ISSUE 16: RECREATION

Changes from the Draft to the Final EIS

During review of the DEIS, some errors were found with the Recreation Opportunity Spectrum (ROS) model, it was corrected and the numbers in Table 3.16.12 and 3.16.13 were updated. The recreation opportunity Tables (3.15.14 – 3.16.28) were updated to reflect changes to Alternative 7-M and corrections to Alternatives 1-6 discovered during review of the DEIS. In some cases, models used to derive the values displayed in these table changed, so numbers displayed by mountain range for each alternative may be somewhat different than in the DEIS – the total numbers relative to miles of opportunities or acres for the Forest remain constant in alternatives that did not change between the DEIS and FEIS. Minor corrections to some alternatives between the DEIS and FEIS account for minor changes to table values. Values throughout this chapter were validated and tables corrected for minor errors and changes to Alternative 7-M. The discussion about accessibility of trails to people with disabilities was expanded. Recreation use and participation information specifically relative to use of "off-highway vehicles" was updated with findings from a 2005 study, and the Montana State Trails Plan. The effects discussion relative to proposed goals, objectives and standards was updated to reflect differences between alternatives.

Introduction

This section addresses the potential effects of the Travel Plan alternatives on the amount and quality of recreation opportunities for various uses that visitors enjoy on the Gallatin National Forest. Issues surrounding the way that people recreate on public lands have been growing as populations increase and more people with divergent interests compete for finite recreation resources. During the comment period associated with the release of the Travel Plan Benchmark in 2002, and then during review of the draft alternatives in 2003, several common themes regarding recreation issues surfaced. Motorized recreationists feel that their opportunities to enjoy the Forest have been greatly restricted over the last 35 years. Non-motorized recreationists feel that expanding motorized use on the Forest's trail system is decreasing the quality of their trail and traditional backcountry experiences, noting that the noise and odors associated with motorized equipment are particularly offensive to them. Non-motorized recreationists specifically identified a shortfall in segregated non-motorized trail opportunities in the front country close to population centers, both in the winter for cross-country skiing and in the summer for hiking and biking. Conflicts between user groups, whether mountain bikers and stock users or cross-country skiers and snowmobilers, have been increasing across the country (Moore 1994). As our society ages, more and more recreationists are looking for easy day use activities of all types, and have voiced concern about the accessibility of road and trail opportunities on the Forest. Evolving technology that allows people to traverse portions of public land that were inaccessible ten years ago along with increasing personal wealth and spare time contribute to growing issues surrounding travel management on public lands (USDA 2003). The Montana Statewide Comprehensive Outdoor Recreation Plan (SCORP) echoes several of these issues and notes that the continued access to and maintenance of rural and backcountry trails for hiking, biking, equine, and motorized off-highway vehicles (OHVs) and snowmobile trails is a concern across the state, as well as noting a shortfall in the available miles and maintenance of urban and rural trails (Montana Fish, Wildlife and Parks 2003).

Affected Environment

The Gallatin National Forest has a long reputation for being an outdoor recreation haven. Thousands of miles of trails, expansive backcountry and wilderness resources, numerous miles of blue ribbon trout streams, hundreds of high elevation mountain lakes, awe inspiring scenery, towering peaks to climb, unique natural features like the Petrified Forest, outstanding big game hunting opportunities and world-class snowmobiling, skiing and ice climbing, have drawn recreationists to this area for decades.

Testament to the popularity of the Forest's recreation resources include the numerous dude ranches and other commercial operations that provide wildland recreation services scattered around the Forest. Possibly the first commercial dude ranching operation to be established in the west was the OTO Ranch just north of Gardiner, Montana, where commercially-guided hunting, riding and fishing adventures were marketed and provided to the public early in the 1900s, capitalizing on the extensive trail system, good hunting opportunities and peoples desire to recreate in a wild backcountry setting.

Outfitters and guides have long been partners with the Forest Service in providing quality services to the recreating public. The Forest currently permits over 140 outfitters and guides who provide over 100,000 service days of guided opportunities to the public every year, ranging from traditional horse pack trips to white water kayaking and guided snowmobile and ATV adventures.

Gallatin Forest Recreation Use Information

The Gallatin National Forest has a history of being the most heavily used forest in the Northern Region of the Forest Service. Historic recreation use estimations were recently replaced across the country with statistically sound sampling techniques tied to a national project called the National Visitor Use Monitoring program. Data gathered from the Gallatin National Forest between October 2002 and October 2003 documented that it continues to be more heavily visited by recreationists than any other Forest in the Region, and is among the top 40 most heavily used National Forests in the nation.

Statistically-sound samples from the 2002/2003 survey show that 2,263,562 site visits occurred during the sample year; 1,980,548 National Forest visits were tallied and an estimated 57,711 Wilderness visits took place (Kocis et al. 2004). Several factors during the year may have affected total visitation: an abnormally warm dry winter (resulting in less than desirable snow conditions), and a hot dry summer with numerous wildfires and associated Forest closures.

A National Forest visit is defined as the entry of one person upon the Forest to participate in recreation activities for an unspecified period. A site visit is defined as the entry of one person onto a National Forest site or area (like a campground or visitor center) to participate in recreation activities for an unspecified period. National Forest visits may be comprised of multiple site visits. These use estimates were based on a random stratified sample of exiting visitors over 217 different sample days. A total of 2,033 visitors were contacted during the sample year. The 80% confidence interval width was plus or minus 11.8% for this sample. (Kocis et al. 2004). For a complete

description of methodology, background, summary data from other Forests and national statistics, visit the website at: www.fs.fed.us/recreation/programs/nvum.

The 2002/2003 survey collected information about participation in recreation activities, visitor demographics, spending patterns, and economic information about users. Several of the summary tables are useful to describe recreation use patterns on the Gallatin National Forest. This data, as displayed, is only valid at the Forest level and cannot be disaggregated to specific sites or locations.

Table 3.16. 1 describes recreation activity participation and primary activity choices on the Gallatin Forest. This data is a snapshot in time on the Gallatin National Forest. The data indicate that hiking/walking are the most popular primary activities, with general relaxing, hunting, downhill skiing, snowmobiling and fishing the next most popular primary activities. Many Forest visitors indicated that viewing scenery, watching wildlife, and driving for pleasure were secondary activities that they frequently participated in.

