Recreation

Summary

The recreation assessment was conducted by an interdisciplinary team. Line officers and other knowledgeable employees, along with public input, contributed to this assessment.

The recreation visitor use is the lowest of any national forest in the country. Our recreation program in terms of use, budget, staffing and infrastructure is very low compared to other national forests in California. The unauthorized routes proposed for addition to the National Forest Transportation System (NFTS) have mostly been in place for 40 years and are used by the local public. New unauthorized routes are not a common occurrence. We are proposing to add between 286 to 336 miles out of a total of 491 miles of surveyed unauthorized routes. This is between 58 percent and 68 percent of the unauthorized routes. The addition of these routes would provide and maintain a diversity of motorized and non-motorized opportunities. Approximately 2/3 of the unauthorized routes are less than 1/4 mile in length and are considered extensions of the NFTS roads.

Mixed use has been occurring on the Forest at a very limited scale over the last 10 years. There have been no accidents associated with OHV use on NFTS routes on the Forest. The amount of OHV use on our maintenance level (ML) 3 roads, based on recent vehicle count surveys, is approximately five OHVs per 800 motorized vehicles counted. Therefore, we are proposing to provide mixed use on our ML 3 routes so that use can continue by the public.

Introduction

Nearly all Forest visitors, regardless of the purpose for their visit, use the motorized transportation system to reach their destination. Making changes to the NFTS (e.g., adding facilities, prohibiting or allowing motor vehicle use by vehicle type or season of use) changes the diversity of motorized and non-motorized opportunities on the Forest. These visitors may be participating in motorized recreation, or using motorized vehicles to access trailheads, facilities, destinations, or geographic areas that are used for non-motorized recreational activities. This section of the Motorized Travel Management Final Environmental Impact Statement (FEIS) examines the extent to which alternatives respond to recreation management direction established in the Modoc National Forest Land and Resource Management Plan (LRMP), The Sierra Nevada Forest Plan Amendment (SNFPA), the Travel Management (TM) Rule, and the diversity of opportunities and access available on the Forest.

The LRMP recreation direction was established under the implementing regulations of the National Forest Management Act (NFMA). The NFMA requires the provision of a broad spectrum of forest and rangeland-related outdoor recreation opportunities that respond to current and anticipated user demands. The LRMP satisfies this requirement through its use of the Recreation Opportunity Spectrum (ROS) classification system in the LRMP. In addition, specifically for off-highway vehicle" use, the NFMA requires that these motor vehicle opportunities be planned and implemented to protect land and other resources, promote public safety, and minimize conflicts with other uses of the National Forest System (NFS) lands. The SNFPA amended portions of the MDF to prohibit wheeled vehicle travel off designated routes and trails. The Travel Management Rule requires that we examine the compatibility of motor vehicle use with existing conditions in populated areas; the conflict between motor vehicle use and existing or proposed recreational uses of NFS lands or neighboring Federal lands; and the provision of recreational opportunities and access needs. It also requires the production of a Motor Vehicle Use Map (MVUM) that will be used along with the National Visitor Use Map to

designate the roads and trails available for public motor vehicle use on a national forest or ranger district.

The LRMP provides goals for the recreation resource and requires a broad range of developed and dispersed recreation opportunities in balance with existing and future demand. The Recreation Opportunity Spectrum (ROS) is the basic inventory that was used to create recreation-opportunity "zoning" in these plans. The intent is to provide for recreation opportunities within these zones to meet NFMA requirements for a broad spectrum of forest- and rangeland-related outdoor recreation opportunities that respond to current and anticipated user demands.

Analysis Framework: Statute, Regulation, Forest Plan, and Other Direction

Regulatory direction relevant and specific to the proposed action as it affects recreation resources consists of the following:

National Forest Management Act (NFMA)

Specifically for off-highway vehicle management, NFMA requires that this use be planned and implemented to protect land and other resources, promote public safety, and minimize conflicts with other uses of the NFS lands. NFMA also requires that a broad spectrum of forest- and rangeland-related outdoor recreation opportunities be provided that respond to current and anticipated user demands.

Sierra Nevada Forest Plan Amendment (SNFPA)

The SNFPA established the direction to prohibit wheeled vehicle travel off designated routes, trails, and limited of-highway vehicle (OHV) use areas. Unless otherwise restricted by current forest plans or other specific area standards and guidelines, cross-country travel by over-snow vehicles would continue.

Travel Management Rule, Subpart B (36 CFR 212.50-57)

> The responsible official shall consider the effects of designated roads, trails and areas on the provision of recreational opportunities, access needs, and conflicts among uses of National Forest System lands. 36 CFR 212.55 (a)
>
> The responsible official shall consider effects on the following: Conflicts between motor vehicle use and existing or proposed recreational uses of National Forest System lands or neighboring Federal lands; conflicts among different classes of motor vehicle uses of National Forest System lands or neighboring Federal lands; and the compatibility of motor vehicle uses with existing conditions in populated areas, taking into account sound, emissions, and other factors. 36 CFR 212.55 (b).

Modoc National Forest LRMP

The LRMP provides goals for the recreation resource, and requires a broad range of developed and dispersed recreation opportunities in balance with existing and future demand. For management and conceptual convenience, possible mixes or combinations of activities, settings, and probable experience opportunities have been arranged along a spectrum, or continuum. This continuum is called the Recreation Opportunity Spectrum (ROS); planning for recreation opportunities using the ROS is conducted as part of land and resource management planning. The ROS provides a framework for defining the types of outdoor recreation the public might desire, and identifies that portion of the spectrum a given national forest might be able to provide.

ROS is divided into six classes: Primitive, Semi-Primitive Non-Motorized, Semi-Primitive Motorized, Roaded Natural, Rural, and Urban. Each class is defined in terms of its combination of activity, setting, and experience opportunities (ROS Users' Guide, USDA Forest Service). The intent is to use ROS and its associated settings to provide recreation input into land resource management planning, which in turn may be incorporated into LRMP management prescriptions or used in project-level planning beyond the programmatic planning used to develop the LRMP. For the purposes of travel management actions, the term "off-highway vehicles" is applied to public wheeled motor vehicle use (highway-legal and non-highway legal). How ROS applies to the LRMP depends on how (or if) it was integrated into the management prescriptions and associated standards and guidelines in the Forest LRMP. On the Modoc National Forest, ROS is integrated into the management prescriptions and associated standards and guidelines in the Forest LRMP. It guides decisions and resource management activities.

Impacts Relevant to Recreation

1. The compatibility of proposed changes to the NFTS with LRMP recreation and OHV management prescriptions and ROS
2. The impact of proposed changes to the NFTS on non-motorized recreation (dust, noise, use conflicts)
3. The amount of motorized recreation opportunity affected by alternative
4. The diversity of motorized access to dispersed recreation by alternative

Assumptions Specific to Recreation Analysis

1. The prohibition of cross-country travel is not a change to ROS (semi-primitive motorized, for example), it is simply a prohibition within that ROS 'zone' to travel off designated routes.
2. The change from an "open to cross-country travel" condition to a "cross-country travel prohibited" condition would reduce the availability of acreage for both motorized recreation as well as motorized access to dispersed recreation activities.
3. The change from "open to cross-country travel" to "cross-country travel prohibited" would increase the availability of acreage for non-motorized recreation, as well as non-motorized access to dispersed recreation activities.
4. Proposed additions to the NFTS would have a beneficial effect on motorized recreation opportunities by providing a variety of road riding experiences and increasing the amount of motorized recreation opportunities (loops, connectors).
5. Proposed changes and additions to the NFTS would have a beneficial effect on the amount of motorized access to dispersed recreation opportunities available.
6. For this report, the area of influence for "quiet recreation" opportunity is considered to be ½ mile beyond (ML) 3, ML 4, and ML 5 NFTS routes.The same applies to county and State routes. Sample field surveys were conducted on the ML 2 routes; the average motor vehicle use was determined to be one vehicle per 1.4 days. This amount of use is considered to be appropriate for quiet use. The area considered for elevated noise and dust is within this ½ mile zone of ML 3, 4, and 5 roads. Because of this very low motorized use, quiet use may also exist within the ½ mile zone from ML 3 roads.
7. There has only been limited use analysis of the unauthorized routes, and only a very small amount of data exists (traffic counts, etc). However, historic data and personal accounts

by Forest personnel who have been on the Forest for over 15 years, indicate extremely low use. There is no reason to believe that this use will change in the future.

8. The majority of the motorized public use occurring on NFS land is occurring on the existing NFTS, based on observation and NVUM data.

Affected Environment and Environmental Consequences

Affected Environment

The Modoc National Forest is best known for its remote location and low use recreation opportunities. Most visitors enjoy hunting, fishing, and camping, while others participate in touring, hiking, horseback riding, swimming, picnicking, and gathering firewood. These activities are enhanced by the abundance of wildlife, variety of landscape settings, and sparsely populated conditions.

The Forest currently hosts a wide range of motorized and non-motorized recreation experiences that occur year-round. Motorized recreation involves the use of highway-licensed cars, sedans, sport utility vehicles (SUVs), dual-sport motorcycles, off-highway vehicles (OHVs), motorcycles, all terrain vehicles (ATVs), snowmobiles, and four-wheel-drive vehicles (4WDs). Non-motorized recreational activities include hiking, camping, mountain bike riding, horseback riding, wildlife viewing, picnicking, rock climbing, hunting, fishing, cross-country skiing, snowshoeing, snow camping, and snow play (National Visitor Use Monitoring Results For Modoc National Forest, August 2001, USDA Forest Service Region 5).

