		3,600		13,000				700			17,300
Waterhouse				4,200						200	4,400
Wheats Meadow				3,000	800						3,800
total	23,900	7,400	3,650	80,850	11,700	100	500	5,050	2,450	500	136,100

RNAs are managed to maintain select vegetative, aquatic, and/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 will prove to be an invaluable asset in the future. The Forest Plan includes direction to manage RNAs with allocations to Semi-Primitive Non-Motorized ROS and Closed Motor Vehicle Travel Management (USDA 2005a, p. 134).

Forest Plan direction for SIAs is to protect values, make educational opportunities available and preserve the integrity of the special interest feature for which the areas were established (USDA 2005a, p. 117). The Forest Plan allocates the Emigrant Road and the Big Trees-Carson Valley Road SIA to Primitive ROS and Closed Motor Vehicle Travel Management because it is within Wilderness; and, all other SIAs to Semi-Primitive Motorized or Roaded Natural ROS and Restricted Motor Vehicle Travel Management (USDA 2005a, p. 119-120).

Management of Proposed Wild and Scenic Rivers within Wilderness complies with Wilderness designations and the Wilderness Act of 1964. The following river segments (46 miles) within Wilderness are not affected by the proposed action or any alternatives and motorized activity is prohibited under all the alternatives per the Wilderness Act of 1964.

- North Fork Mokelumne River: entire Segment 2, from the Mokelumne Wilderness boundary to Salt Springs Reservoir (18 miles)
- Middle Fork Stanislaus River: entire Segment 2, Kennedy Creek (8 miles)
- Middle Fork Stanislaus River: entire Segment 3, Summit Creek headwaters to Relief Reservoir (7 miles)
- Clark Fork: entire Segment 1, headwaters to Carson-Iceberg Wilderness boundary (8 miles)
- Clavey River: portion of Segment 1, Bell Creek (1 mile)
- Clavey River: portion of Segment 2, Lily Creek (4 miles)

Forest Plan direction for Proposed Wild and Scenic Rivers is to protect and enhance Wild and Scenic River characteristics and manage the same as designated Wild and Scenic Rivers (USDA 2005a, p. 108). The Forest Plan allocates Wild classification segments to Primitive or Semi-Primitive Non-Motorized ROS and Closed Motor Vehicle Travel Management; Scenic and Recreational classification segments to Roaded Natural ROS and Restricted Motor Vehicle Travel Management (USDA 2005a, p. 105-106).

The Stanislaus National Forest manages all or portions of the Carson-Iceberg, Emigrant and Mokelumne Wildernesses. Actions proposed comply with Wilderness designations and the Wilderness Act of 1964. Designated Wilderness is not affected by the proposed action or any alternative and motorized activity is prohibited in those areas under all alternatives.

Forest Plan direction for Proposed Wilderness is to protect and enhance Wilderness characteristics and manage them the same as designated Wilderness with allocations to Primitive ROS and Closed Motor Vehicle Travel Management (USDA 2005a, p. 66-67).

Effects Analysis Methodology

Assumptions Specific to Roadless and Special Areas

1. 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.
2. Actions proposed within Wilderness comply with Wilderness designations and the Wilderness Act of 1964. Designated Wilderness is not affected by the proposed action or any alternative and motorized activity is prohibited in those areas under all alternatives.
3. Outside of designated Wilderness, no Forest Order prohibiting motorized use or cross country travel is in effect within Roadless and Special Areas.

4. Wheeled Over Snow (WOS) use does not affect Roadless and Special Areas because the proposed WOS routes are all on existing NFTS routes that are open to public motorized use during the normal summer driving season.
5. No NFTS or unauthorized motorized routes exist within RNAs.
6. Bald Peak Proposed Wilderness currently contains one NFTS road segment of 07N76A (0.02 miles) that is not available for public motorized use. No other authorized or unauthorized motorized routes exist within any Proposed Wilderness.
7. No unauthorized routes in designated Wild and Scenic Rivers are added to the NFTS in any alternative and
8. No vehicle class changes are proposed in designated Wild and Scenic Rivers in any alternative.

Data Sources

1. Forest Plan
2. GIS
3. RNA Establishment Records
4. Wild and Scenic River Study

Roadless and Special Areas 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 are 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.

- **Research Natural Area Values:** RNA values are specific to each RNA and may include selected aquatic, geologic or vegetation elements.
- **Special Interest Area Values:** SIA values are specific to each SIA and may include unique botanic, cultural, geologic, scenic, historic 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 (47 Federal Register 173, September 7, 1982; p. 39454-39461). 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, ecologic, fish, geologic, historic, scenic, recreation, 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 2007a).

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 include:

- 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 ecologic, geologic, 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 2 (No Action).
2. **Additions to the NFTS:** all unauthorized routes proposed as additions to the NFTS are added as trails. No unauthorized routes are added to the NFTS as roads in any alternative.
3. **Changes to the Existing NFTS:** 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.

Roadless Areas - Affected Environment

Six roadless areas do not contain NFTS or unauthorized motorized routes: Arnot Creek, Cherry Lake, Night, Pacific Valley, Tyron Peak and Wheats Meadow. Table 3.05-2 shows that the remaining eleven roadless areas currently contain 44.88 miles of motorized routes (41.97 NFTS and 2.91 unauthorized) of which 26.63 miles are available for public motorized use.

Table 3.05-2 Existing Motorized Routes: Roadless Areas

Roadless Area	NFTS Roads					NFTS Trails			NFTS total	UNR UNT	total
	ADM	ALL	ML1	HLO	total	ALL	ATV	total			
Bald Peak	0.02	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.02	0.00	0.02
Bell Meadow	0.00	0.16	0.00	0.00	0.16	0.01	0.00	0.01	0.17	0.00	0.17
Carson Iceberg	0.06	2.14	4.44	0.00	6.64	0.00	0.00	0.00	6.64	0.18	6.82
Dome	6.68	4.79	0.25	0.00	11.72	0.64	0.00	0.64	12.36	0.00	12.36
Eagle	0.00	0.01	0.79	0.00	0.80	6.42	0.00	6.42	7.22	0.00	7.22
Mt. Reba	0.30	0.36	0.00	0.00	0.66	3.30	0.70	4.00	4.65	1.66	6.31
North Mountain	0.00	0.17	0.00	0.07	0.24	0.00	0.00	0.00	0.24	0.03	0.27
Raymond Peak	0.00	1.55	0.00	0.00	1.55	0.00	0.00	0.00	1.55	0.21	1.76
Trumbull Peak	1.25	0.00	0.00	0.00	1.25	0.00	0.00	0.00	1.25	0.00	1.25
Tuolumne River	0.76	2.85	0.00	0.00	3.61	0.00	0.00	0.00	3.61	0.83	4.44
Waterhouse	0.84	0.55	2.86	0.00	4.25	0.00	0.00	0.00	4.25	0.00	4.25
total	9.91	12.58	8.34	0.07	30.91	10.36	0.70	11.06	41.97	2.91	44.88

ADM and ML1 are closed to public motorized use
UNR and UNT are unauthorized roads and unauthorized trails

The following discussions focus on the 17 non-wilderness roadless areas, totaling 136,100 acres on the Stanislaus National Forest (see Figure 3.05-1)

Arnot Creek

The small Arnot Creek portion (100 acres) of the original Carson-Iceberg roadless area is located in the northeast portion of the Forest. The main attraction in this area is a maintained Forest Service non-motorized trail on a gentle grade, next to a creek within walking distance from the two Forest Service campgrounds and two organization camps. Equestrians and hikers pass through the area on their way to the Carson-Iceberg Wilderness. Soils on flat bottomlands are generally deep cobbly

sandy loams, developed from glacial alluvium. Vegetative cover consists of lodgepole pine, true fir and Jeffrey pine, with montane shrubs and herbaceous species. This area does not contain any NFTS or unauthorized motorized routes.

Bald Peak

The Bald Peak portion (20,500 acres) of the original Carson-Iceberg roadless area is a proposed Wilderness addition located within a triangle formed by Clark Fork Road, Highway 108 and the Carson-Iceberg Wilderness between Iceberg Meadow and Sonora Peak. Elevations range from 6,000 to 11,462 feet. The area is typified by mountain peaks, steep slopes, scattered pockets of timber and meadows, and considerable granite rock. The Pacific Crest Trail crosses a corner of the area near Sonora Pass. One other hiking trail along Douglas Creek receives only light use. Soils between extensive rock outcrops are generally shallow to moderately deep, stony coarse sandy loams developed from volcanic and granitic bedrock and glacial debris. Meadows have deep, organic, sandy loams developed from alluvium. Red fir and lodgepole pine are the predominant tree species, with Jeffrey pine, incense cedar, and white fir common associates. Hunters use the area in pursuit of deer, grouse and quail. Spotted owl, goshawk, fisher, pine marten, wolverine and red fox inhabit this area. The area is also important as summer range for the Stanislaus Deer Herd. Table 3.05-2 shows the Bald Peak roadless area currently containing 0.02 miles of NFTS motorized routes that are not available for public motorized use. This area does not contain any unauthorized motorized routes.

Bell Meadow

The Bell Meadow roadless area (8,200 acres) is located in the central part of the Forest. Elevations range from 6,300 feet at the trailhead near the west end of Bell Meadow to 7,600 feet on the upper slopes of Bell Mountain. The area receives heavy day use due to its proximity to the popular Pinecrest recreation area. Ten miles of maintained non-motorized trails exist in the area. It is a popular entry point to the Emigrant Wilderness. Moderate livestock grazing occurs. It is heavily hunted for deer in the fall. Soils between extensive rock outcrops on the uplands are generally shallow to moderately deep, stony coarse sandy loams developed from volcanic and granitic bedrock and glacial debris. Bell Meadow has deep, organic sandy loams developed from alluvium. Vegetation is true fir, mixed conifer and lodgepole pine mixed with montane shrubs such as mountain whitethorn. Large stands of aspen as well as other wet meadow and riparian vegetation are found adjacent to the stream courses. This roadless area contains important wildlife habitat, including several key deer fawning areas, and habitat for goshawk and fisher. Bell Meadow (110 acres) is surrounded by large groves of quaking aspen with high scenic value. Table 3.05-2 shows the Bell Meadow roadless area currently containing 0.17 miles of NFTS motorized routes available for public motorized use. This area does not contain any unauthorized motorized routes.

Carson-Iceberg

The Carson-Iceberg portion (14,900 acres) of the original Carson-Iceberg roadless area is located in the north central part of the Forest. The original Carson-Iceberg roadless area was once a large contiguous unit of 132,300 acres within the Stanislaus National Forest. The California Wilderness Act of 1984 designated part of the roadless area as Wilderness. The remaining portions of the Carson-Iceberg roadless area include the western portion of Whittaker's Dardanelles, Shoofly Meadow, Bear Trap Meadow, and Highland Creek from Spicer Meadows dam to the confluence of the North Fork Stanislaus River and the Stanislaus River canyon downstream to Ramsey. Elevations vary from 4,600 feet along the Stanislaus River to 7,800 feet atop Whittaker's Dardanelles. The area is surrounded on three sides by roads, logged and developed areas. The eastern edge of this roadless area abuts the Wheats Meadow roadless area. A scout camp at Sand Flat is a source of much river use. The Spicer-Sand Flat non-motorized trail links the scout camp with Union and Utica reservoirs, Elephant Rock Lake, Summit Lake, Rock Lake and Spicer Meadow Reservoir. A mile and a half of this trail passes through the roadless area. Another non-motorized trail links Ganns on State Highway 4 with the river.

At the western edge of this roadless area access to the river is provided by a 4-wheel drive road to a site known as Ramsey. With 12 miles of maintained non-motorized trail, deer hunting is popular in the upper elevations. Soils are developed mostly from granitic glacial debris and residual rock, while about 1,200 acres are developed from residual volcanic rock. A large proportion of the soils (4,400 acres) are deep or moderately deep, sandy loams or gravelly sandy loams. Vegetation is characterized by mixed conifer, lodgepole pine and true fir forest. Meadows near Whittaker's Dardanelles include aspen and lodgepole pine. The canyons of Highland Creek and the North Fork Stanislaus contain live oak and chaparral. Meadows in the southern portion of the roadless area are important fawning grounds. The area, in general, is important summer range for the Stanislaus Deer Herd. Table 3.05-2 shows the Carson-Iceberg roadless area currently containing 6.82 miles of motorized routes (6.64 NFTS and 0.18 unauthorized) of which 2.32 miles are available for public motorized use.