Recreation use data has been gathered by the Forest Service for many years, using a variety of methods, with limited reliability. This current recreation sampling endeavor (NVUM) was the first statistically-sound survey performed on the Forest using the new national protocol. There are no similar sample sets against which the Forest could compare trends in use to the 2002 sample. The Forest will resample using this same protocol in 2008, which will provide sound data upon which to gauge local recreation use trends.

Recreation use participation for certain activities may have been affected by wildfire closures, low snow winter, and other factors that could affect a 1 year survey of actual recreation use.

The study indicated that over 55% of recreationists on the Forest were from local communities (Bozeman, Belgrade, West Yellowstone, Livingston, Big Timber and Gardiner) and that over 60% of Forest visitors were from the Greater Yellowstone Area and southwest Montana.

Approximately one-third of the participants in the survey answered questions about visitor satisfaction. The condition of the environment, scenery and trail conditions were rated the most important factors for a satisfactory visit to general Forest areas, with an average satisfaction rating of good to very good for current conditions of these parameters. The study also presented an assessment of visitor's perceptions of crowding on the Forest. Table 3.16. 2 represents response to the question of how crowded visitors felt in a general Forest setting. Table 3.16. 2 summarizes mean perception of crowding by site type on a scale of 1 to 10 where 1 means hardly anyone was there, and a 10 means the area was perceived as overcrowded. It is important to note that these results represent a snapshot of people currently recreating at various sites on the Forest, and does not represent the viewpoint of recreationists who may have been displaced to other areas due to crowding issues.

Table 3.16. 1 Gallatin National Forest activity participation and primary activity, 2003.

Activity	Percent Participating	Percent as Main (Primary) Activity
Viewing Natural Features	70.72	3.76
Viewing Wildlife	59.97	2.89
Hiking / Walking	57.64	29.1
Relaxing	55.83	10.62
Driving for Pleasure	20.74	1.94
Fishing	12.67	6.63
Developed Camping	12.66	4.53
Picnicking	10.34	1.15
Hunting	9.9	9.22
Downhill Skiing	9.64	8.25
Nature Study	9.56	0.03
Snowmobiling	9.03	7.82
Primitive Camping	7.2	1.8
Non-motorized Water	5.74	3.18
Nature Center Activities	5.43	0.96
Gathering Forest Products	5.12	2.04
Other Non-motorized	4.67	0.86
Visiting Historic Sites	4.55	0.3
OHV Use	4.03	1.39
Cross-country Skiing	4.02	2.95
Backpacking	2.64	0.19
Bicycling	2.52	1.44
Horseback Riding	2.37	1.17
Resort Use	1.34	0.21
Motorized Water Activities	0.91	0.12
Other Motorized Activity	0.69	0.09

* This column may total more than 100% because some visitors chose more than one primary activity.

Table 3.16. 2 Perception of crowding by Gallatin Forest recreation visitors by site type (% site visits).

Crowding Rating	Developed Day Use	Overnight Use	General Forest Area	Wilderness
10 (Overcrowded)	0.0	0.0	0.7	2.4
9	2.6	0.0	0.7	0.0
8	1.8	11.7	2.3	3.6
7	10.2	0.0	8.3	1.2
6	10.3	17.4	8.4	4.7
5	9.7	17.0	21.4	8.3
4	8.3	11.7	12.7	13.6
3	14.1	1.9	13.5	6.5
2	24.2	15.2	15.7	5.3
1 (Hardly anyone there)	18.8	25.2	16.3	54.4

National and Regional Recreation Participation Data

The data displayed in Table 3.16. 1 represents one year of recreation use data on the Gallatin. To understand the bigger picture about recreation participation and overall trends, this next section summarizes national and regional recreation participation data and discusses recreation trend projections. Table 3.16.3 displays national recreation trend data for activities common to the Forest.

Table 3.16. 3 National trends in estimated percentages and numbers of persons 12 years of age or older who participated one or more times in a recreation activity during a 12-month period, 1982-1983 and 2000-2001 (Cordell 2004:40).

Activity	Percent participating 1982-1983	Millions participating 1982-1983	Percent participating 2000-2001	Millions participating 2000-2001	Percent change 1982-1983 to 2000-2001
Walking for pleasure	53	100	83.1	190.5	90.5
Picnicking	48	90	53.9	123.6	37.3
Driving for pleasure	48	90	51.0	116.8	29.8
Bicycling	32	61	40.7	93.3	53.0
Running or jogging	26	49	37.3	85.5	74.5
Fishing	34	64	34.7	79.6	24.4
Day hiking	14	26	33.3	76.3	193.5
Viewing/photographing birds	12	22	31.8	72.9	231.4
Developed camping	17	33	26.8	61.5	86.4
Driving off-road	11	20	18.3	41.9	109.5
Primitive camping	10	18	16.6	38.0	111.1
Canoeing or kayaking	8	15	12.1	27.7	84.7
Hunting	12	22	11.6	26.6	20.9
Backpacking	5	9	11.1	25.4	182.2
Horseback riding	9	17	10.2	23.3	37.1
Downhill skiing	6	12	9.1	2.8	73.3
Snowmobiling	3	6	5.9	13.5	125.0
Cross-country skiing	3	6	3.9	9.0	50.0

Table 3.16.3 shows that several activities nationally have had growth rates of over 100% since the mid-1980s. The activity with largest percent increase in growth was viewing/photographing birds, followed by day hiking, backpacking, snowmobiling, primitive camping and driving off-road.

The same study examined regional differences in recreation participation. In the West, and in Montana in particular, nature-based activities like day hiking, developed and primitive camping, backpacking, mountain biking and snowmobiling are more popular than in other regions of the country.

Table 3.16. 4 displays recreation participation percentages in nature-based activities common to southwest Montana for persons 12 years or older in 2000-2001.

Table 3.16. 4 Percentage of Montana residents 12 years of age or older participating one or more times during a 12-month period (2000-2001) (Cordell 2004:226-228).