Recreation Visitor Use

Visitor use estimates for the Forest were generated based on the National Visitor Use Monitoring (NVUM) survey that was conducted from January 1 through December 31, 2000. Recreation use on the Modoc National Forest for calendar year 2000 was 146,155 national forest visits and 175,206 site visits. The survey was designed to assess existing recreation demand on the Forest by asking visitors what they did during their visit; visitors could check multiple activities. This resulted in two categories of visitor use: activities that users participated in, and the main activity. It highlighted the fact that the two may or may not be related. For example, 67 percent of Forest visitors reported participating in the viewing of natural features, but only 23 percent reported that as their main activity. During their visit to the Modoc National Forest, the top five recreation activities of the visitors were viewing scenery, general relaxation, sightseeing, fishing, and driving for pleasure. Each visitor also picked one of these activities as his or her primary activity for the current recreation visit to the Forest. The top primary activities were viewing natural features, driving for pleasure on Forest roads, fishing, general (relaxing, hanging out, and escaping noise), and sightseeing (Table 3-21).

The second-most popular activities were picnicking, hiking and walking, and off-highway vehicle travel, respectively. Of those activities, the primary activities reported were picnicking, hiking, and walking, while OHV use was measured less than one percent of the primary activity (Table 3-21).

Table 3-21. Highest Percent Visits, by Participation and Primary Activity

Activity	Percent Participation	Percent Saying it was Favorite Activity
Viewing natural features such as scenery, flowers, etc. on NFS lands	67.44%	23.09%

Activity	Percent Participation	Percent Saying it was Favorite Activity
General & other: relaxing, hanging out, escaping noise & heat, etc.	57.67%	11.72%
Sightseeing	51.02%	5.6%
Fishing—all types	47.43%	34%
Driving for pleasure on roads	41.45%	17.92%

Table 3-22. Second-Highest Percent Visits, by Participation and Primary Activity

Activity	Percent Participation	Percent Saying it was Primary Activity
Picnicking and family day gatherings in developed sites (family or group)	24.52%	8.05%
Hiking or walking	20.29%	2.03%
Off-highway vehicle travel (4-wheelers, dirt bikes, etc.)	16.9%	.79%

Data Sources

1. MDF LRMP for distribution of ROS classes
2. The Forest's NVUM report for most popular non-motorized recreation activities
3. Recreation, law enforcement and other resource staff observations
4. Engineering report on mixed-use analysis (available in the project record)
5. Field Surveys of motorized use for ML 3 and ML 2 routes

Recreation Measurement Indicators

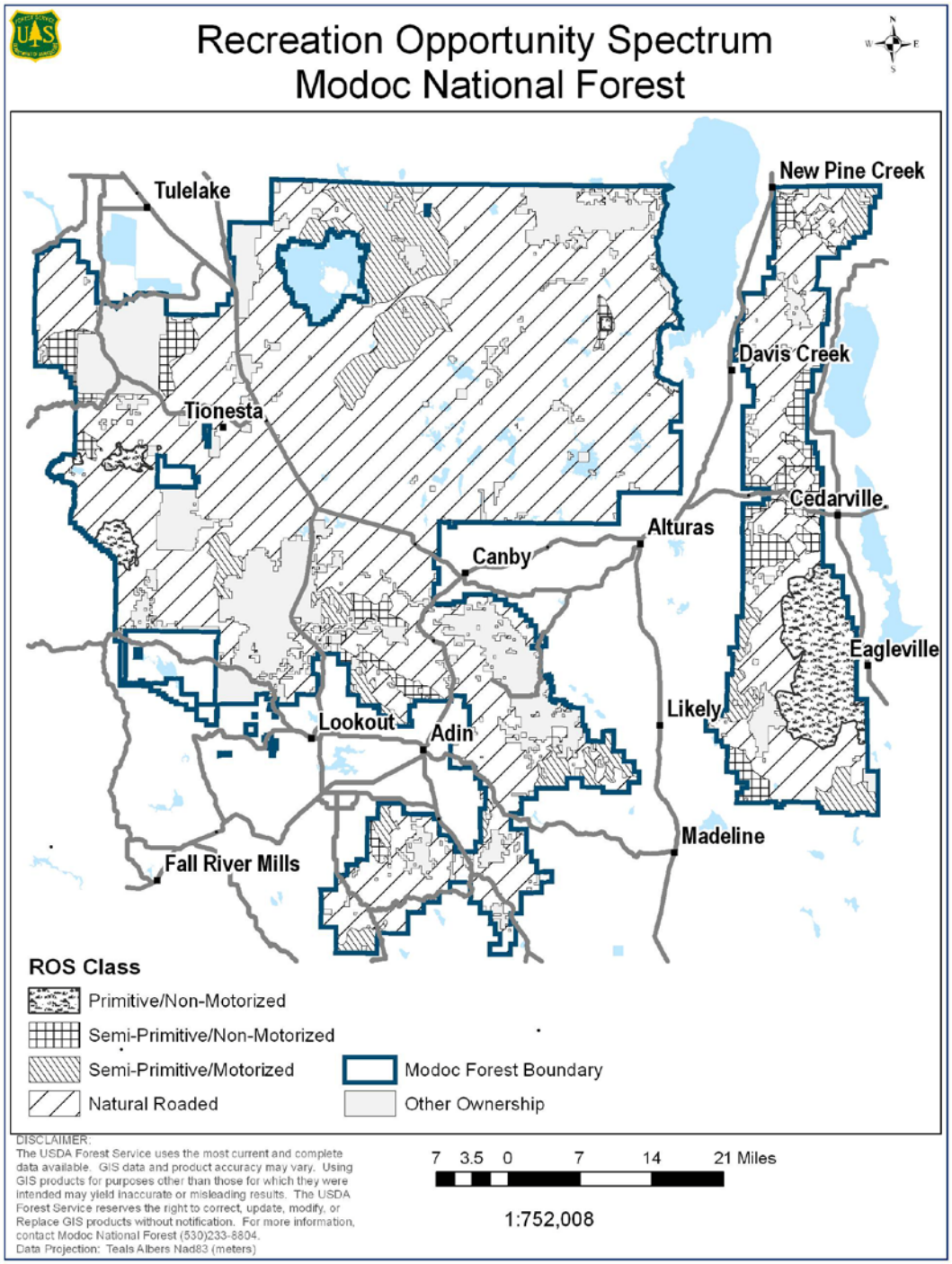
Indicator measures are intended to address how each alternative, as the sum total of its proposed actions, responds to the LRMP and Subpart B of the Travel Management Rule: whether the motorized recreation opportunity conflicts with other recreation opportunities, specifically non-motorized opportunities; the proximity of motor vehicle use to populated areas or neighboring private and Federal lands; the quality of the motorized recreation experience; and the quality of motorized access to dispersed areas for both motorized and non-motorized uses. It also responds to the diversity of motorized access available on the unit. Conflicts with other resources (including air quality) are examined in other resource sections. Public safety is addressed in the transportation section of this document.

For analyzing the effects of changes to the NFTS by vehicle class and season of use, as well as the addition of unauthorized routes to the NFTS as roads, indicator measures were used. Mileage available for each class of vehicle is useful in analyzing the ability of Forest users to not only travel around the Forest and enjoy motorized recreation opportunities, but also to access non-motorized recreation opportunities, such as trailheads, hunting, and dispersed recreation sites for activities such as fishing and camping. The Forest has determined these are important based on both NVUM data and public scoping for this project. Mileage for motorized recreation is an indicator of the number and types of experiences available for motorcycles, ATVs, and 4WDs in each alternative. The changes to motorized mileages can be used to interpret the level of change in opportunities for motorized and non-motorized users. The details of the proposed seasonal closures relate to both the months that motorized recreation would not be allowed to use designated roads, trails or areas and, conversely, the time of year that conflicts between motorized

and non-motorized uses would be minimized. Number of acres located ½ mile away from ML 3, ML 4 and ML 5 roads, are used to analyze the opportunity for non-motorized and 'quiet' recreation on the Forest, along with the ROS acreages available in each class. Standard and Guideline G in the Modoc LRMP gives the following guidance (p. 4-20, #4): "Design resource management activities to complement the Recreation Opportunity Spectrum (ROS) classes delineated on the ROS map and referred to in each prescription."

The following map shows the Recreation Opportunity Spectrum (ROS) on the Modoc National Forest.

Figure 3-5. Recreation Opportunity Spectrum on the Modoc National Forest



Measurement Indicator 1: ROS Consistency with the LRMP

Description

This measurement indicator looks at the possible effects of proposed changed to the MDF on ROS classes. These are the standards and guides in the LRMP related to ROS class:

"3C. Use the Recreation Opportunity Spectrum system to guide decisions."