Cherry Lake

The Cherry Lake roadless area (1,000 acres) is located in the east-central portion of the Forest adjacent to the Emigrant Wilderness and Yosemite National Park. Elevations range from 4,700 to 7,000 feet. The Kibbie Ridge non-motorized trail passes through the northeast corner of the area. This trail is a portal to both Yosemite and the southern portion of the Emigrant. Cherry Lake receives light to moderate use by fishermen and water skiers. Deer hunters use boats to gain access to portions of the roadless area. Much of the area consists of steep bluffs and soils are variable with bare granite outcrops interspersed with shallow to deep sandy loam to clay loam soils developed from granitic bedrock and glacial debris. Vegetation is mixed conifer with black oak and canyon live oak. This area does not contain any NFTS or unauthorized motorized routes.

Dome

The Dome roadless area (11,400 acres) is located in the northeast part of the Forest generally between Highway 108 and Eagle Meadow Road (5N01). Elevations range from 6,200 to 8,700 feet. Recreation use within the area is low due to the steep terrain; however high use campgrounds in the Brightman area and the popular Niagara Rim 4WD trail are adjacent to the area. The Double Dome rock formation is a recognized landmark which can be seen from many view points. Many no longer consider Dome a "true" roadless area due to the presence of over 5 miles of NFTS roads and evidence of past timber harvests completed in the 1980s. Table 3.05-2 shows the Dome roadless area currently containing 12.36 miles of NFTS motorized routes, of which 5.43 miles are available for public motorized use. This area does not contain any unauthorized motorized routes.

Eagle

The Eagle roadless area (16,000 acres) is located in the northeast part of the Forest. Elevations range from 6,300 to 9,700 feet. The area is characterized by bare volcanic ridges and rock outcrops, scattered timberland, and small sub-alpine meadows. Hiking and backpacking occur along Eagle Meadow and Cooper Meadow trails. Soil over most of the area is generally very thin, coarse sandy loam developed mainly from volcanic rock, except for a few areas of granitic rock. Much of the area is covered by bare volcanic rock outcrop. The Three Chimneys rock formation is a recognized landmark which can be seen from many view points. Two of the peaks are on the Emigrant Wilderness boundary. The area contains many key deer fawning sites. Table 3.05-2 shows the Eagle roadless area currently containing 7.22 miles of NFTS motorized routes, of which 6.43 miles are available for public motorized use. This area does not contain any unauthorized motorized routes.

Mt. Reba

The Mt. Reba roadless area (4,100 acres) is located in the north central part of the Forest adjacent to the Mokelumne Wilderness. Elevation ranges from 6,400 to 8,849 feet. An off-highway vehicle trail to Mt. Reba is located on the east side of this area. The western portion of the roadless area includes several jeep trails north of Bear Trap basin. A hiking trail accesses Camp Irene, a camping area on the

Mokelumne River within the Mokelumne Wilderness. The Grouse Valley trail links Highway 4 with the Mokelumne Wilderness in the center of this roadless area. Recreation use within the area is primarily deer hunting with hiking over the trails leading into the Wilderness. Occasional cross country skiers traverse the slopes of Mt. Reba. Soils on the uplands are generally moderately deep to shallow, gravelly sandy loams developed from volcanic and granitic bedrock and glacial debris. Meadow soils are organic sandy loams developed from alluvium. Vegetation includes red fir, lodgepole pine and sub-alpine species. This area is an important deer summer range. Table 3.05-2 shows the Mt. Reba roadless area currently containing 6.31 miles of motorized routes (4.67 NFTS and 1.66 unauthorized) of which 6.01 miles are available for public motorized use.

Night

The Night roadless area (3,100 acres) is located in the northeast part of the Forest. Elevations range from 6,800 to 10,600 feet. It lies between Highway 108 on the north and the Emigrant Wilderness on the south. This area is largely inaccessible and receives little use, except for the portion traversed by the Pacific Crest Trail. The area is used for hiking, deer hunting and nordic skiing. When Highway 108 is plowed over Sonora Pass in late spring, snow play and nordic skiing occur on the gentler slopes. Two low-standard trails access Nightcap Peak and Blue Canyon. Soils between extensive rock outcrops are generally shallow to moderately deep stony, coarse, sandy loams developed from volcanic and granitic bedrock. Vegetative cover consists of true fir, mountain hemlock and other sub-alpine shrubs and herbaceous species. This area does not contain any NFTS or unauthorized motorized routes.

North Mountain

The North Mountain roadless area (8,100 acres) is located in the southeast part of the Forest adjacent to Yosemite National Park. Elevations range from 2,400 to 5,800 feet. The area is characterized by steep slopes and timber in the north, and steep, rocky canyon slopes in the south. The Tuolumne River flows through five miles of the southern portion of the area. Most of the recreation use occurs along the first three miles of the Tuolumne River east of Early Intake in the form of hiking, fishing, swimming and camping. Steep slopes preclude most other uses. Soils are shallow to moderately deep, stony sandy loam to clay loam, developed from granitic rock. Vegetation in the canyon consists of live oak-chaparral on the north-facing slopes with scattered sparse stands of ponderosa pine and annual grass-chaparral on south-facing slopes. Table 3.05-2 shows the North Mountain roadless area currently containing 0.27 miles of motorized routes (0.24 NFTS and 0.03 unauthorized) available for public motorized use.

Pacific Valley

The Pacific Valley portion (10,300 acres) of the original Carson-Iceberg roadless area lies between Highway 4 and the Carson-Iceberg Wilderness in the northeast portion of the Forest. Elevations range from 7,000 to 9,600 feet. Mountain peaks, glaciated valleys with meadows, and scattered timber typify the area. Hiking, backpacking, camping, fishing and hunting, and some cross country skiing occur with most dispersed recreation along the Grouse Creek and Marshall Canyon trails. Soils between extensive rock outcrops on the uplands are generally shallow to moderately deep, stony coarse sandy loams developed from volcanic and granitic bedrock and glacial debris. Meadows have deep, organic sandy loams developed from alluvium. Lodgepole pine and red fir are the predominant tree species. The Pacific Valley further planning area is a deer summer range. This area does not contain any NFTS or unauthorized motorized routes.

Raymond Peak

The Raymond Peak roadless area (3,200 acres) is located in the northeast part of the Forest in a narrow band of land between Highway 4 and the Mokelumne Wilderness. The California Wilderness Act of 1984 designated 13,000 acres of the original 16,200 acre Raymond Peak area as Wilderness.

Elevations range from 7,400 to 3,700 feet. Recreation includes hiking, hunting, nordic skiing, fishing and motorized recreation along 8N02. Soils are generally shallow to moderately deep stony coarse sandy loams developed from volcanic and granitic bedrock and glacial debris. Meadows have deep, organic sandy loams developed from alluvium. Lodgepole pine and red fir are the predominant timber species. The area includes deer summer range. Table 3.05-2 shows the Raymond Peak roadless area currently containing 1.76 miles of motorized routes (1.55 NFTS and 0.21 unauthorized) available for public motorized use.

Trumbull Peak

This Trumbull Peak roadless area (6,300 acres) is located in the southern portion of the Forest. Elevations range from 1,400 to 4,800 feet. It is characterized by steep, south-facing slopes and hot summer temperatures. Vegetative is mostly chamise chaparral and live oak with some ponderosa pine at higher elevations. Soils are generally shallow, gravelly loams and sandy loams developed from meta-sedimentary and granitic rock. Trumbull Peak Lookout is a prominent feature. The area is a major deer winter range for a portion of the Yosemite herd. Table 3.05-2 shows the Trumbull Peak roadless area currently containing 1.25 miles of NFTS motorized routes that are not available for public motorized use. This area does not contain any unauthorized motorized routes.

Tryon Peak

Tryon Peak portion (3,400 acres) of the original Carson-Iceberg roadless area is a proposed Wilderness addition located in the northeast corner of the Forest between the Sierra Nevada crest and Highland Lakes Road. Elevations range from 8,100 to 9,970 feet. Mountain peaks, glaciated valleys with large meadows, and scattered timber characterize the area. Recreation use, primarily hikers from the Highland Lakes area and along the Pacific Crest Trail, is moderate while hunters use the area in the fall. Soils between extensive rock outcrops in the uplands are generally shallow to moderately deep, stony coarse sandy loams developed from volcanic and granitic bedrock and glacial debris. The meadows have deep, organic, sandy loams developed from alluvium. Red fir and lodgepole pine are the predominant tree species with Jeffrey pine and mountain hemlock. This area does not contain any NFTS or unauthorized motorized routes.

Tuolumne River

The Tuolumne River roadless area (17,300 acres) is located in the southwest part of the Forest. Elevations range from 900 to 3,900 feet in an area of steep mountain slopes and river canyons. It contains the lower Clavey River and about 18 miles of the Tuolumne Wild and Scenic River used for whitewater boating and dispersed camping. Three campgrounds outside the roadless area near Lumsden Bridge serve as a base for fishing and general nature study. Some deer and quail hunting occur in the fall. Hikers use about eight miles of existing trails to access the river. Vegetative cover is mostly chamise and manzanita chaparral, annual grass and live oak, with small inclusions of ponderosa pine. Soils are shallow to moderately deep sandy loam or clay on north-facing slopes, developed from meta-sedimentary and granitic rocks; some highly erodible. The area includes key deer winter range on the south-facing slopes of Jawbone Ridge and Paper Cabin Ridge. Table 3.05-2 shows the Tuolumne River roadless area currently containing 4.44 miles of motorized routes (3.61 NFTS and 0.83 unauthorized) of which 3.68 miles are available for public motorized use.

Waterhouse

The Waterhouse roadless area (4,400 acres) is located in the central portion of the Forest just east of Pinecrest Lake adjacent to the Emigrant Wilderness. Elevations vary from 5,700 to 8,200 feet. The area consists of the canyon of the upper South Fork Stanislaus River. This area receives recreation use in the form of hiking, fishing, and hunting. Its proximity to the Pinecrest Lake recreation area makes it readily accessible for day use. A trail extends eastward, up the river canyon, from Pinecrest Lake to a series of attractive granite pools and falls. Vegetation is predominantly red fir forest on upper north

slopes with mixed conifer forest on upper south slopes. Lower slopes and the drainage bottom, once scoured by glaciers, are characterized by large expanses of granite with small pockets of vegetation. Pockets of soil are scattered between large expanses of bare, glaciated granitic rock in the lower part of the canyon, while on the ridge to the north, near Pinecrest Peak, soils are very shallow to shallow sandy loams developed from volcanic bedrock. On the slopes between, the soils are shallow to moderately deep, developed from granitic glacial debris. Meadows located in the area are important fawning grounds. Table 3.05-2 shows the Waterhouse roadless area currently containing 4.25 miles of NFTS motorized routes of which 0.55 miles are available for public motorized use. This area does not contain any unauthorized motorized routes.

Wheats Meadow

The Wheats Meadow portion (3,800 acres) of the original Carson-Iceberg roadless area is located in the north-central part of the Forest. Elevations range from 4,900 to 7,700 feet. The northeast portion of the area (1,800 acres) is part of Spicer Meadow Reservoir, and at full reservoir capacity is mostly underwater. Red fir, lodgepole pine, Jeffrey pine, incense cedar and white fir occur in stands and scattered pockets in the western portion of the area. Soils between extensive rock outcrops in the uplands are generally shallow to moderately deep stony coarse sandy loams developed from volcanic and granitic bedrock and glacial debris. Meadows have deep, organic sandy loams developed from alluvium. This area does not contain any NFTS or unauthorized motorized routes.