Activity	Percent Participation
Walking for pleasure	86.4
Viewing/photographing scenery	78.0
Viewing/photographing wildlife	74.0
Driving for pleasure	61.1
Visiting a wilderness or primitive area	59.7
Day hiking	56.2
Bicycling	47.1
Developed camping	43.7
Primitive camping	40.7
Big game hunting	32.9
Driving off-road	32.3
Mountain biking	31.8
Backpacking	26.0
Horseback riding (general)	20.6
Snowmobiling	20.0
Horseback riding on trails	17.0
Cross country skiing	12.8

A study specifically tied to participation in off-highway driving was compiled by Cordell, et al in 2005. This report "Off-Highway Vehicle Recreation in the United States, Regions and States" summarized where and how off-highway recreation vehicle recreation occurs. The study noted that for recreationists in the West, 27.3 % of recreationists surveyed said they participated in off-highway vehicle use between 1999 and 2004 (Cordell et al 2005 page 13). Statistics for Montana specifically raised that figure to 29.1% (ibid page 15). It is important to note that through the years the questions posed by NSRE surveys relative to off-road vs. off-highway vehicle use changed. Earlier surveys asked specifically about "off-road" vehicle use, while current surveys ask about participation in "off-highway" vehicle use. The current question likely includes participation by recreationists who are simply driving lower standard forest roads, not necessarily driving "off-road" on motorized trails, therefore overestimating motor vehicle use on trails (Cordell et al 2005 page 6).

The source data for these trend comparisons is the National Survey on Recreation and the Environment (NSRE), which has been collected jointly by the National Park Service and Forest Service since the 1960s. This data is reviewed and presented in an exhaustive number of ways in Cordell's most recent publication, "Outdoor Recreation for 21st Century America" (Cordell 2004).

A study completed in 1999 by the Montana Institute for Tourism and Recreation Research indicates similar trends based solely on Montana survey data. In this survey, walking, wildlife watching, day hiking, biking, nature photography, motorcycling and hunting were among the top 20 most frequent recreation activities noted (Ellard, Nickerson and McMahon 1999). Another frequently cited study, "The Montana Trail Users Study" (McCool et al 1994), shows similar general trends with walking and day hiking noted as the most popular activity. Seventy percent of Montanans indicated they participated in this activity within six months of the survey. This study shows a higher participation rate in motorized trail activities in 1994 than current local regional and national participations studies indicate. In this study, 9.1% of Montanans said they used motorcycles, 11.8% said they

rode ATVs, 19.6% drove 4x4 vehicles, and 15.3% rode snowmobiles on Montana's trails (McCool et al. 1994). The Montana State Trails Plan (Montana Fish, Wildlife and Parks No Date) summarized a number of these same studies as well as several other Fish Wildlife and Parks survey efforts with similar findings. One paper cited in this study from 1998 estimated that 90% of Montana trail users hike, 11% rode horseback, 6% bicycle, 4% cross country ski and 2% or less rode dirt bikes, ATVs, drove 4x4 trucks or snowmobiles (Montana Fish, Wildlife and Parks 1998).

Regional Recreation Trend Predictions

The following tables display trends for dispersed recreational activities in the Rocky Mountain Region. Table 3.16. 5 shows a baseline figure of the number of participants in the Rockies for each activity, and projected growth index for 2010, 2020 and 2050. Table 3.16. 6 displays the same activities, listing the number of days participated and projected growth indices for the same years.

Table 3.16. 5 Participation in some dispersed recreation activities in the Rockies, and projection index for participation in 2010, 2020 and 2050 (Cordell et al. 1999:326-349).

Activity	1995 Participants	2010 Projection Index	2020 Projection Index	2050 Projection Index
Cross-country skiing	700,000	1.03	1.41	2.44
Snowmobiling	800,000	1.06	1.10	1.36
Horseback riding	1,700,000	1.13	1.23	1.60
Backpacking	1,800,000	1.11	1.18	1.51
Hunting	2,000,000	1.05	1.12	1.20
Off-road driving	3,000,000	1.09	1.17	1.37
Biking	4,500,000	1.17	1.26	1.65
Hiking	5,000,000	1.15	1.24	1.59
Wildlife watching/photography	9,600,000	1.20	1.30	1.70

The projection index represents the percent increase in the number of participants expected for that activity for a specific decade in Table 3.16. 5 and the percent increase in the total number of days participated attributed to the activity in the Rockies in Table 3.16. 6 . Multiplying the projection index with the 1995 baseline gives the projected growth in participation and the projected growth for the total number of days of dispersed recreation anticipated for a given activity.

Table 3.16. 6 Number of days of some dispersed recreation activities in the Rockies, and projection index for participation in 2010, 2020 and 2050 (Cordell et al. 1999:326-349).

Activity	1995 Total Days	2010 Projection Index	2020 Projection Index	2050 Projection Index
Cross-country skiing	4,200,000	1.44	1.89	3.42
Snowmobiling	6,700,000	1.06	1.20	1.28
Backpacking	14,500,000	1.03	1.07	1.24
Hunting	34,500,000	1.05	1.10	1.22
Horseback riding	48,200,000	1.06	1.14	1.51
Off-road driving	57,300,000	1.12	1.20	1.54
Hiking	87,800,000	1.12	1.20	1.44
Biking	180,300,000	1.13	1.21	1.42
Wildlife watching/photography	578,900,000	1.28	1.49	1.94

The data displayed in Table 3.16. 5 and Table 3.16. 6 represent a subset of all recreational activities covered in this study, and apply to the Rocky Mountain Region in general, not just to recreation activities on National Forests. See the study for more details regarding study design, projection parameters and assumptions (Cordell et al. 1999: 326-349).

Recreation data for the Rocky Mountains found in these studies displays trends that could be expected for visitation on the Gallatin National Forest in the coming decades. According to these projections, non-consumptive wildlife activities like bird watching, wildlife viewing and photography will account for the most recreation use in the future, with biking, hiking, off-road driving, horseback riding and hunting following. This data also indicates that people participating in non-consumptive wildlife activities spend more days participating in their activity than do other recreationists. Heavy growth in the demand for cross-country skiing opportunities could be expected (242% increase by 2050), with the total number of days people participate in cross-country skiing nearly equaling those of snowmobiling by 2020 in the Rockies. The demand for off-road driving is projected to increase by about 20% by 2020. The data suggests the demand for activities that favor semi-primitive non-motorized settings both summer and winter will be heaviest in the future, competing with an also growing demand for semi-primitive motorized settings for off-road vehicle use. It is important to note that recreationists often participate in more than one activity during any given outing, and could be represented more than once in the preceding data.