Table 3-23. Acres by ROS Class on the Forest

ROS Class		Acres
Primitive Non-motorized		81,763
Semi-Primitive Non-motorized		89,842
Semi-Primitive Motorized		160,072
Natural Roaded		1,344,558
Total Acres		1,676,235

Table 3-24. Miles of Unauthorized Routes Proposed for Addition in Each ROS Class, by Alternative

	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Primitive Non-motorized	0	0	0	0	0
Semi-Primitive Non-motorized	0	0	0	0	0
Semi-Primitive Motorized	0	10	0	4	10
Natural Roaded	0	326	0	282	326
Total Miles	0	336	0	286	336

The Forest is best known for its remote location and uncrowded recreation opportunities. This is due to the small population in Modoc County and because tourism is not a primary economic base for the area. The total Forest Service acres available for use are 1,676,235. Of this total, 89,842 acres are designated for Semi-Primitive Non-Motorized Use and 81,763 acres are designated for Primitive Non-motorized. The additions proposed in Alternatives 2, 4, and 5 would not affect the non-motorized use areas. The additions in Alternative 2 and 5 equal approximately 611 acres. The additions in Alternative 4 equal approximately 521 acres, and would not change the characteristics of the motorized use ROS classes.

Measurement Indicator 2: Non-motorized recreation opportunity

Description

The number of acres ½ mile outside of ML 3, ML 4, and ML 5 routes

This measurement indicator looks at the possible effects of proposed changes to the NFTS on non-motorized recreation (dust, noise, use conflicts). It also addresses the "quiet recreation" issue. The standards and guidelines in the LRMP related to this indicator are as follows:

> C. Semi-Primitive Non-Motorized:
>
> Provide opportunities for such recreation activities as hiking, fishing, and tent camping in predominantly natural environments with low incidence of interactions between users.

Prohibit motorized recreation; eliminate and prevent OHV use.

Apply the Semi-Primitive Non-Motorized Dispersed Recreation Prescription to specified areas (generally at least 2,500-acre units).

6. (G) Provide off-highway vehicle (OHV) recreation where OHV activities will not cause resource damage or conflict with other uses.

This acreage is the same for all alternatives because all of the added routes are ML 2 routes. Although we used ½ mile as distance from ML 3, 4, and 5 roads to indicate where quiet use is available, this distance is based on studies that are most likely different in geographical characteristics than the Modoc National Forest. On this Forest, it is highly likely that a quiet use experience can occur within that ½ mile boundary and beyond, because of the geography and the low likelihood of encountering other vehicles. ML 2 routes are used so infrequently that we did not consider their use to be an impact on quiet recreation. Readers can find survey information on Forest use numbers in the transportation section of this document.

Table 3-25. Number of ROS acres Available for Quiet Use (Buffered by ½ mile on ML 3, ML 4 and ML 5)

	Primitive Non Motorized	Semi-Primitive Non-motorized	Semi-Primitive Motorized	Natural Roaded
Acres	79,104	85,891	151,524	1,063,178

Of these acres, 1,379,697 acres are available for quiet recreation (see Table 3-25). Additionally, a quiet recreation experience can be found in almost every area of the Forest due to low use. A count of users on ML 3 roads, which are roads that receive higher use on the Forest because they are connector roads, showed that on any day of the week, the average use was 1.8 cars per hour. Field surveys of ML 2 routes showed that the use was 1 vehicle per 1.4 days. It is not uncommon for recreationists using the NFTS to not encounter another Forest user during their visit.

The National Recreation Use Monitoring results display how recreation visitors rated their perception of how crowded the general forest area felt to them. General forest areas or “dispersed areas” are defined as areas that are not developed for intense recreation use. Primitive roads access vast areas where it is possible to experience nature for days without seeing other humans (LRMP 3-21). More than 80 percent of the recreation use on the Forest occurs in dispersed recreation areas. This information is useful because it displays a direct relationship to the Forest’s low visitor use and the vast opportunity for quiet recreation despite the number of miles of NFTS existing on the Forest. Table 3-26 summarizes the public perception of crowding on a scale of 1 to 10. One indicates that hardly anyone was there, and a 10 means the area was perceived as overcrowded.

Table 3-26. Perception of Crowding by Forest Visitors

Perception of Crowding (Rated 1 to10)	Percent of People Rating General Forest Areas
10 overcrowded	0%
9	0%
8	0%
7	0%
6	0%
5	7%

Perception of Crowding (Rated 1 to10)	Percent of People Rating General Forest Areas
4	11%
3	36%
2	0%
1 hardly anyone there	46%

Measurement Indicator 3: Motorized Recreation Opportunity

Description

This measurement indicator looks at the impact of proposed changes to the NFTS to motorized recreation opportunities by alternative. The standards and guidelines from the LRMP related to this indicator are described below:

> B. Semi-Primitive Motorized:
>
> Provide opportunities for such recreation activities as off-highway vehicle touring, hunting, and camping in areas characterized by predominantly natural or natural-appearing environments with low concentrations of users.
>
> 6. (G) Provide off-highway vehicle (OHV) recreation where OHV activities will not cause resource damage or conflict with other uses.

Method

Number of miles available by vehicle class and season of use

The miles available in each maintenance level (ML) for each alternative were used to display the miles potentially available per vehicle class for comparison purposes. Maintenance levels are defined by the USDA Forest Service Handbook as the level of service provided by, and maintenance required for, a specific road. The levels range from ML 1 to ML 5, lowest service to highest service respectively. ML 1 is defined as intermittent service roads and closed to vehicle traffic. For comparative purposes in this report, ML 2 roads are open to use by motorcycles, ATV's, and high clearance vehicles. ML 3, 4, and 5 roads are open to use by highway-legal vehicles. Mixed use (non-highway legal and highway-legal vehicles) roads include ML 2 roads and some specific ML 3 roads.

Table 3-27. Total NFTS Mileage by Vehicle Class and Maintenance Level

Vehicle Class	Maintenance Level	NFTS Existing Miles
		Mileage
Highway-legal vehicles only	ML 5	13
Highway-legal vehicles only	ML 4	31
Highway-legal vehicles	ML 3	531
Open to all vehicles	ML 2	3,764
	Total NFTS Miles (not including ML 1)	4,339

Table 3-28. Total Mileage Available for each Vehicle Type (Including Change in Vehicle Class and Mixed Use)

	Alternative 1		Alternative 2		Alternative 3		Alternative 4		Alternative 5	
	(No Action)		(Proposed Action)		(No CC Travel)		(Resources)		(Recreation & Resources)	
	NFTS only		NFTS & Proposed		NFTS only		NFTS & Proposed		NFTS & Proposed	
	Mileage	%**	Mileage	%**	Mileage	%**	Mileage	%**	Mileage	%**
Proposed Additions	0		336		0		286		336	
Highway-legal Vehicle Only (Level 3, 4, 5)	575	13%	437	9%	575	13%	575	12%	44	1%
Open to All Vehicles (ML 2 and changes to ML 3)	3764	87%	4238	90%	3764	87%	4050	88%	4631	99%
Change in Vehicle Class (Mixed Use)	0		138	3%	0		0		531	11%
Seasonal Closure Miles	0		312	7%	0		425	9%	312	7%

** Percent of Total NFTS and Proposed Addition Miles

Measurement Indicator 4: Miles available to Access Dispersed Recreation

Description

This measurement indicator looks at the impact of proposed changes to the NFTS to motorized access on dispersed recreation opportunities, by alternative.

Method

Miles of proposed routes accessing dispersed sites, by alternative

Quality of road or dispersed experience: number of facilities provided as surrogate for number of dispersed sites accessed. One site per route addition for the purposes of access to dispersed recreation will be used as a proxy (in some instances multiple sites are accessed through a single route addition).

Visitors selecting dispersed recreation areas, rather than developed areas, report they viewed developed areas as overcrowded, noisy, expensive, and too developed. These visitors preferred the characteristics of roaded or dispersed areas, including the lack of development and greater privacy. They prefer the freedom to engage in activities not appropriate in developed locations, such as OHV use, bringing along a noisy dog, and altering the site to meet their needs. In addition, dispersed sites provide large group members better opportunity to camp close to each other and away from others, than do most developed group campgrounds.

More than 80 percent of the recreation use on the Forest occurs in dispersed areas (areas that are not developed for intensive recreation use) (LRMP 3-21). The table below shows, by alternative,

the additional access to dispersed camping that becomes available by adding routes. These short spur roads can be used for a camping experience that is away from the concentrated use areas and provide a quiet use opportunity for those seeking this type of experience.

Table 3-29. Miles and Proposed Unauthorized Routes Available for Dispersed Recreation Opportunity, by Action Alternative

	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Number of proposed routes	1,154	0	1,025	1,154
Miles of proposed routes	336	0	286	336

Alternative 1 was not included in the table above because with cross-country travel still allowed in this alternative, all roads and all of the acreage on the Forest, except for established Wilderness Areas, are available for motorized access to dispersed recreation opportunities.

Measurement Indicator 5: Impact of Proposed Changes to the NFTS on Neighboring Private and Federal Lands (dust, noise, use conflicts)

Description

This measurement indicator looks at the impact of proposed changes to the NFTS on neighboring private and Federal lands (dust, noise, use conflicts), by alternative.

Method

Number of miles of new routes proposed within ½ miles of populated areas, neighboring Federal land boundaries, wilderness boundaries, and private land boundaries. (This acts as a surrogate, indicating how much conflict off NFTS may occur, by alternative).

The Forest is a very rural and sparsely populated area. Visitors could expect that the potential impacts to populated areas may differ among the alternatives, with those alternatives with fewer roads having a lower impact of noise, dust and physical presence in populated areas. The area of influence (dust, noise) of motorized use on populated areas is considered to be ½ mile of neighboring private and Federal lands boundaries.