Table 3.05-3 Additions to the NFTS: Roadless Areas

Route	RD	MI	SRC	Existing			Alternative					Quad		Roadless Area	
				SYS	USE	SUR	1	2	3	4	5	#	Name		
17EV130	CAL	0.27	INV	UNT	MC	NAT	MC			MC			4911	Tamarack	Mt. Reba
17EV275	CAL	0.01	INV	UNT	ALL	NAT	ALL			ALL			4911	Tamarack	Mt. Reba
17EV275	CAL	0.02	INV	UNT	MC	NAT	MC			MC			4911	Tamarack	Mt. Reba
17EV278	CAL	0.73	INV	UNT	ATV	NAT	ATV			ATV			4911	Tamarack	Mt. Reba
subtotal		1.02													
17EV320	GR	0.06	INV	UNT	ATV	NAT	ATV			ATV			4574	Jawbone Ridge	Tuolumne River
17EV321	GR	0.01	INV	UNT	ALL	NAT	ALL			ALL			4574	Jawbone Ridge	Tuolumne River
17EV327	GR	0.25	INV	UNT	ATV	NAT	ATV			ATV			4574	Jawbone Ridge	Tuolumne River
17EV328	GR	0.06	INV	UNT	ATV	NAT	ATV			ATV			4574	Jawbone Ridge	Tuolumne River
17EV329	GR	0.05	INV	UNT	ATV	NAT	ATV			ATV			4574	Jawbone Ridge	Tuolumne River
17EV330	GR	0.10	INV	UNT	ATV	NAT	ATV			ATV			4574	Jawbone Ridge	Tuolumne River
17EV331	GR	0.10	INV	UNT	ALL	NAT	ALL			ALL			4574	Jawbone Ridge	Tuolumne River
17EV332	GR	0.03	INV	UNT	ALL	NAT	ALL			ALL			4574	Jawbone Ridge	Tuolumne River
subtotal		0.65													
18EV301	CAL	0.05	INV	UNT	ALL	NAT	4WD			4WD	4WD		4902	Spicer Mdw Res	Raymond Peak
FR9090	CAL	0.17	MAP	UNT	ALL	NAT	4WD			4WD			4911	Tamarack	Raymond Peak
subtotal		0.21													
FR9441	CAL	0.18	MAP	UNT	ALL	NAT	4WD			ALL	4WD		4911	Tamarack	Carson-Iceberg
subtotal		0.18													
total		2.07													

Roadless Areas - Environmental Consequences

The following section describes how the alternatives affect roadless areas using the following indicators:

- Roadless Area Characteristics (roadless)
- Wilderness Characteristics (wilderness)

Table 3.05-4 Vehicles Class Changes: Roadless Areas

Route	RD	MI	SRC	Existing			Alternative					Quad		Roadless Area
				SYS	USE	SUR	1	2	3	4	5	#	Name	
FR98580	GR	0.03	INV	ML1	ALL	NAT	HLO			ALL		4562	Cherry Lake S	North Mountain
subtotal		0.03												
01N09	GR	2.78	GIS	ML2	ALL	NAT	ADM				ADM	4571	Duckwall Mt	Tuolumne River
01S06B	GR	0.07	GIS	ML2	ALL	NAT	HLO			HLO	HLO	4573	Groveland	Tuolumne River
subtotal		2.85												
03N17Y	MW	0.16	GIS	ML2	ALL	NAT					HLO	4732	Pinecrest	Bell Meadow
subtotal		0.17												
06N33Y	SU	0.92	GIS	ML2	ALL	NAT	HLO				HLO	4903	Donnell Lake	Dome
06N34Y	SU	2.82	GIS	ML2	ALL	NAT	HLO				HLO	4903	Donnell Lake	Dome
06N34YD	SU	0.25	GIS	ML2	ALL	NAT	HLO				HLO	4903	Donnell Lake	Dome
06N36Y	SU	0.75	GIS	ML2	ALL	NAT	ADM				ADM	4904	Dardanelle	Dome
subtotal		4.74												
FR8322	CAL	0.02	MAP	ML2	ALL	NAT	HLO			HLO	HLO	5063	Pacific Valley	Raymond Peak
FR8323	CAL	0.02	MAP	ML2	ALL	NAT	HLO			HLO	HLO	5063	Pacific Valley	Raymond Peak
FR9330	CAL	0.01	MAP	ML2	ALL	NAT	HLO			HLO	HLO	4902	Spicer Mdw Res	Raymond Peak
subtotal		0.05												
06N17B	CAL	0.59	GIS	ML1		NAT	ALL			ALL		4913	Boards Crossing	Carson-Iceberg
06N66YB	CAL	0.43	GIS	ML1		NAT	ALL			ALL		4914	Liberty Hill	Carson-Iceberg
06N80Y	CAL	0.55	GIS	ML1		NAT	ALL			ALL		4914	Liberty Hill	Carson-Iceberg
06N80YA	CAL	0.04	GIS	ML1		NAT	ALL			ALL		4914	Liberty Hill	Carson-Iceberg
subtotal		1.60												
total		9.43												

Alternative 1 (Proposed Action)

DIRECT AND INDIRECT EFFECTS

1. Cross Country Travel

The cross country travel prohibition protects the roadless and wilderness characteristics of each area by preventing route proliferation and reducing the area available for motorized use. Roadless and wilderness characteristics improve over time as unauthorized routes passively restore to natural conditions.

2. Additions to the NFTS

This alternative includes 2.07 miles of unauthorized routes added to the NFTS as trails in roadless areas (see Table 3.05-3) with direct or indirect effects as described below. All routes are located within Forest Plan land allocations allowing motorized use.

Additions to the NFTS affect roadless and wilderness characteristics in the following roadless areas:

- **Carson-Iceberg:** one segment of FR9441 (0.18 miles) accesses the North Fork Diversion Reservoir off 7N17 (Slick Rock). Although this a short trail within and adjacent to an existing developed road corridor, adding a motorized trail could affect non-motorized recreation opportunities by reducing opportunities for solitude in nearby areas.

- **Mt. Reba:** four segments (1.02 miles) in the Jelmini and Bear Trap areas access private property and popular summer and winter motorized and non-motorized opportunities. Noise resulting from motorized use on these routes could affect semi-primitive non-motorized recreation opportunities by reducing opportunities for solitude and increased conflicts between motorized and non-motorized users.
- **Raymond Peak:** one segment of FR9090 (0.17 miles) in Poison Canyon off 7N93 (Mt. Reba Road) and one segment of 18EV301 (0.05 miles) in the Highway 4 corridor above Lake Alpine access popular summer motorized opportunities. Although these are short trails within and adjacent to existing developed road corridors, adding motorized trails could affect non-motorized recreation opportunities by reducing opportunities for solitude in nearby areas.
- **Tuolumne River:** eight segments (0.65 miles) are all in one small area near the intersection of Ferretti and Lumsden roads at the upper reach of the roadless area. Noise resulting from motorized use on these routes could affect semi-primitive non-motorized recreation opportunities by reducing opportunities for solitude in the Tuolumne River canyon.

3. Changes to the Existing NFTS

Vehicle Class Changes

Vehicle class changes would occur on 9.27 miles of NFTS roads including: opening 1.63 miles of closed roads; closing to public use 3.53 miles of open roads; and, converting 4.12 miles of roads from all vehicles to highway legal only (see Table 3.05-4) with direct or indirect effects as described below.

Vehicle class changes affect roadless and wilderness characteristics in the following roadless areas:

- **Carson-Iceberg:** four NFTS road segments (1.60 miles) change from closed to all vehicles. Although these roads are within and adjacent to existing developed road corridors, opening a closed road could affect non-motorized recreation opportunities by reducing opportunities for solitude in nearby areas.
- **North Mountain:** one NFTS road segment of FR98580 (0.03 miles) changes from closed to highway legal only. Although this is a short route within and adjacent to an existing developed road corridor, opening a closed road could affect non-motorized recreation opportunities by reducing opportunities for solitude in nearby areas.

Vehicle class changes do not affect roadless and wilderness characteristics in the following roadless areas:

- **Dome:** three NFTS road segments (3.99 miles) change from all vehicles to highway legal only, improving roadless and wilderness characteristics because they prohibit non-highway legal vehicles. One NFTS road segment of 6N36Y (0.75 miles) changes from open to closed (administrative use only), improving roadless and wilderness characteristics because it prohibits existing public motorized use.
- **Raymond Peak:** three NFTS road segments (0.05 miles) change from all vehicles to highway legal only, improving roadless and wilderness characteristics because they prohibit non-highway legal vehicles.
- **Tuolumne River:** one NFTS road segment of 1N09 (2.78 miles) changes from open to closed (administrative use only), improving roadless and wilderness characteristics because it prohibits existing public motorized use. One NFTS road segment of 1S06B (0.07 miles) changes from all vehicles to highway legal only, improving roadless and wilderness characteristics because it prohibits non-highway legal vehicles and is a short route within and adjacent to an existing developed road corridor.

Season of Use

Season of use restrictions and wet weather closures protect roadless and wilderness characteristics for undisturbed soil, water and air resources; quality of water resources; and, opportunities for semi-primitive non-motorized recreation opportunities during the closure period.

CUMULATIVE EFFECTS

The past, present or reasonably foreseeable future actions identified in Appendix B (Cumulative Effects Analysis) do not include any actions likely to affect roadless or wilderness characteristics. Therefore, the direct and indirect effects disclosed above are the only cumulative effects on roadless areas.

Alternative 2 (No Action)

DIRECT AND INDIRECT EFFECTS

1. Cross Country Travel

Alternative 2 (No Action) could reduce roadless and wilderness character in all roadless areas because it allows the potential for cross country travel across all 136,100 acres of roadless area outside of designated Wilderness.

Increased noise generated by motor vehicles and more evidence of human activity due to cross country travel with continued route proliferation could significantly alter the following roadless characteristics:

- High quality or undisturbed soil, water and air would be degraded
- Sources of public drinking water would be at higher risk
- Diversity of plant and animal communities would be diminished
- Habitat for threatened, endangered, proposed, candidate, and sensitive species and for those species dependent on large, undisturbed areas of land would be degraded
- Primitive and Semi-Primitive Non- Motorized recreation opportunities would be reduced
- Natural appearing landscapes with high scenic quality would be adversely impacted.

Cross country travel with continued route proliferation could significantly alter the following wilderness characteristics:

- **Natural:** ecological systems no longer appear substantially free from the effects of modern civilization and affected primarily by forces of nature due to potential introduction of noxious weed species that alter the composition of natural plant communities and pollutants that degrade water quality.
- **Undeveloped:** increased evidence of human presence, use and occupation due to user-created trail treads with wheel tracks.
- **Outstanding Opportunities for Solitude or Primitive and Unconfined Recreation:** reduced opportunities for solitude or primitive and unconfined types of recreation due to evidence of user-create trail treads with wheel tracks and noise generated by motor vehicles.

2. Additions to the NFTS

No direct or indirect effects on roadless areas because no unauthorized routes are added to the NFTS.

3. Changes to the Existing NFTS

No direct or indirect effects on roadless areas because no changes are made to the NFTS or existing closures.

CUMULATIVE EFFECTS

This alternative contributes towards cumulative effects on roadless areas because additional future route proliferation will adversely affect roadless and wilderness characteristics.

Alternative 3 (Cross Country Prohibited)

DIRECT AND INDIRECT EFFECTS

1. Cross Country Travel

Same as Alternative 1.

2. Additions to the NFTS

No direct or indirect effects on roadless areas because no unauthorized routes are added to the NFTS.

3. Changes to the Existing NFTS

No direct or indirect effects on roadless areas because no changes are made to the NFTS or existing closures.

CUMULATIVE EFFECTS

The past, present or reasonably foreseeable future actions identified in Appendix B (Cumulative Effects Analysis) do not include any actions likely to affect roadless or wilderness characteristics. Therefore, the direct and indirect effects disclosed above are the only cumulative effects on roadless areas.

Alternative 4 (Recreation)

DIRECT AND INDIRECT EFFECTS

1. Cross Country Travel

Same as Alternative 1.

2. Additions to the NFTS

Same as Alternative 1.

3. Changes to the Existing NFTS

Vehicle Class Changes

Vehicle class changes would occur on 1.70 miles of NFTS roads including: opening 1.63 miles of closed roads; and, converting 0.07 miles of roads from all vehicles to highway legal only (see Table 3.05-4) with direct or indirect effects as described below.

Vehicle class changes affect roadless and wilderness characteristics in the following roadless areas:

- **Carson-Iceberg:** four NFTS road segments (1.60 miles) change from closed to all vehicles. Although these roads are within and adjacent to existing developed road corridors, opening a closed road could affect non-motorized recreation opportunities by reducing opportunities for solitude in nearby areas.
- **North Mountain:** one NFTS road segment of FR98580 (0.03 miles) changes from closed to highway legal only. Although this is a short route within and adjacent to an existing developed road corridor, opening a closed road could affect non-motorized recreation opportunities by reducing opportunities for solitude in nearby areas.

Vehicle class changes do not affect roadless and wilderness characteristics in the following roadless areas:

- **Raymond Peak:** three NFTS road segments (0.05 miles) change from all vehicles to highway legal only, improving roadless and wilderness characteristics because they prohibit non-highway legal vehicles.
- **Tuolumne River:** one NFTS road segment of 1S06B (0.07 miles) changes from all vehicles to highway legal only, improving roadless and wilderness characteristics because it prohibits non-highway legal vehicles and is a short route within and adjacent to an existing developed road corridor.

Season of Use

Same as Alternative 1.

CUMULATIVE EFFECTS

The past, present or reasonably foreseeable future actions identified in Appendix B (Cumulative Effects Analysis) do not include any actions likely to affect roadless or wilderness characteristics. Therefore, the direct and indirect effects disclosed above are the only cumulative effects on roadless areas.

Alternative 5 (Resources)

DIRECT AND INDIRECT EFFECTS

1. **Cross Country Travel**

Same as Alternative 1.

2. **Additions to the NFTS**

This alternative includes 0.23 miles of unauthorized routes added to the NFTS as trails (see Table 3.05-3) with direct or indirect effects as described below.