A study completed by the Forest Service in 2002 surveyed the American public regarding their values with respect to public lands, objectives for management of public lands (including recreation management) and beliefs about the role the Forest Service should play in fulfilling those objectives. The study concludes that the public sees the promotion of ecosystem health and the protection of watersheds as important objectives. When queried specifically about recreation opportunities, the public supports multiple uses, but not all uses to the same degree. The study found that providing access to additional motorized recreation opportunities was not a high priority objective, while preserving the opportunity to have a "Wilderness experience" was important. Providing opportunities and facilities for non-motorized recreation was seen as a somewhat important objective and role for the agency. Separating these often conflicting types of pursuits (motorized and non-motorized uses) by designating trails for specific uses was seen as a somewhat important objective (Shields et al. 2002).

Regional Demographics and Potential Effects on Recreation Use Patterns

Regional population growth will have a pronounced effect on the number of recreationists competing for finite recreation opportunities on public lands in the west. The Rocky Mountain Area can anticipate a robust population growth rate of 53% by 2050 (Cordell et al. 1999:324). See Issue 5: Social and Economic Impacts in Chapter 3 for a more thorough discussion of demographic trends for the forest.

Population increases in Gallatin and Park Counties certainly have had an effect on the number of people recreating on the Gallatin National Forest. Population growth in Gallatin County has more than doubled since 1969, when the population was 32,000 people, compared to the 2000 census of 67,831 people. Gallatin County experienced a 34.4% increase in population between 1990 and

2000. Park County has experienced an increase in population as well, though not as much as Gallatin County, growing from 11,450 residents in 1969 to 15,652 residents in 2000 (USDA 2002). In that over 55% of the recreation use on the Forest comes from local communities, this increasing population trend will exert continued pressure on public lands for recreation opportunities.

Both counties rely heavily on nature-based recreation and tourism business for income. The USDA 2002 report also notes how important Forest-based recreation activities such as outfitting, guiding, and fishing are to local economies. Teton County, Wyoming provides another astounding local growth picture with nearly a 300% population increase from 1969 to 2000. Notably, many of the newcomers to this area are relatively wealthy compared to state average per capita income figures. Also of interest is that the current population is aging, with many retirees moving to the area; attracted by scenery, quality of living, and outdoor recreation activities like skiing and fishing and other day use readily accessible activities (USDA 2002).

The Montana SCORP analysis from 2003 supports these findings noting that with an aging population, more readily accessible day type activities will be in high demand. The study also notes a need to improve the infrastructure of outdoor recreation facilities to make more of them ADA (Americans with Disabilities Act) compliant to accommodate people with disabilities (Montana Fish, Wildlife and Parks 2003).

Recreation Use Conflict

Issues regarding user conflict were raised during the public comment period after the release of the Travel Plan benchmark, and during the comment period for the six draft alternatives. A common thread exists in most of the comments; that is, non-motorized recreationists feel that their recreation experience is negatively affected by motorized recreation, and in general, motorized recreationists do not perceive any user conflict. Other conflicts noted in comments identified conflicts between mountain bikers and hikers/stock users, and concerns over the number of dogs on trails. Comments by hunters who access their hunting areas via foot or horse note conflicts with hunters accessing the same areas using motorized trail vehicles. The hunters who arrive via foot or horse feel the presence of motorized vehicles affects the quality of their hunt and possibly scares game away. The Montana State Trails Plan identifies growing concern about the impact of motorized vehicles (ATV's in particular) on traditional hunting opportunities in the state (MT Dept. FWP No date) The National Recreation Trails Advisory Committee identified trail-user conflict as a major concern that needs resolution (Moore 1994).

Recreation research on the topic of user conflict is broad, with a typical finding that user conflicts are almost always one-way. For example, skiers perceive snowmobilers interfering with their activity, but snowmobilers are generally indifferent to skiers (Jackson and Wong 1982). A similar pattern was documented between hikers and mountain bikers near Salt Lake City, where 32% of hikers felt bikers created conflicts and affected their experience, where only 5.6% of bikers felt hikers caused problems by not yielding the trail to bikers (Ramthun 1995). Conflict has been variously described by social scientists, but generally is attributed to goal interference attributed to others behavior (Jacob and Schreyer 1980).

Executive Orders created in the 1970s (E.O. 11644, E.O. 11989) regarding management of OHVs directed federal agencies to address growing user conflicts on trails. This direction was then interpreted in regulation 36 CFR 295.2 (recently replaced with 36 CFR 212.55), which directs the Forest Service to provide off-road vehicle management strategies that minimize conflicts among users. A Forest Service study team reviewing access and travel management issues for the agency in 2002, came out with a series of recommendations, one of which was to *"minimize conflict associated with access and travel management on National Forest system lands"* (USDA 2003). On November 9, 2005 the Forest Service published the Final Rule: Travel Management: Designated Routes and Areas for Motor Vehicle Use (Federal Register Vol. 70, No. 216) that provides the direction for managing summer motor vehicle use on National Forest System lands. One of the concerns addressed by the final rule was to better manage the needs and conflicting expectations of millions of people who use and enjoy National Forests.

Gallatin National Forest Niche in Providing Recreation Opportunities

Information for this discussion was gleaned from four primary sources: a Recreation Analysis of the Management Situation for Eastside Region 1 Forests (USDA 2003), the National Visitor Use Monitoring Program, the DEIS for Forest Plan Amendments for Grizzly Bear Conservation for the Greater Yellowstone Area (GYA) National Forests (USDA 2004a) and Recreation in the Greater Yellowstone Area – an Interagency Technical Report (USDA 2006a).

A discussion of niche for public land in the recreation arena includes the physical attributes of the area: what the supply of resources looks like, a discussion of historic use, and what are the favored activities in the area? The following is a brief discussion about the Gallatin's niche in Montana and the GYA.