Table 3-30. Number of Miles of Routes Proposed for Addition to the NFTS, by Alternative, within ½ Mile of Neighboring Private and Federal Lands (Included is NFTS Mileage for Comparison Purposes)

	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5
Miles of Proposed Routes	0	48	0	44	48
Miles of NFTS	1038	1038	1038	1038	1038
Total NFTS and Proposed Routes	1038	1086	1038	1084	1086
Percent Change	0%	4%	0%	4%	4%

Environmental Consequences

This section discloses the environmental effects of each of the alternatives on recreation on the Forest. This analysis is focused on the effects of three management actions: (1) the prohibition of cross-country motorized travel, (2) additions of currently unauthorized routes to the National

Forest Transportation System (NFTS), and (3) changes to the existing NFTS (seasonal restrictions and mixed use). Nearly all Forest visitors, regardless of the purpose for their visit, use the motorized transportation system to reach their destination. Changes to traditionally accepted forest practices, such as cross-country motorized travel, alter the diversity of motorized and non-motorized opportunities on the Forest. Visitors seeking a quiet, non-motorized experience often use motorized vehicles to access trailheads, facilities, destinations, or geographic areas for non-motorized recreational activities.

Considerations for all Alternatives

Short-term time frame: 1 year

Long-term time frame: 20 years

Spatial boundary: The Forest boundary is the unit of spatial analysis when considering effects associated with changes in the NFTS or season of use.

Rationale: The effects measurement indicators are based on NFMA and Travel Management Rule requirements, as well as significant issues raised during internal and public scoping.

Cumulative Effects Considerations for all Alternatives

The cumulative effects analysis for recreation considers the impact of the alternatives when combined with past, present, and foreseeable future actions and events. The spatial boundary (Forest-wide) of the cumulative effects analysis was selected because impacts to the recreation system in one area of the Forest can affect the continuity of the system and public access opportunities in other parts of the Forest. The temporal scope is 20 years. It was selected because impacts to recreation and public access from present and reasonably foreseeable future activities may occur over this time frame. In analyzing cumulative effects of motorized travel management, the Modoc National Forest considered effects from all present and reasonably foreseeable future actions that may impact effects in this project. The actions affecting the recreation resource include new road construction, reconstruction, decommissioning, or adding roads to the Forest transportation system. These actions were selected because they have caused or have the potential to cause changes in recreation opportunities, public access, or the creation of routes on the ground. For a full list of the present and reasonably foreseeable future actions considered in this analysis, see Appendix E. The past activities, including the existing NFTS, have shaped the recreation opportunities and ROS settings available on the Forest. The effects of the present and reasonably foreseeable future activities listed in Appendix E would continue to shape the recreation opportunities and ROS settings available on the Forest. It is anticipated that the effects of the present and reasonably foreseeable future actions would meet ROS classifications for the management area in which they occur. This Forest does not anticipate any future actions that would cumulatively impact the effects of any of the actions in the alternatives.

Alternative 1: No Action

1. Direct and Indirect Effects of the Prohibition of Cross-Country, Wheeled Motorized Vehicle Travel

Under this alternative, cross-country motorized vehicle travel would be allowed over most of the Forest. Although consistent with LRMP guidance for ROS, cross-country motorized travel may affect ROS class settings in the short and long term. Motorized use could inadvertently spread to non-motorized areas, changing areas with non-motorized ROS class settings, such as semi-primitive non-motorized, to ROS classes with motorized settings such as semi-primitive motorized, roaded natural, or rural.

The short-term and long-term effects of cross-country motorized travel include the increased potential for conflicts with users seeking a “quiet” recreation experience, as well as increasing dust and noise on neighboring private and Federal lands. These effects are negligible because of low use on the Forest.

There would be no change in motorized recreation in this alternative. Dispersed recreation is outdoor recreation occurring over broad expanses of land or water and accounts for the majority of Forest recreation use. Access to dispersed recreation sites occurs on both the existing NFTS and unauthorized motorized routes. In both the short and long term, no change in motorized access to dispersed recreation activities would occur.

Under the No Action Alternative, about 1,609,466 acres would continue to have unrestricted cross-country motorized travel. The unauthorized motorized routes would not experience any changes or use restrictions. No net change in motorized recreation opportunities would occur; as a result, there would be no short or long term direct or indirect effects to motorized recreation opportunities. However, potential creation and expansion of unauthorized routes may result in environmental harm.

2. Direct and Indirect Effects of Adding Facilities to the NFTS

There would be no new routes added to the existing NFTS under this alternative; therefore, there would be no direct or indirect effects from additions.

3. Direct and Indirect Effects of Changes to the Existing NFTS, Including Identifying Seasons of Use and Vehicle Class

There would be no changes to the existing NFTS; therefore, there would be no direct or indirect effects.

Cumulative Effects for Alternative 1

ROS Consistency with the LRMP

The continuation of cross-country motorized travel could affect consistency with ROS in the future as described above. However, it is anticipated that the effects of the present and reasonably foreseeable actions listed in Appendix E would be consistent with the ROS classifications assigned to the management prescriptions in which the actions occur. Consequently, no cumulative effects are expected unless there is a rapid expansion of new unauthorized routes—which is not expected.

Non-Motorized Recreation Opportunity

This alternative has the greatest potential to negatively alter non-motorized recreation settings as it is difficult to predict where future cross-country motorized use would occur. Dust, noise, and motorized vehicle presence may impact non-motorized recreationists seeking a “quiet” recreation experience. Cumulatively, under this alternative, 1,609,466 acres of the Modoc NF could possibly be affected by motorized use and would not be available for “quiet” recreation, the greatest amount of all the alternatives. The present and foreseeable projects listed in Appendix E are typical management activities that occur on the Forest with the potential to produce noise, dust and use conflicts when they are in operation, due to machinery and equipment. The levels and duration of noise dust, and use conflicts they produce are temporary. They are not expected to have noticeable effects to the amount of overall quiet recreation experienced under this alternative.

Motorized Recreation Opportunity

With no proposed additions or changes to the use of existing NFTS roads or trails and no prohibition of cross-country motorized travel, this alternative results in no change to the existing

motorized recreation opportunities. Over time, with no prohibitions on cross-country motorized travel, more unauthorized motor vehicle access routes could be expected to develop, resulting in more access or opportunity for motorized experiences, and motorized access to non-motorized experiences, including dispersed recreation.

Ongoing road and trail maintenance is essential for creating and managing a cohesive motorized recreation system. The cumulative effects of increasing road use combined with the trend of deferred maintenance could be erosion and deterioration of roads, an increased risk of failure and subsequent loss of motorized recreation opportunity and quality. In the long term, a lack of maintenance could result in the closing of routes to prevent resource damage.

Motorized Recreation Opportunity to Dispersed Camping

Although the present and future projects would result in a decrease, no net loss of NFTS routes that would equate under this indicator to access remaining the same for dispersed recreation. The overall effect of continued cross-country motorized use would be unlimited access (outside of wilderness areas) for motorized dispersed recreation.

Impact of Proposed Changes to NFTS on Neighboring Private and Federal Lands (dust, noise, use conflicts)

This alternative also has the greatest impact on neighboring private and Federal lands , with 1,038 NFTS open roads and the potential for unlimited unauthorized motorized routes occurring within ½ mile of neighboring private and Federal lands, the highest amount when compared to all the alternatives. When compared to the other alternatives, this alternative has the highest potential cumulative impact on non-motorized recreation opportunities and neighboring Federal and private lands by creating more dust, noise and use conflict than is currently experienced. The present and foreseeable projects listed in Appendix E are typical management activities that occur on the Forest with the potential to produce noise, dust and use conflicts when they are in operation, due to machinery and equipment. The levels and duration of noise dust, and use conflicts they produce are temporary, and not expected to have cumulative effects on neighboring private and Federal lands under this alternative.

Alternative 2: Proposed Action

1. Direct and Indirect Effects of the Prohibition of Cross-Country Wheeled Motorized Vehicle Travel

Under this alternative, motorized cross-country recreation opportunities would be prohibited. The prohibition of wheeled motor vehicle use off the NFTS would have a beneficial effect on non-motorized recreation activities throughout the Forest, in populated areas, and neighboring Federal lands in the short and long terms by reducing noise, dust, and the presence of motorized vehicles. Access to dispersed recreation activities would be reduced to authorized routes.

Prohibiting cross-country motorized vehicle travel in alternative 2 would result in a net loss of acreage available for motorized recreation. The season of use restrictions may have a negative effect in the short and long terms to motorized opportunities by reducing area available for motorized opportunity during the closure, and a beneficial effect to non-motorized opportunities by increasing the acreage available for non-motorized activities during the closure. This loss of available open acreage is somewhat offset, however, by the proposed addition of motorized routes to the NFTS and by changes in use type on some existing routes. Although motorized recreation opportunities on open acreage would be greatly reduced, other motorized recreation opportunities would be available.