Additions to the NFTS affect roadless and wilderness characteristics in the following roadless areas:

- **Carson-Iceberg:** one segment of FR9441 (0.18 miles) accesses the North Fork Diversion Reservoir off 7N17 (Slick Rock). Although this is a short trail within and adjacent to an existing developed road corridor, adding a motorized trail could affect non-motorized recreation opportunities by reducing opportunities for solitude in nearby areas.
- **Raymond Peak:** one segment of 18EV301 (0.05 miles) in the Highway 4 corridor above Lake Alpine accesses popular summer motorized opportunities. Although this is a short trail within and adjacent to existing developed road corridors, adding a motorized trail could affect non-motorized recreation opportunities by reducing opportunities for solitude in nearby areas.

3. **Changes to the Existing NFTS**

Vehicle Class Changes

Vehicle class changes would occur on 7.81 miles of NFTS roads including: closing to public use 3.53 miles of open roads; and, converting 4.28 miles of roads from all vehicles to highway legal only (see Table 3.05-4) with direct or indirect effects as described below.

Vehicle class changes do not affect roadless and wilderness characteristics in the following roadless areas because:

- **Bell Meadow:** one NFTS road segment of 3N17Y (0.16 miles) changes from all vehicles to highway legal only, improving roadless and wilderness characteristics because it prohibits non-highway legal vehicles.

- **Dome:** three NFTS road segments (3.99 miles) change from all vehicles to highway legal only, improving roadless and wilderness characteristics because they prohibit non-highway legal vehicles. One NFTS road segment of 6N36Y (0.75 miles) changes from open to closed (administrative use only), improving roadless and wilderness characteristics because it prohibits existing public motorized use.
- **Raymond Peak:** three NFTS road segments (0.05 miles) change from all vehicles to highway legal only, improving roadless and wilderness characteristics because they prohibit non-highway legal vehicles.
- **Tuolumne River:** one NFTS road segment of 1N09 (2.78 miles) changes from open to closed (administrative use only), improving roadless and wilderness characteristics because it prohibits existing public motorized use. One NFTS road segment of 1S06B (0.07 miles) changes from all vehicles to highway legal only, improving roadless and wilderness characteristics because it prohibits non-highway legal vehicles and it is a short route within and adjacent to an existing developed road corridor.

Season of Use

Same as Alternative 1.

CUMULATIVE EFFECTS

The past, present or reasonably foreseeable future actions identified in Appendix B (Cumulative Effects Analysis) do not include any actions likely to affect roadless or wilderness characteristics. Therefore, the direct and indirect effects disclosed above are the only cumulative effects on roadless areas.

Research Natural Areas - Affected Environment

The following discussions focus on the 4 RNAs, totaling 2,453 acres on the Stanislaus National Forest (see Figure 3.05-1).

Bell Meadow Research Natural Area

Bell Meadow RNA (490 acres) designated for aspen research is located in the east-central portion of the Forest. It contains 110 acres of aspen stands in Bell Meadow along with wet mountain meadow, riparian habitat and examples of the aspen-meadow complex on deep soils.

Clark Fork Candidate Research Natural Area

Clark Fork Candidate RNA (460 acres) designated for white fir research is located in the northeast portion of the Forest near Clark Fork Campground. It includes various mixtures of white fir and other conifers at a range of elevations. Part of the area (250 acres) is within the Bald Peak proposed addition to the Carson-Iceberg Wilderness and the remainder is within the Clark Fork proposed Wild and Scenic River.

Critchfield (Bourland Meadow) Research Natural Area

Critchfield RNA (1,003 acres) designated for bogs and meadow research is located in the east-central portion of the Forest adjacent to the Emigrant Wilderness. Vegetation consists of seven major associations: red fir, red fir-lodgepole pine, red fir-western white pine-lodgepole pine, red fir-white fir-Jeffrey pine, red fir-white fir, and red fir-aspen. Wet and dry meadows are present and the area is noted for aquatic bog values. Stages of succession are present in several stands, including meadows.

Grizzly Mountain Research Natural Area

Grizzly Mountain RNA (500 acres) designated for black oak research is located in the southern portion of the Forests on the northern slopes of Little Grizzly and Big Grizzly Mountains. Black oak stands occupy most of the area, interspersed with brush and scattered ponderosa pine.

Research Natural Areas - Environmental Consequences

Since unauthorized or NFTS routes do not exist within RNAs the following section describes only the effects of cross country travel on RNAs using the following indicator:

- RNA values

Alternative 1 (Proposed Action)

DIRECT AND INDIRECT EFFECTS

1. Cross Country Travel

The cross country travel prohibition protects the RNA values of each area by preventing route proliferation and reducing the area available for motorized use.

CUMULATIVE EFFECTS

The past, present or reasonably foreseeable future actions identified in Appendix B (Cumulative Effects Analysis) do not include any actions likely to affect RNA values. Therefore, the direct and indirect effects disclosed above are the only cumulative effects on roadless areas.

Alternative 2 (No Action)

DIRECT AND INDIRECT EFFECTS

1. Cross Country Travel

Alternative 2 (No Action) could reduce RNA values in all RNAs because it allows the potential for cross country travel across all 2,453 acres of RNAs. Cross country travel with continued route proliferation could significantly reduce botanic, cultural, heritage, historic and scenic values across all RNAs.

CUMULATIVE EFFECTS

This alternative contributes towards cumulative effects on RNAs because additional future route proliferation will adversely affect RNA values.

Alternative 3 (Cross Country Prohibited)

DIRECT AND INDIRECT EFFECTS

1. Cross Country Travel

Same as Alternative 1.

CUMULATIVE EFFECTS

Same as Alternative 1.

Alternative 4 (Recreation)

DIRECT AND INDIRECT EFFECTS

1. Cross Country Travel

Same as Alternative 1.

CUMULATIVE EFFECTS

Same as Alternative 1.

Alternative 5 (Resources)

DIRECT AND INDIRECT EFFECTS

1. Cross Country Travel

Same as Alternative 1.

CUMULATIVE EFFECTS

Same as Alternative 1.

Special Interest Areas - Affected Environment

Five SIAs do not contain NFTS or unauthorized motorized routes: Bourland Creek, Emigrant Road and the Big Trees-Carson Valley Road, Pacific Madrone, Sonora-Mono Toll Road and Windeler Cave. Table 3.05-5 shows that the remaining six SIAs currently contain 11.71 miles of motorized routes (10.94 NFTS and 0.77 unauthorized) of which 10.29 miles are available for public motorized use.

The following discussions focus on the 11 SIAs, totaling 2,468 acres and three historic road corridors on the Stanislaus National Forest¹ (see Figure 3.05-1).

Table 3.05-5 Existing Motorized Routes: Special Interest Areas

Special Interest Area	NFTS Roads					NFTS Trails			NFTS total	UNR UNT	total
	ADM	ALL	ML1	HLO	total	ALL	ATV	total			
Bull Run	0.00	0.06	0.00	0.00	0.06	0.18	0.00	0.18	0.24	0.00	0.24
Column of the Giants	0.00	0.00	0.00	0.39	0.39	0.00	0.00	0.00	0.39	0.00	0.39
Jawbone Falls	0.00	0.74	0.01	0.00	0.75	0.00	0.00	0.00	0.75	0.00	0.75
Jordan Cr/Bower Cave	0.00	4.33	0.38	0.20	4.91	0.00	0.00	0.00	4.91	0.77	5.68
Niagara Creek and Falls	0.00	1.40	0.68	0.00	2.08	0.05	0.00	0.05	2.12	0.00	2.12
Trumbull Peak	0.00	2.17	0.36	0.00	2.53	0.00	0.00	0.00	2.53	0.00	2.53
total	0.00	8.70	1.42	0.59	10.71	0.23	0.00	0.23	10.94	0.77	11.71

ADM and ML1 are closed to public motorized use

UNR and UNT are unauthorized roads and unauthorized trails

Bourland Creek Trestle Historic Area

The Bourland Creek Trestle SIA (0.5 acres) contains a large, curved, wooden trestle that once supported rails for the Westside Railroad logging system. It was built in the early 1920s. It is 315 feet long and 76 feet above Bourland Creek. The trestle has 22 bents that are spaced 14 feet on center. It is anchored by rough aggregate concrete abutments and piers. This area does not contain any NFTS or unauthorized motorized routes.

Bull Run Scenic and Geologic Area

The Bull Run SIA (230 acres) consists of a rugged lava-capped ridge of horseshoe shape enclosing a forested bowl. It contains a variety of unique rock formations formed through volcanic and glacial action. Table 3.05-5 shows that the Bull Run SIA currently contains 0.24 miles of NFTS motorized routes of which 0.18 miles are available for public motorized use. This area does not contain any unauthorized motorized routes.

Columns of the Giants Scenic and Geologic Area

Column of the Giants SIA (105 acres) includes a unique formation of columnar basalt. A National Recreation Trail accesses the area. It is a miniature “Devil’s Postpile” approximately 21 miles

¹ Five other SIAs are administratively confidential, in order to protect location information for non-renewable resources subject to vandalism.

northeast of Strawberry along Highway 108. Table 3.05-5 shows that the Column of the Giants SIA currently contains 0.39 miles of NFTS motorized routes available for public motorized use. This area does not contain any unauthorized motorized routes.

Emigrant Road and the Big Trees-Carson Valley Road Historic Areas

The Emigrant Road and the Big Trees-Carson Valley Road SIA contains segments of two of the historic routes over the Sierra from the 1800s. The Emigrant Road runs parallel and south of Highway 4 from Mosquito Lakes to Lake Alpine. The Big Trees-Carson Valley Road goes from Lake Alpine south and west to Alpine Station. This area does not contain any NFTS or unauthorized motorized routes.

Jawbone Falls Heritage Area

The Jawbone Falls SIA (47 acres) contains special heritage resources on Jawbone Creek, between Jawbone Falls and Jawbone Meadow. Table 3.05-5 shows that the Jawbone Falls SIA currently contains 0.75 miles of NFTS motorized routes of which 0.74 miles are available for public motorized use. This area does not contain any unauthorized motorized routes.

Jordan Creek/Bower Cave Cultural and Geologic Area

The Jordan Creek/Bower Cave SIA (1,600 acres) includes the former Linkletter Ranch property which was acquired through a land exchange in December, 1990. It is situated in a botanically diverse location due to several geological features. Three prominent drainages cut through the area allowing for a wide variety of slope aspects as well as riparian and meadow habitats. Outcrops of limestone/marble and areas of differing soil depths contribute to the wide variety of plant life. Six plant communities are represented within the SIA: freshwater marsh; mixed-conifer forest; lower montane meadow; streamside riparian; foothill woodland; and chaparral. Bower Cave is a unique limestone cavern, once a popular recreation attraction in the early 1900s and has Native American sacred values. It is located in the southwest portion of the Forest along the North Fork Merced River. Table 3.05-5 shows that the Jordan Creek/Bower Cave SIA currently contains 5.68 miles of motorized routes (4.91 NFTS and 0.77 unauthorized) of which 5.30 miles are available for public motorized use.

Niagara Creek and Falls Scenic and Geologic Area

The Niagara Falls SIA (320 acres) is located adjacent to Donnell Reservoir. It includes a "hanging valley" waterfall over 900 feet high. It is the highest waterfall on the Forest and is the Forest's only true hanging valley waterfall. This portion of Niagara Creek is also a proposed Wild and Scenic River. Table 3.05-5 shows that the Niagara Creek and Falls SIA currently contains 2.12 miles of NFTS motorized routes of which 1.45 miles are available for public motorized use. This area does not contain any unauthorized motorized routes.

Pacific Madrone Botanic Area

The Pacific Madrone SIA (15 acres) contains the two southernmost known groves of Pacific Madrone (*Arbutus menziesii*). About 0.1 miles apart, the two groves together contain 20 mature and sapling trees and some seedlings surrounded by riparian vegetation. This area does not contain any NFTS or unauthorized motorized routes.

Sonora-Mono Toll Road Historic Area

The Sonora-Mono Toll Road SIA is an old trans-Sierra road roughly following Highway 108 from Sonora Pass to Eagle Meadow Road (5N01). Other segments of the historic road are thought to exist west of 5N01, but their exact location is unknown. This area does not contain any NFTS or unauthorized motorized routes.

Trumbull Peak Historic and Botanic Area

The Trumbull Peak SIA (150 acres) includes the upper slopes of Trumbull Peak, the Trumbull Peak Lookout, a railroad spur and two logging inclines. The historical features date back to the 1920s. The abandoned inclines total about 1.75 miles. A railroad spur to the longest incline, overlooking the Merced River Canyon, is about 4,000 feet long. The Trumbull Peak Lookout is located on a ridge south of Trumbull Peak at the end of a 0.25 mile non-motorized trail. The area includes populations of three sensitive plants: *Allium yosemitense*, *Eriophyllum congdoni*, and *Lewisia congdonii*. Table 3.05-5 shows that the Trumbull Peak SIA currently contains 2.53 miles of NFTS motorized routes of which 2.17 miles are available for public motorized use. This area does not contain any unauthorized motorized routes.