The Gallatin Forest is characterized by large expanses of backcountry and Wilderness, with developed recreation corridors that follow major rivers and highways, and provide popular scenic access routes to Yellowstone National Park. Use on the Forest is most heavily slanted toward dispersed recreation activities like hiking, hunting, general relaxing, fishing, skiing and snowmobiling (Table 3.16. 1). These six main activities account for over 70% of the Gallatin's total visitation. The Forest reported more recreation visits to dispersed areas than did any other Forest in the Northern Region. In the GYA, a similar pattern also occurs on the Bridger Teton and Caribou-Targhee National Forests. The number of recreationists visiting Wilderness was also comparatively high on the Gallatin compared to other Forests in the Region and in the GYA (only the Bitterroot reported more Wilderness visitors).

Hiking and walking are the most popular dispersed recreation activities on the Forest, by quite a wide margin, and stand out as a unique use pattern on public lands in Montana and the GYA. Twenty nine percent of Gallatin Forest visitors indicated that hiking and walking was their primary activity, where on other Forests in Montana and the GYA this figure averaged 12% (Table 3.16.8 below). Nearly 50% of Gallatin NF recreationists indicated that the use of non-motorized trails were their top choice of facilities or special areas (USDA 2006b). This use pattern was unique to the Gallatin NF within the Greater Yellowstone Area. The Gallatin's extensive trail system and relatively accessible hiking opportunities support this trend, as does proximity to the population centers of Bozeman/Billings.

The number of site visits on the Gallatin Forest to overnight developed sites also stands out in the Region and in the GYA. Users of developed sites indicated however, that camping was not their primary recreation activity, which supports the observation that use of developed sites is often ancillary to other recreation activities like hiking, fishing, or serves as a stopping place while traveling to Yellowstone National Park. The following tables compare estimated recreation use, primary recreation activities and public land characterization for Forests near the Gallatin.

Table 3.16. 7 Estimated recreation use for Forests surrounding the Gallatin (USDA 2004d).

National Forest System Lands	Year Sampled	National Forest Visits (millions)	Wilderness Visits (millions)
National level	2002	214.0	12.7
Northern Region (R1)	2002	12.2	0.3
Intermountain Region (R4)	2002	22.0	0.9
Nearby National Forests			
Beaverhead - Deerlodge	2000	1.10	0.016
Bridger-Teton	2002	2.67	0.052
Custer	2002	0.74	0.023
Gallatin	2003	1.98	0.058
Shoshone	2003	0.65	0.027
Targhee (including Caribou)	2000	2.20	0.021
Helena	2003	0.54	0.003
Lewis and Clark	2002	0.48	0.031

Table 3.16. 8 Primary recreation activity participation (top four activities per Forest) (USDA 2004d).

Activity	Percent Participation by National Forest							
	Beaverhead -Deerlodge	Helena	Lewis and Clark	Bridger-Teton	Custer	Gallatin	Shoshone	Caribou-Targhee
General relaxing	8		15			11	15	
Viewing scenery or wildlife	16			10			11	8
Developed camping							21	
Picnic or day use	13							
Hiking or walking		9	9	13	18	29	11	
Hunting	24	36	20		19	9		16
Fishing					14			8
OHV use								8
Skiing			13	24	16	8		

Activity	Percent Participation by National Forest							
	Beaverhead -Deerlodge	Helena	Lewis and Clark	Bridger-Teton	Custer	Gallatin	Shoshone	Caribou-Targhee
Snow machining				11		8		26
Other Non-Motorized Activities		12						

Table 3.16. 9 Recreation setting (ROS Class*) for the GYA and eastern Montana National Forests (thousands of acres).

National Forest	Primitive	Semi-Primitive Non-motorized	Semi-Primitive Motorized	Roaded Natural	Rural/ Urban
Beaverhead Deerlodge	170	963	969	592	11
Bridger-Teton	1,418	849	294	892	13
Custer	324	143	21	103	13
Gallatin	725	313	401	342	68
Shoshone	1,366	573	294	209	1
Targhee	222	380	417	764	80
Lewis and Clark	556	262	423	598	0
Helena	98	194	169	493	11
Total	4,879	3,677	2,988	3,993	197

*See the following Analysis Methodology section for an explanation of Recreation Opportunity Spectrum (ROS) classes.

Figure 3.16.1 Comparison of ROS classes distribution proximate to the Gallatin National Forest.

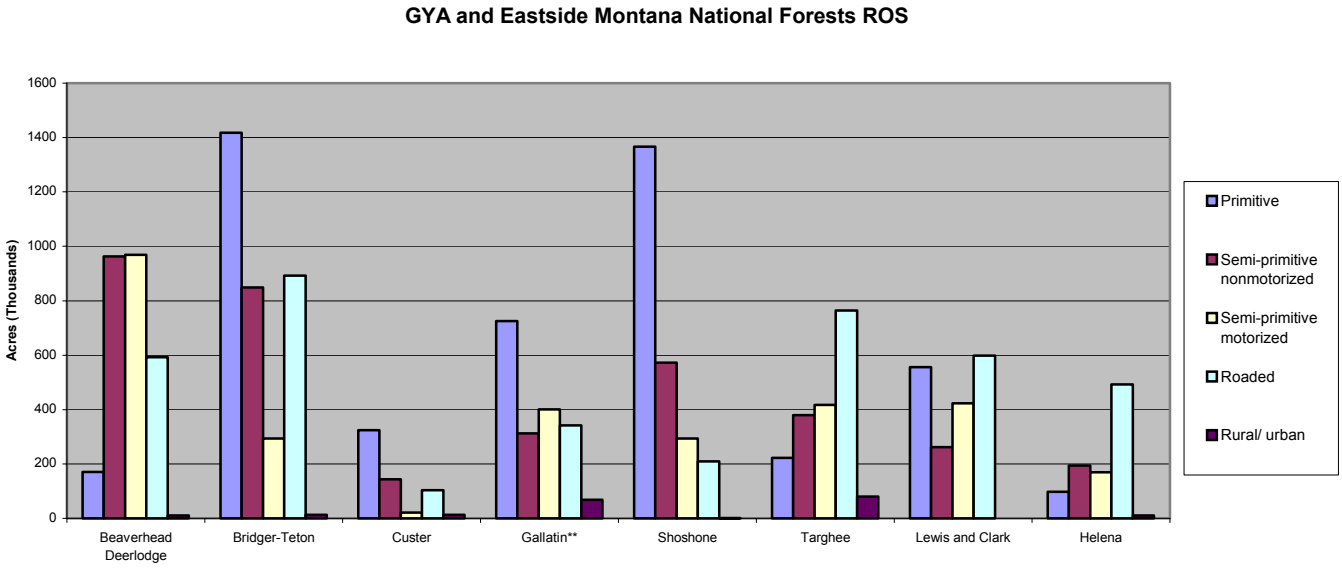


Table 3.16. 10 Summary of Wilderness, Wilderness Study Areas, and Inventoried Roadless for Region 1 Eastside and GYA National Forests (approximate acres in thousands).