Indicators referenced

- Measurement Indicator 2: Non-motorized recreation opportunity
- Measurement Indicator 3: Motorized recreation opportunity
- Measurement Indicator 5: Impact of proposed changes to the NFTS on neighboring private and Federal lands (dust, noise, use conflicts)

2. Direct and Indirect Effects of Adding Facilities to the NFTS

Adding presently unauthorized roads would be consistent with ROS as allocated in the LRMP. All routes proposed for addition to the NFTS comply with the ROS class in the associated management area. All proposed route additions under this alternative would be located in semi-primitive motorized or roaded natural ROS classes.

Adding presently unauthorized roads may have a negative effect in both short and long term context for non-motorized opportunities, due to an increase in noise, dust, physical presence, possible use conflicts and displacement. When compared to the other action alternatives, the proposed route additions under this alternative would have the same impact on the Forest's "quiet" recreation opportunities (see Table 3-25) as Alternative 5.

Adding presently unauthorized roads and trails would have a beneficial effect on motorized opportunities. The proposed route additions also contribute to the continuity of the motor-touring opportunities by increasing loop and connector opportunities, and providing access to a diversity of dispersed recreation activities, providing beneficial effects to motorized recreation opportunities.

The season-of-use restrictions on proposed road additions may have a negative effect in the short and long terms to motorized opportunities and a beneficial effect to non-motorized opportunities by increasing the acreage available for non-motorized activities during the closure.

Motorized roads and trails would be administratively defined and published on a Motor Vehicle Use Map (MVUM). Recreationists would be able to better plan recreational pursuits based on an individual's unique expectations. As a result, the frequency of user conflicts between non-motorized and motorized recreation users would likely decrease in the short and long terms.

As shown in Table 3-29, Alternative 2 provides motorized access to a total of 1,154 dispersed recreation sites, providing a beneficial effect to motorized recreation opportunities. Alternative 2 and Alternative 5 provide the most motorized access to dispersed recreation sites when compared to the other action alternatives.

Alternative 2 proposes 48 miles of road additions within ½ mile of neighboring private and Federal lands, potentially having noise, dust, and physical presence impacts on neighboring private and Federal lands (seeTable 3-30).

Indicators referenced

- Measurement Indicator 1: ROS consistency with LRMP
- Measurement Indicator 2: Non-motorized recreation opportunity
- Measurement Indicator 3: Motorized recreation opportunity
- Measurement Indicator 4: Type of motorized access to dispersed recreation

3. Direct and Indirect Effects of Changes to the Existing NFTS, Including Identifying Seasons of use and Changes to Vehicle Class

Changes to the NFTS that add vehicle classes to the NFTS by providing mixed use on ML 3 roads would benefit motorized recreation by increasing the diversity of motorized opportunities. By contrast, changes in class that restrict motor vehicle on the NFTS would negatively affect

motorized recreation diversity. There would be a slight decrease in riding opportunities during seasonal closures affecting early- and late-season use. The impacts to adjacent land could increase slightly, but would be tempered by seasonal closures.

Alternative 2 proposes mixed use on about 138 miles of NFTS roads. This mileage would be available for all vehicle classes listed in Table 3-27. Alternative 2 proposes prohibiting mixed use on about 1.45 miles of NFTS ML 2 road (Glass Mountain Pumice Road 44N08). This mileage would only be available for highway-legal vehicle use. The prohibition of mixed use which restricts non-highway legal motor vehicles on the NFTS would negatively affect motorized recreation diversity in a very minimal way. However, the prohibition of mixed use on the 44N08 road would protect non-highway legal vehicles from unsafe interaction with large haul trucks using the road from the Glass Mountain Pumice Mine.

Motorized roads would be administratively defined and published on a Motor Vehicle Use Map (MVUM). Recreationists would be able to better plan recreational pursuits based on an individual's unique expectations. As a result, the frequency of user conflicts between non-motorized and motorized recreation users would likely decrease in the short and long terms. Dispersed recreation activities could be slightly impacted during seasonal closures occurring in early and late seasons of use.

Indicator Referenced

- Measurement Indicator 3: Motorized recreation opportunity
- Measurement Indicator 4: Type of motorized access to dispersed recreation
- Measurement Indicator 5: Impact of proposed changes to the NFTS on neighboring private and Federal lands (dust, noise, use conflicts)

Cumulative Effects for Alternative 2

ROS Consistency with LRMP

The prohibition of cross-country motorized travel would not affect the ROS in the future. It is anticipated that the effects of the present and reasonably foreseeable future actions listed in Appendix E would be consistent with the ROS classifications assigned to the management prescriptions in which the actions occur, so no cumulative effects are expected. All additions to the NFTS would be consistent with ROS class requirements.

Non-Motorized Recreation Opportunity

This alternative has the potential to negatively alter non-motorized recreation settings when considering the proposed route additions. Dust, noise, and motorized vehicle presence may impact non-motorized recreationists seeking a "quiet" recreation experience. Cumulatively under this alternative, 18 percent of the Modoc NF would be affected by motorized use and would not be available for "quiet" recreation, less than the no action alternative, but the same as the other action alternatives (see Table 3-25). Future actions would not change the potential to alter non-motorized recreation settings because this indicator was measured using ML 3, ML 4 and ML 5 NFTS roads. These roads are unlikely to change in the future.

Although Alternative 2 proposes route additions, these route additions are close enough to the existing NFTS that cumulatively their effect on "quiet" recreation is similar to Alternative 3. The present and foreseeable projects listed in Appendix E are typical management activities that occur on the Forest with the potential to produce noise, dust and use conflicts when they are in operation, due to machinery and equipment. The levels and duration of noise dust, and use conflicts they produce are temporary and not expected to have cumulative effects on neighboring private and Federal lands under this alternative.

Motorized Recreation Opportunity

Alternative 2 provides the second highest mileage available to all vehicle use, including motorcycles, ATV's, and high clearance vehicles of all the action alternatives. The quality of motorized recreation use would be enhanced compared to Alternative 3 and 4, due to the designation of 138 miles of mixed use, the second highest of the action alternatives and a 3 percent change in the NFTS. The Forest would be closed to cross-country travel and would impose seasonal closures on 312 miles of NFTS roads slightly impacting motorized recreation opportunities.

Proposed road additions and open NFTS roads would provide about 4,675 miles of motorized recreation opportunity, the same as Alternative 5, more than Alternative 4, and more than the current condition (see Table 3-28). Combined with the present and reasonably foreseeable future road actions about 4,675 miles of motorized recreation opportunity would be provided.

Proposed mixed use, which adds vehicle classes to the NFTS, would benefit motorized recreation by increasing the diversity of motorized opportunities. Alternative 2, when combined with the existing NFTS ML 2 roads, would provide for about 3,902 miles of mixed use motorized opportunity, more than the No Action Alternative (Alternative 1) and Alternatives 3 and 4, but less than Alternative 5 (see Table 3-28).

Cumulatively, seasonal closures on 312 miles could benefit 7 percent of the NFTS and additional unauthorized roads in the future by reducing damage caused from erosion. Seasonal closures would have a slight negative impact on motorized recreation by limiting motorized activities in the early and late seasons. It is reasonable to consider that other areas of the Forest may be closed seasonally in the future for a variety of reasons, including wildlife and safety. However, these closures are short in duration and would not cumulatively affect the motorized recreation experience.

Motorized Recreation Opportunity to Dispersed Camping

This alternative would have beneficial cumulative effects to motorized recreation by increasing NFTS mileage available for access to dispersed recreation. Proposed route additions contribute to a variety of riding experiences, as well as the continuity of the motor-touring opportunities. The route additions also provide loops, connectors, and access to a diversity of dispersed recreation activities which can benefit both motorized and non-motorized recreation opportunities by providing access to trailheads, dispersed campsites, etc. Although present and future projects may result in a temporary closure of roads to meet project specifications, no net loss of NFTS routes that would equate to loss of access for the long term for dispersed recreation would occur.

Impact of Proposed Changes to NFTS on Neighboring Private and Federal Lands (dust, noise, use conflicts)

This alternative, combined with the past, present and reasonably foreseeable future actions, also has the potential to impact neighboring private and Federal lands. About 1,086 miles of NFTS open roads and proposed route additions occur within ½ mile of neighboring private and Federal lands (see Table 3-30). The proposed route additions provide for a four percent increase from the current condition of open NFTS roads occurring within ½ mile of neighboring private and Federal lands. This alternative has the same potential cumulative impact as Alternative 5 on non-motorized recreation opportunities among the action alternatives, but less of an impact than the No Action Alternative (Alternative 1) or the current condition.

Alternative 3

1. Direct and Indirect Effects of the Prohibition of Cross-Country Wheeled Motorized Vehicle Travel

This alternative would prohibit cross-country motorized travel with motorized recreation restricted to existing NFTS roads. The prohibition of wheeled motor vehicle use off the NFTS would have a beneficial effect on non-motorized recreation activities throughout the Forest, in populated areas, and neighboring Federal lands in the short and long terms by reducing dust and noise from motorized vehicles. When compared to the other action alternatives, this alternative may provide slightly more quiet recreation opportunities because it does not add unauthorized routes (see Table 3-24). It also carries less potential impact to neighboring private and Federal lands in the short and long terms (see Table 3-30).

Prohibiting cross-country motorized vehicle travel in Alternative 3 would result in a loss of acreage available for motorized recreation. Alternative 3 represents the current condition except for prohibiting cross-country motorized travel. Motorized use would no longer occur on unauthorized routes and all currently unauthorized routes would naturally rehabilitate. This alternative has fewer miles of motorized opportunity than the current condition, and provides the least amount of motorized recreation opportunities when compared to the other action alternatives (see Table 3-24).