Windelar Cave Geologic Area

The Windelar Cave SIA (0.5 acres) consists of a limestone cave, thought to be over 2,500 feet long, containing a variety of stalactite and stalagmite formations. This area does not contain any NFTS or unauthorized motorized routes.

Special Interest Areas - Environmental Consequences

The following section describes how the alternatives affect SIAs using the following indicator:

- SIA values

Table 3.05-6 Additions to the NFTS: Special Interest Areas

Route	RD	MI	SRC	Existing			Alternative					Quad		Special Interest Area	
				SYS	USE	SUR	1	2	3	4	5	#	Name		
FR10178	GR	0.48	MAP	UNR	ALL	NAT	4WD				4WD		4391	Buckhorn Peak	Jordan Cr/Bower Cave
FR98486	GR	0.21	INV	UNT	ALL	NAT	ALL				ALL		4391	Buckhorn Peak	Jordan Cr/Bower Cave
FR98488	GR	0.05	INV	UNT	ALL	NAT	4WD				4WD		4391	Buckhorn Peak	Jordan Cr/Bower Cave
FR98510	GR	0.04	INV	UNT	ALL	NAT	4WD				4WD		4574	Jawbone Ridge	Jordan Cr/Bower Cave
total		0.78													

Table 3.05-7 Vehicles Class Changes: Special Interest Areas

Route	RD	MI	SRC	Existing			Alternative					Quad		Special Interest Area	
				SYS	USE	SUR	1	2	3	4	5	#	Name		
02S24Y	GR	0.32	GIS	ALL	ALL	NAT	HLO				HLO	HLO	4391	Buckhorn Peak	Jordan Cr/Bower Cave
FR4898	GR	0.09	GIS	ALL	ALL	NAT	ADM					ADM	4574	Jawbone Ridge	Jordan Cr/Bower Cave
FR4898	GR	0.22	GIS	ALL	ALL	NAT	ADM					ADM	4574	Jawbone Ridge	Jordan Cr/Bower Cave
FR8602	GR	0.23	MAP	ALL	ALL	NAT	ADM					ADM	4574	Jawbone Ridge	Jordan Cr/Bower Cave
subtotal		0.86													
02S20C	GR	0.37	GIS	ML1		NAT	t-ALL				t-ALL		4381	EI Portal	Trumbull Peak
subtotal		0.37													
total		1.23													

Alternative 1 (Proposed Action)

DIRECT AND INDIRECT EFFECTS

1. Cross Country Travel

The cross country travel prohibition protects the SIA values of each area by preventing route proliferation and reducing the area available for motorized use. SIA values improve over time as unauthorized routes passively restore to natural conditions.

2. Additions to the NFTS

This alternative includes 0.78 miles of unauthorized routes added to the NFTS as trails in SIAs (see Table 3.05-6) with direct or indirect effects as described below. All routes are located within Forest Plan land allocations allowing motorized use.

Additions to the NFTS do not affect SIA values in the following SIA because:

- **Jordan Creek/Bower Cave:** four segments (0.78 miles) in the Jordan Creek area access popular dispersed recreation opportunities, not affecting SIA values because these are short trails within and adjacent to existing developed road corridors.

3. Changes to the Existing NFTS

Vehicle Class Changes

Vehicle class changes would occur on 1.23 miles of NFTS roads including: converting 0.37 miles of closed roads to a trail open to all vehicles; changing 0.32 miles from all vehicles to highway legal only; and, closing 0.54 miles of open roads (see Table 3.05-7) with direct or indirect effects as described below.

Vehicle class changes do not affect SIA values in the following SIAs because:

- **Jordan Creek/Bower Cave:** three NFTS road segments (0.54 miles) change from open to closed (administrative use only), improving SIA values because they eliminate existing motorized use. One NFTS road segment of 2S24Y (0.32 miles) changes from all vehicles to highway legal only, improving SIA values because it prohibits non-highway legal vehicles.
- **Trumbull Peak:** one NFTS road segment of 2S20C (0.37 miles) converts from a closed road to a trail open to all vehicles, not affecting SIA values because it is a short route within and adjacent to existing developed road corridors over 1 mile from the actual Trumbull Peak Lookout site.

Season of Use

Season of use restrictions and wet weather closures protect the special values of all SIAs by prohibiting motorized use during the closure period.

CUMULATIVE EFFECTS

The past, present or reasonably foreseeable future actions identified in Appendix B (Cumulative Effects Analysis) do not include any actions likely to affect SIA values. Therefore, the direct and indirect effects disclosed above are the only cumulative effects on SIAs.

Alternative 2 (No Action)

DIRECT AND INDIRECT EFFECTS

1. Cross Country Travel

Alternative 2 (No Action) could reduce values in all SIAs because it allows the potential for cross country travel across all 2,468 acres of SIAs and one historic road corridor. Cross country travel with continued route proliferation could significantly reduce botanic, cultural, heritage, historic and scenic values across all SIAs.

2. Additions to the NFTS

No direct or indirect effects on SIAs without unauthorized routes added to the NFTS.

3. Changes to the Existing NFTS

No direct or indirect effects on SIAs without changes to the existing NFTS or existing closures.

CUMULATIVE EFFECTS

This alternative contributes towards cumulative effects on SIAs because additional future route proliferation will adversely affect SIA values.

Alternative 3 (Cross Country Prohibited)

DIRECT AND INDIRECT EFFECTS

1. Cross Country Travel

Same as Alternative 1.

2. Additions to the NFTS

No direct or indirect effects on SIAs without unauthorized routes added to the NFTS as trails.

3. Changes to the Existing NFTS

No direct or indirect effects on SIAs without changes to the existing NFTS or existing closures.

CUMULATIVE EFFECTS

The past, present or reasonably foreseeable future actions identified in Appendix B (Cumulative Effects Analysis) do not include any actions likely to affect SIA values. Therefore, the direct and indirect effects disclosed above are the only cumulative effects on SIAs.

Alternative 4 (Recreation)

DIRECT AND INDIRECT EFFECTS

1. Cross Country Travel

Same as Alternative 1.

2. Additions to the NFTS

Same as Alternative 1.

3. Changes to the Existing NFTS

Vehicle Class Changes

Vehicle class changes would occur on 0.69 miles of NFTS roads including: converting 0.37 miles of closed roads to a trail open to all vehicles; and, changing 0.32 miles from all vehicles to highway legal only (see Table 3.05-7) with direct or indirect effects as described below.

Vehicle class changes do not affect SIA values in the following SIAs because:

- **Jordan Creek/Bower Cave:** one NFTS road segment of 2S24Y (0.32 miles) changes from all vehicles to highway legal only, improving SIA values because it prohibits non-highway legal vehicles.
- **Trumbull Peak:** one NFTS road segment of 2S20C (0.37 miles) converts from a closed road to a trail open to all vehicles, not affecting SIA values because it is a short route within and adjacent to existing developed road corridors over 1 mile from the actual Trumbull Peak Lookout site.

Season of Use

Same as Alternative 1.

CUMULATIVE EFFECTS

The past, present or reasonably foreseeable future actions identified in Appendix B (Cumulative Effects Analysis) do not include any actions likely to affect SIA values. Therefore, the direct and indirect effects disclosed above are the only cumulative effects on SIAs.

Alternative 5 (Resources)

DIRECT AND INDIRECT EFFECTS

1. Cross Country Travel

Same as Alternative 1.

2. Additions to the NFTS

No direct or indirect effects on SIAs without unauthorized routes added to the NFTS.

3. Changes to the Existing NFTS

Vehicle Class Changes

Vehicle class changes would occur on 1.23 miles of NFTS roads including: converting 0.37 miles of closed roads to a trail open to all vehicles; changing 0.32 miles from all vehicles to highway legal only; and, closing 0.54 miles of open roads (see Table 3.05-7) with direct or indirect effects as described below.

Vehicle class changes do not affect SIA values in the following SIA because:

- **Jordan Creek/Bower Cave:** three NFTS road segments (0.54 miles) change from open to closed (administrative use only), improving SIA values because they eliminate existing motorized use. One NFTS road segment of 2S24Y (0.32 miles) changes from all vehicles to highway legal only, improving SIA values because it prohibits non-highway legal vehicles.

Vehicle Class Changes

Season of Use

Same as Alternative 1.

CUMULATIVE EFFECTS

The past, present or reasonably foreseeable future actions identified in Appendix B (Cumulative Effects Analysis) do not include any actions likely to affect SIA values. Therefore, the direct and indirect effects disclosed above are the only cumulative effects on SIAs.

Wild and Scenic Rivers and Proposed Wild and Scenic Rivers - Affected Environment

Wild and Scenic Rivers and Proposed Wild and Scenic Rivers are managed to preserve their notable values or features as part of, or for eventual inclusion in, the National Wild and Scenic River System. On the Stanislaus National Forest this management applies to those National Forest lands within 1/4 mile on either side of approximately 29 miles of the Tuolumne Wild and Scenic River; 11 miles of the Merced Wild and Scenic River; and, 160 miles of Proposed Wild and Scenic Rivers.

The Stanislaus Proposed Wild and Scenic River does not contain authorized or unauthorized motorized routes. Table 3.05-8 shows that the remaining 9 Wild and Scenic Rivers and Proposed Wild and Scenic Rivers currently contain 84.29 miles of motorized routes (77.75 NFTS and 6.54 unauthorized) of which 68.66 miles are available for public motorized use.

Table 3.05-8 Existing Motorized Routes: Wild and Scenic Rivers

Wild and Scenic Rivers	NFTS Roads					NFTS Trails			NFTS total	UNR UNT	total
	ADM	ALL	ML1	HLO	total	ALL	ATV	total			
Clark Fork	2.00	1.49	1.14	4.32	8.95	0.00	0.00	0.00	8.95	0.00	8.95
Clavey	0.00	21.86	1.09	3.59	26.54	0.07	0.00	0.07	26.61	5.44	32.05
Merced	1.58	0.00	0.00	0.00	1.58	0.00	0.00	0.00	1.58	0.00	1.58
Middle Fork Stanislaus	2.16	2.77	3.03	10.92	18.88	0.28	0.00	0.28	19.16	0.00	19.16
Niagara Creek	0.00	1.40	0.68	0.00	2.08	0.02	0.00	0.02	2.10	0.00	2.10
North Fork Mokelumne	0.00	1.12	0.00	0.90	2.02	0.00	0.00	0.00	2.02	1.10	3.12
North Fork Stanislaus	2.55	3.85	0.25	2.68	9.34	0.00	0.00	0.00	9.34	0.00	9.34
South Fork Tuolumne	0.00	0.14	0.99	0.20	1.33	0.00	0.00	0.00	1.33	0.00	1.33
Tuolumne	0.00	6.06	0.16	0.44	6.66	0.00	0.00	0.00	6.66	0.00	6.66
total	8.29	38.70	7.34	23.05	77.38	0.37	0.00	0.37	77.75	6.54	84.29

ADM and **ML1** are closed to public motorized use

UNR and **UNT** are unauthorized roads and unauthorized trails

The following discussions focus on the 2 Wild and Scenic Rivers and 8 Proposed Wild and Scenic Rivers, totaling 200 miles on the Stanislaus National Forest (see Figure 3.05-1). Each provides a brief description of the river listing their OR values. Detailed information about each river is contained in the project record.

Clark Fork

This portion of the Clark Fork Proposed Wild and Scenic River includes the 9 mile Recreational segment from the Carson-Iceberg Wilderness to the Middle Fork Stanislaus. The 8 mile Wild segment within Wilderness is not included. The river is located in the north-central portion of the Forest. OR values include recreation and scenic. Table 3.05-8 shows that the Clark Fork Proposed Wild and Scenic River currently contains 8.95 miles of NFTS motorized routes of which 5.81 miles are available for public motorized use. This area does not contain any unauthorized motorized routes.

Clavey River

The Clavey Proposed Wild and Scenic River includes 28 miles of Wild and 14 miles of Scenic segments including its tributaries Bell Creek and Lily Creek. The 5 miles of Wild segments within Wilderness are not included. OR values include ecologic, fish, recreation, scenic and wildlife. Table 3.05-8 shows that the Clavey Proposed Wild and Scenic River currently contains 32.05 miles of motorized routes (26.61 NFTS and 5.44 unauthorized) of which 30.96 miles are available for public motorized use.

Merced Wild and Scenic River

The Stanislaus National Forest portion of the Merced Wild and Scenic River includes the 11 mile Recreation segment from Yosemite National Park to the lower National Forest boundary. The Stanislaus National Forest portion of the Merced Wild and Scenic River forms the boundary between the Stanislaus and Sierra National Forests². OR values include recreation, scenic and whitewater boating. Table 3.05-8 shows that the Merced Wild and Scenic River currently contains 1.58 miles of NFTS motorized routes that are not available for public motorized use. This area does not contain any unauthorized motorized routes.