Forest	Total Acres	Wilderness		Wilderness Study Area		Forest Plan Recommended Wilderness		Inventoried Roadless	
		Thousand Acres	%	Thousand Acres	%	Thousand Acres	%	Thousand Acres	%
Beaverhead-Deerlodge	3,360	224	7	269	8	173	5	1,831	54
Custer	1,185	346	29	0	0	12	1	145	12
Gallatin	1,801	715	40	155	9	22	1	705	39
Helena	975	109	11	0	0	33	3	445	46
Lewis and Clark	1,862	384	21	190	10	52	3	1,004	54
Shoshone	2,437	1,368	56	*	*	17	>1	687	28
Bridger Teton	4,540	1,330	29	84	2	0	0	1,340	29
Caribou Targhee	1,789	134	7	49	3	154	9	838	47
TOTAL	17,949	4,610	26	747	4	463	3	6,995	39

* Information unavailable

The table above illustrates that a large percentage of the National Forest land proximate to the Gallatin Forest is roadless backcountry, or designated Wilderness. Only about 5,100,000 acres of these Forests have been roaded or developed.

Recreation Opportunity Spectrum (ROS) – Current Situation

The Gallatin Forest Plan (USDA 1987) identified a range of ROS classes from primitive to rural for the 26 different Management Areas (MAs) identified in the plan. See the glossary for a complete description of each ROS class. No formal map of record was ever incorporated into the plan identifying specific ROS polygons as standards relating to the recreation resource. Rather, a range of applicable ROS classes were identified for all 26 MAs, creating quite a wide possible interpretation of what the appropriate ROS class for recreation was to be for a given landscape. The Forest Recreation and Wilderness Program Manager created an interpretation of that direction for the Eastside Forest Planning Assessment effort in the late 1990s. A map was created using a combination of Travel Plan restrictions (a product of the 1987 Forest Plan), specific direction regarding ROS in the plan, and old ROS inventory maps which were created during the original Forest planning effort in the late 1980s. Table 3.16. 11 summarizes the acres of each ROS class as depicted in the 1990s mapping exercise. Again, this map and the corresponding acreages are only an approximation of what could be several appropriate prescriptions for ROS in the current Forest Plan. A copy of this map is available at the Forest Supervisor's Office.

Table 3.16. 11 displays summer ROS opportunities. While it is a common practice to describe separate winter ROS classes, no specific direction was given regarding separate standards for ROS during the winter season in the Gallatin Forest Plan. Acres displayed are net acres and do not include private lands.

Table 3.16. 11 Current Forest Plan (1987) ROS approximate net acres, by mountain range.

ROS Class	Mountain Range						
	Absaroka Beartooth	Bridger Bangtail	Crazy	Gallatin	Henrys and Hebgen Basin	Madison	Forest Total
Urban	0	0	0	0	0	0	0
Rural	12,020	1,572	5,279	7,364	1,874	7,434	35,543
Roaded Natural	65,818	39,355	23,481	136,222	76,856	53,974	395,706
Semi-Primitive Motorized (SPM)	131,818	45,199	74,953	149,595	6,552	98,116	506,233
Semi-Primitive Non-motorized (SPNM)	43,504	2,869	11,864	37,040	25,688	40,044	161,009
Primitive*	583,476	0	0	12,002	0	134,286	729,764

* The Forest Plan prescribed that the Limits of Acceptable Change (LAC) process be used to describe different zones within Wilderness (which was generically allocated a primitive ROS class), but did not actually create those zones at that time. Draft LAC classes have since been mapped. See Issue 21: Wilderness Effects section in this FEIS for more detail, and further delineation of these primitive acres into two categories: primitive, and semi-primitive Wilderness.

* See the following Analysis Methodology section for an explanation of Recreation Opportunity Spectrum (ROS) classes.

Summary of Current Road and Trail Opportunities

Alternative 1 represents the road and trail opportunities reflected on the Gallatin's 1999 Travel Map, as guided by the 1987 Forest Plan. In 2001, the Northern Region published the Montana Dakota (MT/ND) Statewide OHV decision (USDA 2001) which eliminated cross-country travel of summer motorized wheeled vehicles. Alternative 2 maps which "system" roads and trails on the Forest would be open to different types of trail vehicles under the MT/ND Statewide OHV decision. System roads and trails are those constructed and maintained for public use by the Forest Service.

The Forest currently manages approximately 2,100 miles of summer trails, and about 615 miles of winter trails (400 miles of snowmobile trails, and 215 miles of cross-country ski trails). No trails are currently closed to recreational livestock, and only those trails in designated Wilderness are currently closed to mountain bikes (about 800 miles). Motorized trail vehicles are currently allowed at some time during the year on approximately 738 miles of summer trails outside of designated Wilderness. Additionally, about 80 miles of project or administrative roads are open to ATVs or motorcycles (that are not open to passenger cars). Driving for pleasure has long been a favored activity on National Forests. Approximately 740 miles of the Forest's road system is open to public travel by passenger cars and trucks today (not including other public roads – State, County, Federal Highways). Both roads and trails currently open to motorized vehicles have a variety of seasonal closures to protect wildlife, minimize erosion and prevent damage to the facility. In addition to the system roads or trails displayed above, approximately 130 miles of user-created trails are currently legally open to summer trail vehicles, and 160 miles of user created roads are open to cars/trucks under the MT/ND OHV decision. Certain portions of the Forest currently have area closures that limit motorized trail vehicles to designated routes only. Approximately 411,000 acres (outside of designated Wilderness) currently have yearlong area closures, and 5,200 acres have seasonal area closures. In these areas, off-route travel is prohibited on user created unauthorized routes (though trespass does occur).