Alternative 3 provides the least amount of access to dispersed recreation sites. Some dispersed sites have been used by the same families for several generations. Forest visitors may find that their favorite dispersed site is no longer accessible by a motorized vehicle. Additionally, some dispersed sites with vistas and scenery viewing opportunities may no longer be easily accessible. As shown in Table 3-29, Alternative 3 provides motorized access to zero additional dispersed recreation sites.

Indicators referenced

- Measurement Indicator 2: Non-motorized recreation opportunity
- Measurement Indicator 3: Motorized recreation opportunity
- Measurement Indicator 4: Type of motorized access to dispersed recreation
- Measurement Indicator 5: Impact of proposed changes to the NFTS on neighboring private and Federal lands (dust, noise, use conflicts)

2. Direct and Indirect Effects of Adding Facilities to the NFTS, including Identifying Seasons of Use and Vehicle Class

There would be no new routes added to the existing NFTS under this alternative; therefore, there would be no direct or indirect effects.

3. Direct and Indirect Effects of Changes to the Existing NFTS

There would be no changes to the existing NFTS under this alternative; therefore, there would be no direct or indirect effects.

Cumulative Effects for Alternative 3

Only the existing NFTS and other State, county, or private roads traveling through the Forest were considered for Alternative 3. About 1,038 miles of NFTS open roads occur within ½ mile of neighboring private and Federal lands (see Table 3-30), providing less potential cumulative impact on neighboring Federal and private lands than alternatives 1, 2, 4, and 5. This alternative, when compared to the other action alternatives and the current condition, has the same cumulative impact to non-motorized recreation opportunities.

The open NFTS roads would provide about 4,339 miles of motorized recreation opportunity, less than the other action alternatives (see Table 3-28). Combined with the present and reasonably foreseeable future road actions, about 4,339 miles of motorized recreation opportunity would be provided. This alternative has the most potential cumulative impact on motorized users by providing fewer motorized recreation opportunities than the current condition. All cross-country travel would be prohibited, and no route additions or additional mixed use would be proposed. Mixed use on existing NFTS ML 2 roads would provide for about 3,764 miles of mixed use motorized opportunity, the least among the action alternatives (see Table 3-28.)

ROS Consistency with LRMP

The prohibition of cross-country motorized travel would not affect ROS in the future. It is anticipated that the effects of the present and reasonably foreseeable future actions listed in Appendix E would be consistent with the ROS classifications assigned to the management prescriptions in which the actions occur, so no cumulative effects are expected.

Non-Motorized Recreation Opportunity

This alternative has very little potential to alter non-motorized recreation settings. Dust, noise, and motorized vehicle presence may impact non-motorized recreationists seeking a “quiet” recreation experience. Cumulatively under this alternative, 18 percent of the Modoc NF would be affected by motorized use and would not be available for “quiet” recreation, the same as all of the other action alternatives (see Table 3-25). Future actions would not change the potential to alter non-motorized recreation settings because this indicator was measured using a ½ - mile buffer outside of ML 3, ML 4 and ML 5 NFTS roads; these roads are unlikely to change in the future.

Motorized Recreation Opportunity

This alternative does not have any proposed road additions. Combined with the present and reasonably foreseeable future road actions, about 4,339 miles of motorized recreation opportunity would be provided. Ongoing road and trail maintenance is essential for creating and managing a cohesive motorized recreation system, and would continue on the existing NFTS. By not adding any of the proposed unauthorized routes and by prohibiting cross-country travel, this alternative would have the most negative effect on motorized recreation alternatives. Alternative 3 does not provide any additional mileage outside of the ML 2 routes for use by all vehicle use, including motorcycles, ATV’s, and high-clearance vehicles. The quality of motorized recreation use would be negatively affected compared to Alternative 2, 4, and 5 due to restricting mixed use to existing ML 2 roads. The Forest would also be closed to cross-country travel.

The lack of seasonal closures would have a slight positive impact on motorized recreation by extending use of motorized activities in the early and late seasons. This would, however, be offset by the potential for erosion and damage cause to roads from use during this time. This use could increase rutting and erosion and result in potential safety hazards. It is reasonable to consider that other areas of the Forest may be closed seasonally in the future for a variety of reasons including wildlife and safety. However, these closures are short in duration and would not cumulatively affect the motorized recreation experience.

Motorized Recreation Opportunity to Dispersed Camping

This alternative would have negative cumulative effects to motorized recreation by not allowing use on routes currently used for access to dispersed camping. This prohibition, along with the prohibition of cross-country travel, would limit dispersed camping opportunities on the Forest. This Alternative would not add proposed routes which contribute to a variety of riding experiences, as well as the continuity of the motor-touring opportunities. This limitation would decrease the opportunity for loops, connectors, and access to a diversity of dispersed recreation activities which can benefit both motorized and non-motorized recreation opportunities by

providing access to trailheads, dispersed campsites, etc. Although present and future projects may result in a temporary closure of roads to meet project specifications, no net loss of NFTS routes equating to a gain in access for dispersed recreation would occur.

Impact of Proposed Changes to NFTS on Neighboring Private and Federal Lands (dust, noise, use conflicts)

This alternative, combined with the past, present, and reasonably foreseeable future actions, also has the potential to impact neighboring private and Federal lands. About 1,038 miles of NFTS open roads and proposed route additions occur within ½ mile of neighboring private and Federal lands (see Table 3-30). There are no proposed route additions within ½ mile of neighboring private and Federal lands. This alternative has the same potential cumulative impact as all the other alternatives, but less of an impact than the No Action Alternative or the current condition.

Alternative 4

Alternative 4 prohibits cross-country motorized travel and adds fewer routes to the NFTS in response to the concerns of cost, maintenance, wilderness, quiet recreation use, and natural resource impacts. This alternative adds about 286 miles (25 segments) of roads to the NFTS to access dispersed camping sites, allows no additional miles of mixed use, prohibits 1.45 miles of mixed use on ML 2 44N08 road (Glass Mountain Pumice Road), prohibits cross-country motorized travel and amends the LRMP with the prohibition. This alternative has the most roads affected by seasonal closures.

1. Direct and Indirect Effects of the Prohibition of Cross-Country, Wheeled Motorized Vehicle Travel

Under this alternative, motorized cross-country recreation opportunities would be prohibited. The prohibition of wheeled motor vehicle use off the NFTS would have a beneficial effect on non-motorized recreation activities throughout the Forest, in populated areas, and neighboring Federal lands in the short and long terms by reducing noise, dust, and physical presence of motorized vehicles. Access to dispersed recreation activities would be reduced to authorized routes.

Prohibiting cross-country motorized vehicle travel in Alternative 4 would result in a net loss of acreage available for motorized recreation. The season of use restrictions may have a negative effect in the short and long terms to motorized opportunities by reducing area available for motorized opportunity during the closure and a beneficial effect to non-motorized opportunities by increasing the acreage available for non-motorized activities during the closure. This alternative has the highest number of seasonal closures of all the alternatives. This loss of available open acreage is somewhat offset, however, by the proposed addition of motorized routes to the NFTS. Although motorized recreation opportunities on open acreage would be reduced, other motorized recreation opportunities would be available.

Indicators referenced

- Measurement Indicator 2: Non-motorized recreation opportunity
- Measurement Indicator 3: Motorized recreation opportunity
- Measurement Indicator 5: Impact of proposed changes to the NFTS on neighboring private and Federal lands (dust, noise, use conflicts)

2. Direct and Indirect Effects of Adding Facilities (presently unauthorized roads, trails, or areas) to the NFTS, including Identifying Seasons of Use and Vehicle Class

Adding presently unauthorized roads and trails would be consistent with ROS as allocated in the LRMP. All routes proposed for addition to the NFTS comply with the ROS class in the associated management area. All proposed route additions under this alternative would be located in semi-primitive motorized, roaded-natural, or rural ROS classes.

Adding presently unauthorized roads and trails may have a negative effect in both short and long term context for non-motorized opportunities due to an increase in noise, dust, physical presence, possible use conflicts and displacement. When compared to the other action alternatives, the proposed route additions under Alternative 4 would have the same impact on the Forest's "quiet" recreation opportunities as all of the other action alternatives (see Table 3-25). Alternative 4 proposes 44 miles of road additions within ½ mile of neighboring private and Federal lands, potentially having some noise, dust, and physical presence impacts on neighboring private and Federal lands. When compared to the other action alternatives, Alternative 4 would have slightly less impact on neighboring private and Federal lands than Alternatives 2 and 5, and slightly more impact than Alternative 3 (see Table 3-30). The season of use restrictions on proposed road additions may have a negative effect in the short and long terms to motorized opportunities by reducing mileage of motorized opportunity during the closure and a beneficial effect to non-motorized opportunities by increasing the acreage available for non-motorized activities during the closure.

Motorized roads would be administratively defined and published on a Motor Vehicle Use Map (MVUM). Recreationists would be able to better plan recreational pursuits based on an individual's unique expectations. As a result, the frequency of user conflicts between non-motorized and motorized recreation users would likely decrease in the short and long terms.