Middle Fork Stanislaus River

The Middle Fork Stanislaus Proposed Wild and Scenic River includes 6.5 miles of Wild and 20 miles of Recreational segments including its tributary Deadman Creek. The 15 miles of Wild segments (Kennedy Creek and Summit Creek) within Wilderness are not included. The river is located in the east and central portions of the Forest. OR values include fish, geologic, historic/cultural, recreation,

² By special agreement, the Sierra National Forest manages the Merced Wild and Scenic River corridor.

wildlife and other. Table 3.05-8 shows that the Middle Fork Stanislaus Proposed Wild and Scenic River currently contains 19.16 miles of NFTS motorized routes of which 13.97 miles are available for public motorized use. This area does not contain any unauthorized motorized routes.

Niagara Creek

The Niagara Creek Proposed Wild and Scenic River includes the 1 mile eligible Scenic segment from Highway 108 to Donnell Reservoir. The creek is located in the north-central portion of the Forest. OR values include geologic and scenic. Table 3.05-8 shows that the Niagara Creek Proposed Wild and Scenic River currently contains 2.10 miles of NFTS motorized routes of which 1.42 miles are available for public motorized use. This area does not contain any unauthorized motorized routes.

North Fork Mokelumne River

This portion of the North Fork Mokelumne Proposed Wild and Scenic River includes the 9 mile Recreational segment from Highland Lake to the Mokelumne Wilderness boundary. The 18 mile Wild segment within Wilderness is not included³. The river is located in the northern portion of the Forest and forms part of the boundary between the Stanislaus and Eldorado National Forests. OR values include recreation and scenic. Table 3.05-8 shows that the North Fork Mokelumne Proposed Wild and Scenic River currently contains 3.12 miles of motorized routes (2.02 NFTS and 1.10 unauthorized) available for public motorized use.

North Fork Stanislaus River

The North Fork Stanislaus Proposed Wild and Scenic River includes 20 miles of Wild and 3 miles of Recreational segments from Highland Creek to the Middle Fork Stanislaus. The river is located in the west-central portion of the Forest. OR values include recreation, scenic, wildlife and other⁴. Table 3.05-8 shows that the North Fork Stanislaus Proposed Wild and Scenic River currently contains 9.34 miles of NFTS motorized routes of which 6.54 miles are available for public motorized use. This area does not contain any unauthorized motorized routes.

South Fork Tuolumne River

The South Fork Tuolumne Proposed Wild and Scenic River includes the 2 mile Scenic segment from the Middle Fork Tuolumne to the Tuolumne. The river is located in the south-central portion of the Forest. OR values include scenic and other. Table 3.05-8 shows that the South Fork Tuolumne Proposed Wild and Scenic River currently contains 1.33 miles of NFTS motorized routes of which 0.34 miles are available for public motorized use. This area does not contain any unauthorized motorized routes.

Stanislaus River

The Stanislaus Proposed Wild and Scenic River includes the 1.5 mile Wild segment from the North Fork/Middle Fork Stanislaus confluence to Clark Flat. The river is located near the western boundary of the Forest. OR values include recreation and scenic. This area does not contain any NFTS or unauthorized motorized routes.

Tuolumne Wild and Scenic River

The Stanislaus National Forest portion of the Tuolumne Wild and Scenic River includes 24 miles of Wild, 4 miles of Scenic and 1 mile of Recreational segments. The river is located in the south-central part of the Forest. OR values include fish, geologic, historic/cultural, recreation, scenic, scientific/educational, whitewater boating and wilderness characteristics. Table 3.05-8 shows that the Tuolumne Wild and Scenic River currently contains 6.66 miles of NFTS motorized routes of which

³ By special agreement, the Eldorado National Forest manages the North Fork Mokelumne below Salt Springs.

⁴ Other: considered sensitive because they are fragile or nonrenewable.

6.06 miles are available for public motorized use. This area does not contain any unauthorized motorized routes.

Wild and Scenic Rivers and Proposed Wild and Scenic Rivers - Environmental Consequences

The following section describes how the alternatives affect Wild and Scenic Rivers and Proposed Wild and Scenic Rivers using the following indicator:

- Wild and Scenic River Values (OR values)

Alternative 1 (Proposed Action)

DIRECT AND INDIRECT EFFECTS

1. Cross Country Travel

The cross country travel prohibition protects the OR values of each river by preventing route proliferation and reducing the area available for motorized use. OR values improve over time as unauthorized routes passively restore to natural conditions.

2. Additions to the NFTS

This alternative includes 4.68 miles of unauthorized routes added to the NFTS as trails in Proposed Wild and Scenic Rivers (see Table 3.05-9) with direct or indirect effects as described below. All routes are located within Forest Plan land allocations allowing motorized use.

Additions to the NFTS do not affect OR values on the following Proposed Wild and Scenic Rivers because:

- **Clavey:** eleven segments (3.60 miles) access popular dispersed recreation opportunities in the Scenic segment between the Bell/Lily confluence and Cottonwood Road, not affecting OR values because they are short trails within and adjacent to existing developed road corridors.
- **North Fork Mokelumne:** nine segments (1.08 miles) provide highway legal only access to popular dispersed recreation opportunities in the Recreational segment along Highland Lakes Road, not affecting OR values because they are short trails within and adjacent to existing developed road corridors.

3. Changes to the Existing NFTS

Vehicle Class Changes

Vehicle class changes would occur on 18.46 miles of NFTS roads in Proposed Wild and Scenic Rivers including: converting 0.25 miles of closed to an ATV trail; converting 0.24 miles of all vehicles to a 4WD trail; changing 1.15 miles of closed to administrative use only; closing 0.80 miles of open roads; changing 1.79 miles from highway legal only to all vehicles; and, changing 14.23 miles from all vehicles to highway legal only (see Table 3.05-10) with direct or indirect effects as described below.

Vehicle class changes do not affect OR values on the following Proposed Wild and Scenic Rivers because:

- **Clark Fork:** one segment of 6N06C (0.26 miles) changes from all vehicles to highway legal only, improving OR values because it prohibits non-highway legal vehicles.
- **Clavey:** one NFTS road segment of 3N08Y (0.25 miles) converts from a closed road to an ATV trail, not affecting OR values because it is a short trail within and adjacent to an existing developed road corridor. One NFTS road segment of 1S01 (1.15 miles) changes from closed to administrative use only, not affecting OR values because it does not increase public use.

One NFTS road segment of 2N58 (0.80 miles) changes from open to closed, improving OR values because it prohibits existing public motorized use. Two NFTS road segments (1.79 miles) change from highway legal only to all vehicles, not affecting OR values because they are main Forest roads in existing developed road corridors. Five NFTS road segments (6.98 miles) change from all vehicles to highway legal only, improving OR values because they prohibit non-highway legal vehicles.

- **Middle Fork Stanislaus:** one NFTS road segment of 6N82Y (0.24 miles) converts from an all vehicles road to a 4WD trail, improving OR values because it prohibits non-highway legal vehicles. Twenty-one NFTS road segments (3.70 miles) change from all vehicles to highway legal only, improving OR values because they prohibit non-highway legal vehicles.
- **North Fork Mokelumne:** six NFTS road segments (0.67 miles) change from all vehicles to highway legal only, improving OR values because they prohibit non-highway legal vehicles.
- **North Fork Stanislaus:** four NFTS road segments (0.98 miles) change from all vehicles to highway legal only, improving OR values because they prohibit non-highway legal vehicles. One NFTS road segment of 4N80Y (0.16 miles) and one NFTS road segment of 5N02R (1.48 miles) change from all vehicles to highway legal only, improving OR values because they prohibit non-highway legal vehicles and are located within or adjacent to existing road corridors and developed areas; although these two roads are located within proposed Wild River corridors, continued highway legal only use will not preclude future Wild and Scenic River designation or Wild classification of these segments of North Fork Stanislaus.

Table 3.05-9 Additions to the NFTS: Proposed Wild and Scenic Rivers

Route	RD	MI	SRC	Existing			Alternative					Quad		Proposed Wild and Scenic River	
				SYS	USE	SUR	1	2	3	4	5	#	Name		
17EV299	MW	0.59	INV	UNT	ATV	NAT	ATV				ATV		4744	Hull Creek	Clavey (Scenic)
17EV51	MW	0.69	INV	UNT	ATV	NAT	ATV				ATV	ATV	4744	Hull Creek	Clavey (Scenic)
17EV51	MW	0.83	INV	UNT	ATV	NAT					ATV		4744	Hull Creek	Clavey (Scenic)
18EV270	MW	0.36	INV	UNT	ALL	NAT	ALL				ALL		4732	Pinecrest	Clavey (Scenic)
18EV271	MW	0.34	INV	UNT	ATV	NAT	ATV				ATV		4732	Pinecrest	Clavey (Scenic)
18EV276	MW	0.10	INV	UNT	ATV	NAT	ATV				ATV		4744	Hull Creek	Clavey (Scenic)
18EV278	MW	0.08	INV	UNT	MC	NAT					MC		4732	Pinecrest	Clavey (Scenic)
18EV310	MW	0.56	INV	UNT	ALL	NAT	ALL				ATV		4744	Hull Creek	Clavey (Scenic)
18EV63	MW	0.26	INV	UNT	ATV	NAT	ATV				ALL		4744	Hull Creek	Clavey (Scenic)
18EV95	MW	0.31	INV	UNT	ALL	NAT	ALL				ALL		4744	Hull Creek	Clavey (Scenic)
31821C	MW	0.20	GIS	UNR	ALL	NAT	ALL				ALL		4733	Cherry Lake N	Clavey (Scenic)
31821H	MW	0.10	GIS	UNT	ALL	NAT	ALL				ALL		4732	Pinecrest	Clavey (Scenic)
EV681	MW	0.09	INV	UNT	ALL	NAT	ALL				ALL		4732	Pinecrest	Clavey (Scenic)
subtotal		4.52													
19EV110	CAL	0.08	INV	UNT	ALL	NAT	4WD				4WD	4WD	5063	Pacific Valley	NF Mokelumne (Rec)
19EV111	CAL	0.32	INV	UNT	ALL	NAT	4WD				4WD		5063	Pacific Valley	NF Mokelumne (Rec)
19EV111A	CAL	0.14	INV	UNT	ALL	NAT	4WD				4WD	4WD	5063	Pacific Valley	NF Mokelumne (Rec)
19EV112	CAL	0.04	INV	UNT	ALL	NAT	4WD				4WD	4WD	5064	Ebbetts Pass	NF Mokelumne (Rec)
FR8437	CAL	0.13	MAP	UNT	ALL	NAT	4WD				4WD	4WD	4901	Dardanelles Cone	NF Mokelumne (Rec)
FR8784	CAL	0.06	MAP	UNT	ALL	NAT	4WD				4WD	4WD	5064	Ebbetts Pass	NF Mokelumne (Rec)
FR9438	CAL	0.10	MAP	UNT	ALL	NAT	4WD				4WD	4WD	5064	Ebbetts Pass	NF Mokelumne (Rec)
FR9439	CAL	0.16	MAP	UNT	ALL	NAT	4WD				4WD	4WD	5064	Ebbetts Pass	NF Mokelumne (Rec)
FR9440	CAL	0.04	MAP	UNT	ALL	NAT	4WD				4WD	4WD	5064	Ebbetts Pass	NF Mokelumne (Rec)
subtotal		1.08													
total		5.60													