The Gallatin has a reputation for being a winter recreationist's paradise. With over 400 miles of groomed or marked snowmobile trails, 215 miles of groomed or marked ski trails, and endless backcountry opportunities, winter enthusiasts have a wide range of choices for adventure. The Rendezvous Ski Trail system is a world-class public Nordic ski center outside of West Yellowstone, Montana, with over 30 km of professionally groomed classic and skating trails. Snowmobile trails are jointly managed across the Forest with local snowmobile clubs and the Montana Department of Fish, Wildlife and Parks being the principal partners in grooming and maintenance. The West Yellowstone Chamber of Commerce is intimately involved with the grooming program for both ski and snowmobile trails. Private Nordic centers (Bohart and Lone Mountain Ranch) offer additional high quality groomed and marked ski trails under special use permit with the Forest. Bridger Bowl Ski area is Bozeman's long-time local downhill ski area is also under permit by the Forest Service. Three other downhill resorts offer abundant alpine ski terrain nearby: Big Sky, Moonlight Basin and Yellowstone Club.

Direct and Indirect Effects

Analysis Methodology

Potential change to recreation opportunities between alternatives was gauged in this analysis using several methods. Table 3.16. 15 through Table 3.16. 28 and Figure 3.16. 2 through Figure 3.16. 15 display the difference among alternatives in the potential number of different recreation opportunities available, access to different recreation experiences, and a relative rating of the quality of experiences provided in each alternative. These tables and figures summarize the data by Forest. The same data is available by mountain range in the analysis project file. This data was compiled using Geographic Information System (GIS) analysis, and professional subjective assessments of the quality of different opportunities. A complete description of the ranking system and definitions for the opportunities and quality scale is available in the project file. Brief explanations accompany each table or figure.

Research on recreation use and trends on public land, locally, regionally and nationally were reviewed. This review was assembled to provide an estimation of recreation demand for different activities on the Gallatin Forest in the next several decades. Additionally, an analysis of this information was used to display what the Gallatin's niche is in providing recreation opportunities in eastern Montana and the GYA.

A computer model was developed to depict the actual snowmobile-friendly terrain on the Forest. This model, using GIS analysis, maps areas of the Forest where slopes are less than 40 degrees, and vegetative cover is sparse enough to allow snowmobiles to pass through (Urie 2004). A gross acreage for "snowmobile-able" terrain was derived from this model, which was about 650,000 acres (out of 1,850,056 total acres of the Forest). This was then reduced by the number of acres in each alternative that were closed to snowmobiles (some in designated Wilderness, some outside) to provide a net desirable snowmobile-able acreage figure for each alternative. Further reductions to the net desirable acres were made if the suitable terrain did not hold an adequate snowpack (typically areas lower than 6,000 feet elevation). The result of this model was to display by alternative, by quality scale (best backcountry snowmobiling to least desirable) the number of acres of backcountry snowmobiling available in each category in each alternative. This data is displayed

in the Winter Motorized Recreation Opportunities Summary, Table 3.16. 21 and Figure 3.16. 14 . The best "snowmobile-friendly" terrain is depicted in quality 1 and 2 opportunities in this figure.

The Recreation Opportunity Spectrum (ROS) is a mid-scale recreation planning and analysis tool long used by the Forest Service for recreation planning. The system was developed to improve recreation planning and to recognize the importance of zoning and managing different recreation experiences and settings as important Forest resources (Clark and Stankey 1979). A spatial GIS analysis of potential changes to winter and summer ROS classes, by alternative, was used to gauge the potential effects of different Travel Plan alternatives to recreation settings and potential experiences. Recently, the Forest Service developed a revised protocol for mapping ROS that fine-tunes GIS methodology for analysis. The protocol was developed to improve consistency of ROS mapping across the nation, as Forests begin to revise their Forest Plans. This protocol was used to generate the maps for this analysis. Acres of different ROS classes (including urban, rural, roaded natural, semi-primitive motorized, semi-primitive non-motorized and primitive) are displayed for each alternative by mountain range for summer and winter. ROS maps are available for review at the Forest Supervisor's Office. See the glossary for a description of each ROS class. A detailed description of the ROS system is available in the project file.

Recreation Opportunity Spectrum (ROS) Analysis

All alternatives would have a direct effect on the kinds of recreation experiences and settings available to the public. In this section of the analysis, alternative 2 best represents current conditions for an inventory of existing condition using the ROS method. The ROS analysis displays this potential change to recreation settings among alternatives at a mid-level scale. The summary of acres by ROS class, by alternative, is displayed in Table 3.16. 12 and table 3.16.13. GIS mapping was completed for two separate seasons: spring/summer/fall (roughly April through November) and winter (December through March). These maps represent the inventory of ROS classes as they differ between alternatives.

ROS as a planning tool was used to develop the objectives for each travel planning area (TPA) during the development of the benchmark, and subsequently the seven alternatives. The maps used for this analysis depict the outcome of the mid-scale planning effort, and the more mechanical mapping effort that assigns the appropriate ROS inventory class, once specific road and trail uses had been identified in each alternative.

Another important concept to discuss is the seasonality of different recreation opportunities and ROS settings described in the tables below. The spring/summer/fall ROS maps do not distinguish between different closure dates for motorized uses on roads and trails. Closure dates however do vary among alternatives. This important concept must be considered when reviewing the number of acres assigned particularly in the semi-primitive motorized (SPM) category, which primarily includes motorized trails. In all alternatives, motorized trails would have seasonal restrictions for motorized trail vehicles. For example in Alternative 7-M, while the Porcupine-Buffalo Horn TPA shows significant acres of SPM on the spring/summer/fall map, the open season is actually only proposed to be from July 15 to September 5 - less than 60 days. During the remainder of the spring/summer/fall season, the appropriate ROS inventory class for this TPA would be semi-

primitive non-motorized (SPNM). This situation (with differing dates) occurs across the Forest in all alternatives.