Adding presently unauthorized roads would have a beneficial effect on motorized opportunities. The proposed route additions contribute to the continuity of the motor-touring opportunities by increasing connector opportunities, and providing access to dispersed recreation activities, thereby providing beneficial effects to motorized recreation opportunities. As shown in Table 3-29, Alternative 4 provides motorized access to a total of 1,025 dispersed recreation sites. Some dispersed sites with vistas and scenery viewing opportunities may no longer be easily accessible. When compared to the other action Alternatives, Alternative 4 provides slightly less motorized access to dispersed recreation than Alternatives 2 and 5, but more motorized access than Alternative 3.

Alternative 4 also provides 286 miles of road additions to the NFTS, presenting a beneficial effect on motorized recreation opportunities for a variety of vehicle classes and access to dispersed recreation. Fifteen miles of unauthorized road additions under Alternative 4 would have season of use restrictions.

Indicators Referenced

- Measurement Indicator 1: ROS consistency with LRMP
- Measurement Indicator 2: Non-motorized recreation opportunity
- Measurement Indicator 3: Motorized recreation opportunity
- Measurement Indicator 4: Type of motorized access to dispersed recreation
- Measurement Indicator 5: Impact of proposed changes to the NFTS on neighboring private and Federal lands (dust, noise, use conflicts)

3. Direct and Indirect effects of Changes to the Existing NFTS

(This can include deletions of facilities and changing the vehicle class and season of use.)

This alternative would have 425 miles of NFTS roads closed seasonally. The season of use restrictions on proposed roads and existing NFTS roads may have a negative effect in the short and long terms to motorized opportunities by reducing mileage of motorized opportunity during the closure, and a beneficial effect to non-motorized opportunities by increasing the acreage available for non-motorized activities during the closure.

The amount of mixed use on the Forest would remain the same as the current situation; however with enforcement of the Travel Management Rule, 575 miles of ML 3, ML 4 and ML 5 routes would no longer be available for use by non-highway legal vehicles. This would have a short and long-term effect by reducing availability of motorized opportunities for non-highway legal vehicles. It would also reduce the availability of connector routes and loops.

Cumulative Effects for Alternative 4

ROS Consistency with LRMP

The prohibition of cross-country motorized travel would not affect the ROS in the future. It is anticipated that the effects of the present and reasonably foreseeable future actions listed in Appendix E would be consistent with the ROS classifications assigned to the management prescriptions in which the actions occur, so no cumulative effects are expected. All additions to the NFTS would be consistent with ROS class requirements.

Non-Motorized Recreation Opportunity

This alternative has the slight potential to negatively alter non-motorized recreation settings when considering the proposed route additions, the existing NFTS, and other roads traveling through the Forest. Dust, noise, and motorized vehicle presence may impact non-motorized recreationists seeking a “quiet” recreation experience. Cumulatively under this alternative, 18 percent of the Modoc NF would be affected by motorized use and would not be available for “quiet” recreation, which is the same as the other action alternatives. (see Table 3-25). Future actions would not change the potential to alter non-motorized recreation settings because this indicator was measured using a ½ - mile buffer outside of ML 3, ML 4, and ML 5 NFTS roads and these roads. These are unlikely to change in the future.

Although Alternative 4 proposes route additions, these route additions are close enough to the existing NFTS, that cumulatively their effect on “quiet” recreation is the same as Alternatives 2, 3, and 5. The present and foreseeable projects listed in Appendix E are typical management activities that occur on the Forest with the potential to produce noise, dust, and use conflicts when they are in operation, due to machinery and equipment. The levels and duration of noise dust, and use conflicts they produce are temporary and not expected to have cumulative effects on neighboring private and Federal lands under this alternative.

Motorized Recreation Opportunity

The Forest would be closed to cross-country travel and would impose the highest number of miles (425) of seasonal closures of all the alternatives. These closures may have a slight negative effect on motorized use during the early and late season. However, the closures would reduce the amount of rutting and erosion on the roads, thus increasing the level of safety and road surface protection. Seasonal closures would have a slight negative impact on motorized recreation by limiting motorized activities in the early and late seasons. It is reasonable to consider that other areas of the Forest may be closed seasonally in the future for a variety of reasons, including wildlife and safety. However, these closures would be short in duration and would not cumulatively affect the motorized recreation experience.

Proposed road additions and open NFTS roads would provide about 4,625 miles of motorized recreation opportunity, less than Alternatives 2 and 5, but more than Alternative 3 (see Table 3-28). Combined with the present and reasonably foreseeable future road actions about 4,625 miles of motorized recreation opportunity would be provided.

Alternative 4 provides the same availability to all vehicle use, including motorcycles, ATV's, and high clearance vehicles as Alternative 3. The quality of motorized recreation use would be the same as Alternative 3 because there would be no change on ML 3 roads to allow for mixed use. Prohibiting mixed use on ML 3 roads would negatively affect motorized recreation by decreasing the diversity of motorized opportunities. Alternative 4 would allow mixed use only on existing NFTS ML 2 roads (see Table 3-28). Ongoing road and trail maintenance is essential for creating and managing a cohesive motorized recreation system. The cumulative effect of adding roads to the NFTS would provide for their maintenance and should reduce erosion and deterioration of roads, an increased risk of failure and subsequent loss of motorized recreation opportunity and quality. There would also be the beneficial effects of increased safety and decreased maintenance costs on roads due to less erosion and rutting.

Cumulatively, seasonal closures on 425 miles in the future could benefit nine percent of the NFTS and additional unauthorized roads by reducing damage caused from erosion. Seasonal closures would have a slight negative impact on motorized recreation by limiting motorized activities during the early and late seasons. It is reasonable to consider that other areas of the Forest may be closed seasonally in the future for a variety of reasons including projects, wildlife and safety. However, these closures are short in duration and would not cumulatively affect the motorized recreation experience.

Motorized Recreation Opportunity to Dispersed Camping

This alternative would have beneficial cumulative effects to motorized recreation by increasing NFTS mileage (1,025 miles) available for access to dispersed recreation. This opportunity is slightly less than Alternatives 2 and 5. Proposed route additions contribute to a variety of riding experiences as well as the continuity of the motor-touring opportunities. The route additions also provide loops, connectors, and access to a diversity of dispersed recreation activities which can benefit both motorized and non-motorized recreation opportunities by providing access to trailheads, dispersed campsites, etc.

Impact of Proposed Changes to NFTS on Neighboring Private and Federal Lands (dust, noise, use conflicts)

This alternative, combined with the past, present and reasonably foreseeable future actions, also has the potential to impact neighboring private and Federal lands. About 1,084 miles of NFTS open roads and proposed route additions occur within ½ mile of neighboring private and Federal lands (see Table 3-30). The proposed route additions provide for a four percent increase from the current condition of open NFTS roads occurring within ½ mile of neighboring private and Federal lands. This alternative has the same potential cumulative impact as Alternatives 2 and 5 on non-motorized recreation opportunities among the action alternatives. But it has less impact than the No Action Alternative (Alternative 1) or the current condition, because of continuation of cross-country travel.

Alternative 5

This alternative is based on public comments from local government, local residents, the tribes, local organizations, and the national motorized recreation community. It proposes additional routes and mixed use to provide for more access and motorized recreation opportunity. This alternative adds about 1,054 segments of roads to the NFTS to access dispersed camping sites, adds 336 miles of roads to the NFTS, allows 531 miles of mixed use, prohibits 1.45 miles of

mixed use on ML 2 44N08 road (Glass Mountain Pumice Road). It prohibits cross-country motorized travel and amends the Forest Plan with the prohibition.

1. Direct and Indirect Effects of the Prohibition of Cross-Country Wheeled Motorized Vehicle Travel

Under this alternative, cross-country motorized vehicle travel would be prohibited. This prohibition would result in a net loss of acreage available for motorized recreation. The prohibition of wheeled motor vehicle use off the NFTS would have a beneficial effect on non-motorized recreation activities throughout the Forest, in populated areas, and neighboring Federal lands in the short and long terms by reducing dust and noise from motorized vehicles. Prohibiting cross-country motorized travel would also curtail ongoing negative effects from motorized vehicles such as noise, dust, and physical presence in the short and long terms.

The season of use restrictions may have a negative effect in the short and long terms to motorized opportunities by reducing area available for motorized opportunity during the closure and a beneficial effect to non-motorized opportunities by increasing the acreage available for non-motorized activities during the closure.

2. Direct and Indirect Effects of Adding Facilities to the NFTS, Including Identifying Seasons of use and Vehicle Class

Adding presently unauthorized roads and trails would be consistent with the ROS as allocated in the LRMP. All routes proposed for addition to the NFTS comply with the ROS class in the associated management area. All proposed route additions under this alternative would be located in semi-primitive motorized, and roaded natural ROS classes.

This alternative has the same number and miles of added routes as Alternative 2. It also has the highest motorized mileage available to motorcycles, ATV's, and high clearance vehicles of all the action alternatives. This includes 336 miles added to the NFTS totaling 4,675 miles of roads. Adding presently unauthorized roads and trails may have a negative effect in both short and long term context for non-motorized opportunities due to a potential increase in noise, dust, physical presence, possible use conflicts, and displacement. The season-of-use restrictions on some road additions may have a negative effect in the short and long terms to motorized opportunities, and a beneficial effect to non-motorized opportunities by increasing the acreage available for non-motorized activities during the closure.