Table 3.05-10 Vehicles Class Changes: Proposed Wild and Scenic Rivers

Route	RD	MI	SRC	Existing			Alternative					Quad		Proposed Wild and Scenic River	
				SYS	USE	SUR	1	2	3	4	5	#	Name		
06N06C	SU	0.26	GIS	ALL	ALL	NAT	HLO					HLO	4903	Donnell Lake	Clark Fork (Rec)
subtotal		0.26													
01N01	GR	1.02	GIS	HLO	HLO	AC	ALL				ALL		4562	Cherry Lake S	Clavey (Scenic)
01N10	GR	2.32	GIS	ALL	ALL	NAT	HLO				HLO	HLO	4571	Duckwall Mt	Clavey (Scenic)
01N10	GR	3.60	GIS	ALL	ALL	NAT	HLO				HLO	HLO	4574	Jawbone Ridge	Clavey (Scenic)
01S01	GR	1.15	GIS	ML1		NAT	ADM			t-4WD	ADM		4574	Jawbone Ridge	Clavey (Scenic)
01S52	GR	0.15	GIS	ALL	ALL	NAT	HLO				HLO	HLO	4574	Jawbone Ridge	Clavey (Scenic)
02N58	MW	0.80	GIS	ALL	ALL	NAT	ML1					ML1	4744	Hull Creek	Clavey (Scenic)
03N01	GR	0.77	GIS	HLO	HLO	AGG	ALL				ALL		4733	Cherry Lake N	Clavey (Scenic)
03N08Y	MW	0.25	GIS	ML1	ALL	NAT	t-ATV				t-ATV	t-ATV	4744	Hull Creek	Clavey (Scenic)
03N17Y	MW	0.76	GIS	ALL	ALL	NAT						HLO	4732	Pinecrest	Clavey (Scenic)
03N29A	MW	0.70	GIS	ALL	ALL	NAT						HLO	4732	Pinecrest	Clavey (Scenic)
03N29C	MW	0.77	GIS	ALL	ALL	NAT						HLO	4732	Pinecrest	Clavey (Scenic)
03N43A	MW	0.10	GIS	ML1		NAT					t-ALL		4744	Hull Creek	Clavey (Scenic)
04N26B	SU	0.78	GIS	ALL	ALL	NAT	HLO					HLO	4732	Pinecrest	Clavey (Scenic)
04N50Y	MW	0.47	GIS	ALL	ALL	NAT						HLO	4732	Pinecrest	Clavey (Scenic)
FR7856	GR	0.14	MAP	ALL	ALL	NAT	HLO				HLO	HLO	4574	Jawbone Ridge	Clavey (Scenic)
subtotal		13.78													
06N07Y	SU	0.08	GIS	ALL	ALL	NAT	HLO					HLO	4893	Sonora Pass	MF Stanislaus (Rec)
06N08Y	SU	0.06	GIS	ALL	ALL	NAT	HLO					HLO	4893	Sonora Pass	MF Stanislaus (Rec)
06N09Y	SU	0.04	GIS	ALL	ALL	NAT	HLO					HLO	4893	Sonora Pass	MF Stanislaus (Rec)
06N12	SU	0.33	GIS	ALL	ALL	NAT	HLO					HLO	4904	Dardanelle	MF Stanislaus (Rec)
06N14	SU	0.37	GIS	ALL	ALL	NAT	HLO					HLO	4904	Dardanelle	MF Stanislaus (Rec)
06N16A	SU	0.21	GIS	ALL	ALL	NAT	HLO					HLO	4901	Dardanelles Cone	MF Stanislaus (Rec)
06N36Y	SU	0.04	GIS	ALL	ALL	NAT	HLO					HLO	4904	Dardanelle	MF Stanislaus (Rec)
06N36Y	SU	0.21	GIS	ALL	ALL	NAT	HLO					HLO	4904	Dardanelle	MF Stanislaus (Rec)
06N36Y	SU	0.36	GIS	ALL	ALL	NAT	HLO					HLO	4904	Dardanelle	MF Stanislaus (Rec)
06N37Y	SU	0.09	GIS	ALL	ALL	NAT	HLO					HLO	4893	Sonora Pass	MF Stanislaus (Rec)
06N39Y	SU	0.05	GIS	ALL	ALL	NAT	HLO					HLO	4893	Sonora Pass	MF Stanislaus (Rec)
06N47Y	SU	0.25	GIS	ALL	ALL	NAT	HLO					HLO	4904	Dardanelle	MF Stanislaus (Rec)
06N82Y	SU	0.24	GIS	ALL	ALL	NAT	t-4WD					HLO	4904	Dardanelle	MF Stanislaus (Rec)
07N13	SU	0.60	GIS	ALL	ALL	NAT	HLO					HLO	4901	Dardanelles Cone	MF Stanislaus (Rec)
07N13A	SU	0.15	GIS	ALL		NAT	HLO					HLO	4901	Dardanelles Cone	MF Stanislaus (Rec)
07N30Y	SU	0.23	GIS	ALL	ALL	NAT	HLO					HLO	4901	Dardanelles Cone	MF Stanislaus (Rec)
07N30YA	SU	0.09	GIS	ALL	ALL	NAT	HLO					HLO	4901	Dardanelles Cone	MF Stanislaus (Rec)
07N30YB	SU	0.09	GIS	ALL	ALL	NAT	HLO					HLO	4901	Dardanelles Cone	MF Stanislaus (Rec)
62127C	SU	0.06	GIS	ALL	ALL	NAT	HLO					HLO	4893	Sonora Pass	MF Stanislaus (Rec)
72032C	SU	0.05	GIS	ALL	ALL	NAT	HLO					HLO	4901	Dardanelles Cone	MF Stanislaus (Rec)
FR14823	SU	0.25	MAP	ALL	ALL	NAT	HLO				HLO	HLO	4901	Dardanelles Cone	MF Stanislaus (Rec)
FR14833	SU	0.09	MAP	ALL	ALL	NAT	HLO				HLO	HLO	4901	Dardanelles Cone	MF Stanislaus (Rec)
subtotal		3.94													
08N01A	CAL	0.12	GIS	ALL	ALL	NAT	HLO				HLO	HLO	5064	Ebbetts Pass	NF Mokelumne (Rec)
FR5219	CAL	0.03	MAP	ALL	ALL	NAT	HLO				HLO	HLO	5063	Pacific Valley	NF Mokelumne (Rec)
FR8322	CAL	0.08	MAP	ALL	ALL	NAT	HLO				HLO	HLO	5063	Pacific Valley	NF Mokelumne (Rec)
FR8323	CAL	0.06	MAP	ALL	ALL	NAT	HLO				HLO	HLO	5063	Pacific Valley	NF Mokelumne (Rec)
FR9331	CAL	0.33	MAP	ALL	ALL	NAT	HLO				HLO	HLO	4901	Dardanelles Cone	NF Mokelumne (Rec)
FS83231	CAL	0.06	MAP	ALL	ALL	NAT	HLO				HLO	HLO	5064	Ebbetts Pass	NF Mokelumne (Rec)
subtotal		0.67													
04N38	CAL	0.01	GIS	ALL	ALL	AC	HLO				HLO	HLO	4751	Stanislaus	NF Stanislaus (Rec)
04N80Y	CAL	0.16	GIS	ALL	ALL	AGG	HLO				HLO	ML1	4751	Stanislaus	NF Stanislaus (Wild)
05N02B	CAL	0.67	GIS	ALL	ALL	NAT	HLO				HLO	HLO	4913	Boards Crossing	NF Stanislaus (Rec)
05N02B	CAL	0.22	GIS	ALL	ALL	NAT	HLO				HLO	HLO	4913	Boards Crossing	NF Stanislaus (Rec)
05N02R	CAL	1.48	GIS	ALL	ALL	NAT	HLO				HLO	ML1	4913	Boards Crossing	NF Stanislaus (Wild)
05N53Y	CAL	0.08	GIS	ALL	ALL	NAT	HLO				HLO	HLO	4913	Boards Crossing	NF Stanislaus (Rec)
subtotal		2.62													
total		21.26													

Season of Use

Season of use restrictions and wet weather closures protect OR values by prohibiting motorized use during the closure period.

CUMULATIVE EFFECTS

The past, present or reasonably foreseeable future actions identified in Appendix B (Cumulative Effects Analysis) do not include any actions likely to affect OR values. Therefore, the direct and indirect effects disclosed above are the only cumulative effects on Wild and Scenic Rivers and Proposed Wild and Scenic Rivers.

Alternative 2 (No Action)

DIRECT AND INDIRECT EFFECTS

1. *Cross Country Travel*

Alternative 2 (No Action) could degrade OR values in all Wild and Scenic Rivers and Proposed Wild and Scenic Rivers because it allows the potential for cross country travel across all 154 miles of Wild and Scenic Rivers and Proposed Wild and Scenic Rivers outside of designated Wilderness. Cross country travel with continued route proliferation could significantly reduce cultural, historic, recreation and scenic OR values across all Wild and Scenic Rivers and Proposed Wild and Scenic Rivers.

2. *Additions to the NFTS*

No direct or indirect effects on Proposed Wild and Scenic Rivers without unauthorized routes added to the NFTS.

3. *Changes to the Existing NFTS*

No direct or indirect effects on Proposed Wild and Scenic Rivers without changes to the NFTS or existing closures.

CUMULATIVE EFFECTS

This alternative contributes towards cumulative effects on Wild and Scenic Rivers and Proposed Wild and Scenic Rivers because additional future route proliferation will adversely affect OR values.

Alternative 3 (Cross Country Prohibited)

DIRECT AND INDIRECT EFFECTS

1. *Cross Country Travel*

Same as Alternative 1.

2. *Additions to the NFTS*

No direct or indirect effects on Proposed Wild and Scenic Rivers without unauthorized routes added to the NFTS.

3. *Changes to the Existing NFTS*

No direct or indirect effects on Proposed Wild and Scenic Rivers without changes to the NFTS or existing closures.

CUMULATIVE EFFECTS

The past, present or reasonably foreseeable future actions identified in Appendix B (Cumulative Effects Analysis) do not include any actions likely to affect OR values. Therefore, the direct and

indirect effects disclosed above are the only cumulative effects on Wild and Scenic Rivers and Proposed Wild and Scenic Rivers.

Alternative 4 (Recreation)

DIRECT AND INDIRECT EFFECTS

1. Cross Country Travel

Same as Alternative 1.

2. Additions to the NFTS

This alternative includes 5.60 miles of unauthorized routes added to the NFTS as trails in Proposed Wild and Scenic Rivers (see Table 3.05-9) with direct or indirect effects as described below. All routes are located within Forest Plan land allocations allowing motorized use.

Additions to the NFTS do not affect OR values on the following Proposed Wild and Scenic Rivers because:

- **Clavey:** thirteen segments (4.52 miles) access popular dispersed recreation opportunities in the Scenic segment between the Bell/Lily confluence and Cottonwood Road, not affecting OR values because they are short trails within and adjacent to existing developed road corridors.
- **North Fork Mokelumne:** nine segments (1.08 miles) provide highway legal only access to popular dispersed recreation opportunities in the Recreational segment along Highland Lakes Road, not affecting OR values because they are short trails within and adjacent to existing developed road corridors.

3. Changes to the Existing NFTS

Vehicle Class Changes

Vehicle class changes would occur on 13.13 miles of NFTS roads in Proposed Wild and Scenic Rivers including: converting 1.50 miles of closed to motorized trails; changing 1.79 miles from highway legal only to all vehicles; and, changing 9.83 miles from all vehicles to highway legal only (see Table 3.05-10) with direct or indirect effects as described below.

Vehicle class changes do not affect OR values on the following Proposed Wild and Scenic Rivers because:

- **Clavey:** three NFTS road segments (1.50 miles) convert from closed roads to motorized trails, not affecting OR values because they are short trails within and adjacent to existing developed road corridors. Two NFTS road segments (1.79 miles) change from highway legal only to all vehicles, not affecting OR values because they are main Forest roads in existing developed road corridors. Four NFTS road segments (6.20 miles) change from all vehicles to highway legal only, improving OR values because they prohibit non-highway legal vehicles.
- **Middle Fork Stanislaus:** two NFTS road segments (0.34 miles) change from all vehicles to highway legal only, improving OR values because they prohibit non-highway legal vehicles.
- **North Fork Mokelumne:** six NFTS road segments (0.67 miles) change from all vehicles to highway legal only, improving OR values because they prohibit non-highway legal vehicles.
- **North Fork Stanislaus:** four NFTS road segments (0.98 miles) change from all vehicles to highway legal only, improving OR values because they prohibit non-highway legal vehicles. One NFTS road segment of 4N80Y (0.16 miles) and one NFTS road segment of 5N02R (1.48 miles) change from all vehicles to highway legal only, improving OR values because they prohibit non-highway legal vehicles and are located within or adjacent to existing road corridors and developed areas; although these two roads are located within proposed Wild

River corridors, continued highway legal only use will not preclude future Wild and Scenic River designation or Wild classification of these segments of North Fork Stanislaus.

Season of Use

Same as Alternative 1.

CUMULATIVE EFFECTS

The past, present or reasonably foreseeable future actions identified in Appendix B (Cumulative Effects Analysis) do not include any actions likely to affect OR values. Therefore, the direct and indirect effects disclosed above are the only cumulative effects on Wild and Scenic Rivers and Proposed Wild and Scenic Rivers.

Alternative 5 (Resources)

DIRECT AND INDIRECT EFFECTS

1. Cross Country Travel

Same as Alternative 1.

2. Additions to the NFTS

This alternative includes 1.45 miles of unauthorized routes added to the NFTS as trails in Proposed Wild and Scenic Rivers (see Table 3.05-9) with direct or indirect effects as described below. All routes are located within Forest Plan land allocations allowing motorized use.

Additions to the NFTS do not affect OR values on the following Proposed Wild and Scenic Rivers because:

- **Clavey:** one segment (0.69 miles) provides access to popular dispersed recreation opportunities in the Scenic segment between the Bell/Lily confluence and Cottonwood Road, not affecting OR values because it is a short trail within and adjacent to an existing developed road corridor.
- **North Fork Mokelumne:** eight segments (0.76 miles) provide highway legal only access to popular dispersed recreation opportunities in the Recreational segment along Highland Lakes Road, not affecting OR values because they are short trails within and adjacent to existing developed road corridors.