Cumulatively under this alternative, 18 percent of the Modoc NF would be affected by motorized use and would not be available for "quiet" recreation, less than the No Action Alternative, but the same as the other action alternatives (see Table 3-25). Future actions would not change the potential to alter non-motorized recreation settings because this indicator was measured using ML 3, ML 4, and ML 5 NFTS roads. These roads are unlikely to change in the future.

Alternative 5 proposes 48 miles of road additions within ½ mile of neighboring private and Federal lands, potentially having noise, dust, and physical presence impacts on those lands. When compared to the other action alternatives, Alternative 5 has slightly more impacts on neighboring private and Federal lands than Alternatives 3 and 4, and the same impacts as Alternative 2 (see Table 3-30). Motorized roads, trails, and areas would be administratively defined and published on a Motor Vehicle Use Map (MVUM). Recreationists would be able to better plan recreational pursuits based on an individual's unique expectations. As a result, the frequency of user conflicts between non-motorized and motorized recreation users would likely decrease in the short and long terms.

Indicators referenced

- Measurement Indicator 1: ROS consistency with LRMP

- Measurement Indicator 2: Non-motorized recreation opportunity
- Measurement Indicator 3: Motorized recreation opportunity
- Measurement Indicator 4: Type of motorized access to dispersed recreation
- Measurement Indicator 5: Impact of proposed changes to the NFTS on neighboring private and Federal lands (dust, noise, use conflicts)

3. Direct and Indirect Effects of Changes to the Existing NFTS

(This can include deletions of facilities and changing the vehicle class and season of use.)

Changes to the NFTS that add vehicle classes to the NFTS by providing more mixed use would benefit motorized recreation by increasing the diversity of motorized opportunities. Changes in vehicle class that restrict mixed use on the NFTS would negatively affect motorized recreation diversity. Level 3 connector routes would be available for use by all vehicles providing the most diverse riding experience; however, 312 miles of seasonal restrictions would be imposed on NFTS roads, slightly impacting riding opportunities during early and late seasons. The impacts to adjacent land could increase slightly, but would be tempered by seasonal closures. The increase in use of non-highway legal vehicles on the NFTS could slightly increase the frequency in which highway-legal vehicles encounter OHVs. There would be a slight decrease in riding opportunities during seasonal closures affecting early- and late-season use.

This alternative provides the highest motorized mileage available to motorcycles, ATV's, and other high-clearance vehicles of all the action alternatives. This includes 4,630 miles of NFTS and additional unauthorized routes that would be designated for mixed use. It would provide the most diverse riding experience for OHV users, including loop opportunities, and would provide the greatest amount of access to dispersed recreation activities. This increase in use of non-highway legal vehicles on the NFTS could slightly increase the frequency in which highway-legal vehicles encounter non-highway legal vehicles. The frequency of encounters with other people on the Forest is low.

Cumulative Effects for Alternative 5

ROS Consistency with LRMP

The prohibition of cross-country motorized travel would not affect the ROS in the future. It is anticipated that the effects of the present and reasonably foreseeable future actions listed in Appendix E would be consistent with the ROS classifications assigned to the management prescriptions in which the actions occur, so no cumulative effects are expected. All additions to the NFTS would be consistent with ROS class requirements.

Non-Motorized Recreation Opportunity

This alternative has the potential to negatively alter non-motorized recreation settings when considering the proposed route additions, the existing NFTS, and other roads traveling through the Forest. Dust, noise, and motorized vehicle presence may impact non-motorized recreationists seeking a "quiet" recreation experience. Cumulatively under this alternative, 18 percent of the Modoc NF would be affected by motorized use and would not be available for "quiet" recreation, less than the No Action Alternative, but the same as the other action alternatives (see Table 3-25). Future actions would not change the potential to alter non-motorized recreation settings because this indicator was measured using ML 3, ML 4, and ML 5 NFTS roads. These roads are unlikely to change in the future.

Although Alternative 5 proposes route additions, these route additions are close enough to the existing NFTS that cumulatively their effect on "quiet" recreation is the same as Alternative 2, 3, and 4. The present and foreseeable projects listed in appendix E are typical management activities

that occur on the Forest with the potential to produce noise, dust and use conflicts when they are in operation, due to machinery and equipment. The levels and duration of noise dust, and use conflicts they produce are temporary and not expected to have cumulative effects on neighboring private and Federal lands under this alternative.

Motorized Recreation Opportunity

Alternative 5 provides the highest mileage available to all vehicle use, including motorcycles, ATV's, and high-clearance vehicles, of all the action alternatives. The quality of motorized recreation use would be enhanced due to the designation of 531 miles of mixed use, the highest of the action alternatives. The Forest would be closed to cross-country travel and would impose seasonal closures on 312 miles of NFTS, roads slightly impacting motorized recreation opportunities.

Proposed mixed use, which adds vehicle classes to the NFTS ML 3 routes, would benefit motorized recreation by increasing the diversity of motorized opportunities. Alternative 5, when combined with the existing NFTS ML 2 roads, would provide for about 4,631 miles of mixed-use motorized opportunity, more than Alternatives 2, 3, and 4. The change in vehicle class is anapproximately 11 percent change to the total NFTS. Proposed road additions and open NFTS roads would provide about 4,675 miles of motorized recreation opportunity, the same as Alternative 2, more than Alternative 4 (see Table 3-28). Combined with the present and reasonably foreseeable future road actions, about 4,675 miles of motorized recreation opportunity would be provided.

Ongoing road and trail maintenance is essential for creating and managing a cohesive motorized recreation system. Adding these roads to the NFTS would bring them into the Forest maintenance system. The cumulative effect of this would be to reduce erosion, deterioration, and risk of failure. It would also prevent subsequent loss of motorized recreation opportunity and quality. There would also be the beneficial effects of increased safety and decreased maintenance costs on roads due to less erosion and rutting.

Cumulatively, seasonal closures on 312 miles could benefit seven percent of the NFTS and additional unauthorized roads in the future by reducing damage caused from erosion. This is the same as Alternative 2, more than Alternatives 1 and 3, and less than Alternative 4. Seasonal closures would have a slight negative impact on motorized recreation by limiting motorized activities in the early and late seasons. It is reasonable to consider that other areas of the Forest may be closed seasonally in the future for a variety of reasons including wildlife and safety. However, these closures are short in duration and would not cumulatively affect the motorized recreation experience.

Motorized Recreation Opportunity to Dispersed Camping

This alternative would have the same beneficial cumulative effects to motorized recreation by increasing NFTS mileage available for access to dispersed recreation as Alternative 2. Proposed route additions contribute to a variety of riding experiences as well as the continuity of the motor-touring opportunities. The route additions also provide loops, connectors, and access to a diversity of dispersed recreation activities which can benefit both motorized and non-motorized recreation opportunities by providing access to trailheads, dispersed campsites, etc. Although present and future projects may result in a temporary closure of roads to meet project specifications, no net loss of NFTS routes that would equate to loss of access for the long term for dispersed recreation would occur.

Impact of Proposed Changes to NFTS on Neighboring Private and Federal Lands (dust, noise, use conflicts)

This alternative, combined with the past, present, and reasonably foreseeable actions, also has the potential to impact neighboring private and Federal lands. About 1,086 miles of NFTS open roads and proposed route additions occur within ½ mile of neighboring private and Federal lands (see Table 3-30). The proposed route additions provide for a four percent increase from the current condition of open NFTS roads occurring within ½ mile of neighboring private and Federal lands. This alternative has the same potential cumulative impact as Alternative 5 on non-motorized recreation opportunities among the action alternatives, but less of an impact than the No Action Alternative (Alternative 1) or the current condition.

Summary of Effects Analysis Across all Alternatives

Motorized Recreation

Alternative 1 does not propose a change to the managed use of existing NFS roads, and cross-country travel would not be prohibited. Alternative 2 provides the second-highest motorized mileage available of all the action alternatives, followed by Alternatives 5 and 4. Alternative 5 provides the widest range of opportunity for motorized recreation of all the action alternatives, and provides to most mixed use opportunities. Alternative 1 results in the lowest impact to motorized recreation followed by Alternative 5, 2, and 4 respectively. Alternative 3 is the most restrictive and provides the least amount of opportunity for motorized recreation. Although Alternative 2 and 5 have the same number of proposed additions of unauthorized routes, Alternative 5 offers an increased amount of mixed use opportunities.

Non-Motorized Recreation

Alternative 1 would allow cross-country travel to continue unabated; dust and noise from vehicle traffic could impact non-motorized recreation. Alternative 1 has the highest potential impact on non-motorized users. Alternative 3 is the most beneficial to non-motorized recreation of all the alternatives. This alternative does not add any unauthorized routes, eliminates cross-country travel, and provides for quiet recreation; therefore, users choosing to recreate away from the road system would no longer be impacted by motorized use. Alternative 3 is the most beneficial to non-motorized recreation, followed by Alternatives 4, 2, 5, and 1 respectively. However, the differences between Alternatives 2,3,4, and 5 are very slight considering the entire NFTS.

Compliance with the Forest Plan and Other Regulatory Direction

Alternative 1 does not comply with the 2004 Sierra Nevada Forest Plan Amendment Record of Decision because it allows wheeled vehicle travel off designated routes and trails. The action alternatives do not comply with the LRMP because unless amended, it states that 87 percent of the Forest should be left open to cross-country travel.