3. Changes to the Existing NFTS

Vehicle Class Changes

Vehicle class changes would occur on 19.37 miles of NFTS roads in Proposed Wild and Scenic Rivers including: converting 0.25 miles of closed to an ATV trail; changing 1.15 miles of closed to administrative use only; closing 2.44 miles of open roads; and, changing 15.53 miles from all vehicles to highway legal only (see Table 3.05-10) with direct or indirect effects as described below.

Vehicle class changes do not affect OR values on the following Proposed Wild and Scenic Rivers because:

- **Clark Fork:** one segment of 6N06C (0.26 miles) changes from all vehicles to highway legal only, improving OR values because it prohibits non-highway legal vehicles.
- **Clavey:** one NFTS road segment of 3N08Y (0.25 miles) converts from a closed road to an ATV trail, not affecting OR values because it is a short trail within and adjacent to an existing developed road corridor. One NFTS road segment of 1S01 (1.15 miles) changes from closed to administrative use only, not affecting OR values because it does not increase public use. One NFTS road segment of 2N58 (0.80 miles) changes from open to closed, improving OR values because it prohibits existing public motorized use. Two NFTS road segments (1.79

miles) change from highway legal only to all vehicles, not affecting OR values because they are main Forest roads in existing developed road corridors. Five NFTS road segments (6.98 miles) change from all vehicles to highway legal only, improving OR values because they prohibit non-highway legal vehicles.

- **Middle Fork Stanislaus:** twenty-two NFTS road segments (3.94 miles) change from all vehicles to highway legal only, improving OR values because they prohibit non-highway legal vehicles.
- **North Fork Mokelumne:** six NFTS road segments (0.67 miles) change from all vehicles to highway legal only, improving OR values because they prohibit non-highway legal vehicles.
- **North Fork Stanislaus:** four NFTS road segments (0.98 miles) change from all vehicles to highway legal only, improving OR values because they prohibit non-highway legal vehicles. One NFTS road segment of 4N80Y (0.16 miles) and one NFTS road segment of 5N02R (1.48 miles) change from all vehicles to closed, improving OR values because they eliminate existing motorized use.

Season of Use

Same as Alternative 1.

CUMULATIVE EFFECTS

The past, present or reasonably foreseeable future actions identified in Appendix B (Cumulative Effects Analysis) do not include any actions likely to affect OR values. Therefore, the direct and indirect effects disclosed above are the only cumulative effects on Wild and Scenic Rivers and Proposed Wild and Scenic Rivers.

Wilderness and Proposed Wilderness - Affected Environment

The Stanislaus National Forest recommended Wilderness designation for the Bald Peak and Tryon Peak “further planning areas” through the land management planning process (USDA 1991a). The following discussions focus on those two Proposed Wilderness additions, totaling 23,900 acres (see Figure 3.05-1).

Bald Peak Proposed Wilderness

The Bald Peak Proposed Wilderness (20,500 acres), a recommended addition to the Carson-Iceberg Wilderness, is located within a triangle formed by Clark Fork Road, Highway 108 and the Carson-Iceberg Wilderness between Iceberg Meadow and Sonora Peak. Elevations range from 6,000 to 11,462 feet. The area is typified by mountain peaks, steep slopes, scattered pockets of timber and meadows, and considerable granite rock. The Pacific Crest Trail crosses a corner of the area near Sonora Pass. One other hiking trail along Douglas Creek receives only light use. Soils between extensive rock outcrops are generally shallow to moderately deep, stony coarse sandy loams developed from volcanic and granitic bedrock and glacial debris. Meadows have deep, organic, sandy loams developed from alluvium. Red fir and lodgepole pine are the predominant tree species, with Jeffrey pine, incense cedar, and white fir common associates. Hunters use the area in pursuit of deer, grouse and quail. Spotted owl, goshawk, fisher, pine marten, wolverine and red fox inhabit this area. The area is also important as summer range for the Stanislaus Deer Herd. Table 3.05-2 shows that Bald Peak Proposed Wilderness currently contains one NFTS road segment of 07N76A (0.02 miles) that is not available for public motorized use. This area does not contain any unauthorized motorized routes.

Tryon Peak Proposed Wilderness

The Tryon Peak Proposed Wilderness (3,400 acres), a recommended addition to the Carson-Iceberg Wilderness, is located in the northeast corner of the Forest between the Sierra Nevada crest and Highland Lakes Road. Elevations range from 8,100 to 9,970 feet. Mountain peaks, glaciated valleys

with large meadows, and scattered timber characterize the area. Recreation use, primarily hikers from the Highland Lakes area and along the Pacific Crest Trail, is moderate while hunters use the area in the fall. Soils between extensive rock outcrops in the uplands are generally shallow to moderately deep, stony coarse sandy loams developed from volcanic and granitic bedrock and glacial debris. The meadows have deep, organic, sandy loams developed from alluvium. Red fir and lodgepole pine are the predominant tree species with Jeffrey pine and mountain hemlock. This area does not contain any NFTS or unauthorized motorized routes.

Wilderness and Proposed Wilderness - Environmental Consequences

Since designated Wilderness is not affected by the proposed action or any alternative and unauthorized or NFTS routes open to public motorized use do not exist within Proposed Wilderness the following section describes only the effects of cross country travel on Proposed Wilderness using the following indicator:

- Wilderness Characteristics (wilderness)

Alternative 1 (Proposed Action)

DIRECT AND INDIRECT EFFECTS

1. Cross Country Travel

The cross country travel prohibition protects the wilderness characteristics of each area by preventing route proliferation and reducing the area available for motorized use.

CUMULATIVE EFFECTS

The past, present or reasonably foreseeable future actions identified in Appendix B (Cumulative Effects Analysis) do not include any actions likely to affect wilderness characteristics. Therefore, the direct and indirect effects disclosed above are the only cumulative effects on Proposed Wilderness.

Alternative 2 (No Action)

DIRECT AND INDIRECT EFFECTS

1. Cross Country Travel

Alternative 2 (No Action) could affect wilderness characteristics in all Proposed Wilderness because it allows the potential for cross country travel across all 23,900 acres of Proposed Wilderness. Cross country travel with continued route proliferation could significantly alter the following wilderness characteristics:

- **Natural:** ecological systems no longer appear substantially free from the effects of modern civilization and affected primarily by forces of nature due to potential introduction of noxious weed species that alter the composition of natural plant communities and pollutants that degrade water quality.
- **Undeveloped:** increased evidence of human presence, use and occupation due to user-created trail treads with wheel tracks.
- **Outstanding Opportunities for Solitude or Primitive and Unconfined Recreation:** reduced opportunities for solitude or primitive and unconfined types of recreation due to evidence of user-created trail treads with wheel tracks and noise generated by motor vehicles.

CUMULATIVE EFFECTS

This alternative contributes towards cumulative effects on Proposed Wilderness because additional future route proliferation will adversely affect wilderness characteristics.

Alternative 3 (Cross Country Prohibited)

DIRECT AND INDIRECT EFFECTS

1. Cross Country Travel

Same as Alternative 1.

CUMULATIVE EFFECTS

Same as Alternative 1.

Alternative 4 (Recreation)

DIRECT AND INDIRECT EFFECTS

1. Cross Country Travel

Same as Alternative 1.

CUMULATIVE EFFECTS

Same as Alternative 1.

Alternative 5 (Resources)

DIRECT AND INDIRECT EFFECTS

1. Cross Country Travel

Same as Alternative 1.

CUMULATIVE EFFECTS

Same as Alternative 1.

Summary of Effects Analysis across All Alternatives

Table 3.05-11 provides a brief summary of effects on roadless and wilderness characteristics in roadless areas; Table 3.05-12 provides a brief summary of effects across all alternatives for roadless and special areas; and, Table 3.05-13 provides a summary of effects by roadless and special area indicators.

Compliance with the Forest Plan and Other Direction

Alternatives 1, 3, 4 and 5 meet Forest Plan S&Gs. Alternative 2 does not meet Forest Plan Direction to prohibit cross county travel. Alternatives 1, 3, 4 and 5 implement 36 CFR 212 while Alternative 2 does not.

Table 3.05-11 Effects on Roadless and Wilderness Characteristics in Roadless Areas

Roadless Area	Alternative 1 (Proposed Action)	Alternative 2 (No Action)	Alternative 3 (X-C Prohibited)	Alternative 4 (Recreation)	Alternative 5 (Resources)
Arnot Creek	none	Increased noise generated by motor vehicles and more evidence of human activity due to cross country travel with continued route proliferation could significantly alter: high quality or undisturbed soil, water, and air; sources of public drinking water; diversity of plant and animal communities; habitat for threatened, endangered, proposed, candidate, and sensitive species and for those species dependent on large, undisturbed areas of land; primitive and semi-primitive non-motorized recreation opportunities; natural appearing landscapes with high scenic quality	roadless and wilderness characteristics improve over time as unauthorized routes passively restore to natural conditions	none	none
Bald Peak	none			none	none
Bell Meadow	none			none	no direct or indirect effects
Carson-Iceberg	roadless and wilderness characteristics improve over time as unauthorized routes passively restore to natural conditions; adding routes and opening a closed road could affect SPNM opportunities by reducing opportunities for solitude			same as Alternative 1	adding a route could affect SPNM opportunities by reducing opportunities for solitude
Cherry Lake	none			none	none
Dome	none			none	none
Eagle	none			none	none
Mt. Reba	roadless and wilderness characteristics improve over time as unauthorized routes passively restore to natural conditions; adding routes could affect SPNM opportunities by reducing opportunities for solitude and increased conflicts between motorized and non-motorized users			same as Alternative 1	roadless and wilderness characteristics improve over time as unauthorized routes passively restore to natural conditions
Night	none			none	none
North Mountain	roadless and wilderness characteristics improve over time as unauthorized routes passively restore to natural conditions; opening a closed road could affect SPNM opportunities by reducing opportunities for solitude			same as Alternative 1	roadless and wilderness characteristics improve over time as unauthorized routes passively restore to natural conditions
Pacific Valley	none			none	none
Raymond Peak	roadless and wilderness characteristics improve over time as unauthorized routes passively restore to natural conditions; adding routes could affect SPNM opportunities by reducing opportunities for solitude			same as Alternative 1	roadless and wilderness characteristics improve over time as unauthorized routes passively restore to natural conditions; adding a route could affect SPNM opportunities by reducing opportunities for solitude
Trumbull Peak	none			none	none
Tryon Peak	none			none	none
Tuolumne River	roadless and wilderness characteristics improve over time as unauthorized routes passively restore to natural conditions; adding routes could affect SPNM opportunities by reducing opportunities for solitude in the Tuolumne River canyon			none	none
Waterhouse	none	none	none		
Wheats Meadow	none	none	none		

Table 3.05-12 Summary of Effects across All Alternatives: Roadless and Special Areas

Alternative 1 (Proposed Action)	Alternative 2 (No Action)	Alternative 3 (X-C Prohibited)	Alternative 4 (Recreation)	Alternative 5 (Resources)
roadless characteristics and special area values improve over time as unauthorized routes passively restore to natural conditions; additions to the NFTS and opening closed roads reduce opportunities for solitude in the Carson-Iceberg, Mt. Reba, North Mountain, Raymond Peak and Tuolumne River roadless areas	noise and more evidence of human activity due to cross country travel with continued route proliferation reduce roadless character in all roadless areas; cross country travel with continued route proliferation could reduce values in all Special Areas (Proposed Wilderness, SIAs, RNAs, Wild and Scenic Rivers and Proposed Wild and Scenic Rivers) outside of Wilderness	roadless characteristics and special area values improve over time as unauthorized routes passively restore to natural conditions	roadless characteristics and special area values over time as unauthorized routes passively restore to natural conditions; additions to the NFTS and opening closed roads reduce opportunities for solitude in the Carson-Iceberg, Mt. Reba, North Mountain, Raymond Peak and Tuolumne River roadless areas	roadless characteristics and special area values improve over time as unauthorized routes passively restore to natural conditions; additions to the NFTS reduce opportunities for solitude in the Carson-Iceberg and Raymond Peak roadless areas

Table 3.05-13 Summary of Effects: Roadless and Special Areas

Indicators – Roadless and Special Areas	Rankings of Alternatives for Each Indicator ¹				
	1	2	3	4	5
Roadless Area and Wilderness Characteristics (Roadless Areas)	3	1	5	2	4
Research Natural Area Values	5	1	5	5	5
Special Interest Area Values	3	1	5	2	4
Wild and Scenic River Values	3	1	5	2	4
Wilderness Characteristics (Proposed Wilderness)	5	1	5	5	5
total	19	5	25	16	23
Average for Roadless and Special Areas	3.8	1.0	5.0	3.2	4.6

¹ A score of 5 indicates the alternative has the least impact on this resource; a score of 1 indicates the alternative has the most impact.

Figure 3.05-1 Roadless and Special Area Map