The rural and urban ROS categories do not change appreciably among alternatives. The minor acreage difference shown in Table 3.16. 12 and Table 3.16. 13 are due to vagaries of the model. These categories are essentially hard-wired by virtue of the landscape conditions that classify them in these categories to begin with. The rural and urban settings that are present within the Forest boundary are defined by a higher level of development (homes, ranches, resorts, roads, and vegetation manipulation), primarily on private lands within the Forest boundary. The urban ROS class only occurs on private land that falls within the Forest boundary. The rural ROS class occurs in a few locations on public land within the Forest boundary, proximate to highway corridors, intermingled ranch ownership, ski areas and concentrations of summer homes.

The roaded natural ROS class does not vary much among alternatives. The inventory reflects many historic roads, and timber harvest or mining activities. The minor differences among alternatives are generated when an existing road that is currently managed as a low standard 4x4 high clearance road is proposed to be upgraded to a higher standard passenger car road. The GIS model used to create the ROS maps includes higher standard roads in the roaded natural ROS class, and low standard roads (generally) in the SPM class. No alternative proposes to construct new roads that would add to roaded natural ROS acreage totals.

The most pronounced differences in ROS class inventory among alternatives both in summer and in winter is in the SPNM and SPM classes. This is because most of the difference among alternatives has to do with motorized use of trails. In the summer, Alternatives 1-4 provide the most SPM opportunities while Alternatives 5 through 7-M provide the most SPNM opportunities. Alternative 6 decreases the SPM opportunities the most from current condition (237,028 acres or 60% less than current condition) with Alternatives 5 and 7-M following with 161,761 (41%) and 125,157 (32%) fewer acres of SPM, respectively. Alternative 2 was used as the baseline for current condition as it best describes the current Travel Plan with the MT/ND Statewide OHV decision applied.

Alternative 7-M proposes to incorporate two objectives into the Detailed Description of Alternatives for each travel planning area. Proposed Objective 1-1b states that future proposals to change uses specified in the route by route decisions made by this travel plan be done in consideration of the targeted recreation setting to be provided as shown on the ROS summer maps. Objective 2-1b for each travel planning area articulates the same language for the winter ROS setting. These objectives incorporate the summer and winter ROS maps for Alternative 7-M by reference. The importance of these objectives is that they provide guidance to future managers to carefully consider the desired future condition ROS setting as displayed in this travel plan before considering route by route decisions that could change the ROS setting, thereby reducing the chance of un-intended setting changes by specific route decisions.

Table 3.16. 12 Spring/summer/fall ROS classes approximate acres by mountain range, by alternative.

ROS Class - Rural							
Mountain Range	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7-M
Absaroka Beartooth	28,819	28,819	28,819	28,817	28,817	28,817	28,817
Bridger Bangtails	1,491	1,491	1,491	1,491	1,491	1,491	1,491
Crazy	0	0	0	0	0	0	0
Gallatin	15,957	15,957	15,957	15,957	15,983	15,838	15,983
Henrys	3,105	3,105	3,105	3,105	3,105	3,105	3,105
Madison	19,012	19,012	19,012	19,012	19,012	19,012	19,013
TOTAL	68,384	68,384	68,384	68,382	68,408	68,263	68,409

ROS Class – Roaded Natural							
Mountain Range	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7-M
Absaroka Beartooth	49,568	49,567	51,245	51,000	50,999	51,000	50,987
Bridger Bangtails	32,065	32,065	32,159	32,159	32,159	32,159	32,262
Crazy	27,082	27,082	27,082	27,082	27,082	27,082	27,081
Gallatin	118,072	118,072	118,242	118,242	118,239	118,239	118,248
Henrys	80,779	80,779	80,779	80,779	80,828	80,828	80,988
Madison	34,566	34,566	36,529	36,529	36,529	36,529	35,788
TOTAL	342,132	342,131	346,036	345,791	345,836	345,837	345,354

ROS Class – Semi-Primitive Motorized							
Mountain Range	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7-M
Absaroka Beartooth	102503	102503	82153	71355	59136	56545	80324
Bridger Bangtails	44349	44349	38447	21039	16421	15415	28269
Crazy	39584	39584	38618	30109	25487	24202	27925
Gallatin	109595	109595	87717	81808	60569	30844	65987
Henrys	20916	20915	20895	19550	14666	13055	14507
Madison	69979	73246	58344	55061	52152	13103	48139
TOTAL	386926	390192	326174	278922	228431	153164	265151
% Change from Alt. 2			-16%	-28%	-41%	-60%	-32%

ROS Class – Semi-Primitive Non-Motorized							
Mountain Range	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7-M
Absaroka Beartooth	68244	68272	89699	97979	110206	112805	89032
Bridger Bangtails	10968	10968	16781	34190	38809	39814	26851
Crazy	48873	48874	49839	58350	62972	64257	60534
Gallatin	102479	102479	124233	130143	151312	167305	145884
Henrys	20496	20496	20516	21860	26695	28306	26695
Madison	76416	73150	86073	86558	88333	108542	95137
TOTAL	327476	324239	387141	429080	478327	521029	444133
% Change from Alt. 2			+ 19%	+32%	+48%	+61%	+37%

ROS Class - Primitive							
Mountain Range	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7-M
Absaroka Beartooth	590,223	590,195	587,439	590,207	590,200	590,191	590,194
Bridger Bangtails	0	0	0	0	0	0	0
Crazy	0	0	0	0	0	0	0
Gallatin	0	0	0	0	0	13,924	0
Henrys	0	0	0	0	0	0	0
Madison	134,837	134,837	134,853	137,650	138,785	157,624	135,990
TOTAL	725,060	725,032	722,292	727,857	728,985	761,739	726,184

The model used to map the winter ROS inventory uses a few different assumptions than does the summer model. In winter, many of the acres mapped as roaded natural in summer become either SPNM or SPM in the winter. Landscape manipulations (primarily timber harvest) and improved roads are softened or hidden by snow, and typically provide a setting for winter recreation more in keeping with the SPM or SPNM categories. The one exception to this general inventory rule is in the Hebgen Basin, where the volume of snowmobile traffic and the number of groomed snowmobile trails warrant the roaded natural ROS class, even in winter. The primary difference among alternatives in the winter ROS is driven by proposed area closures to snowmobiles, and road plowing. Alternative 1 would provide the most SPM opportunities (the least area restricted to snowmobiles) and Alternative 6 would provide the most SPNM opportunities. Seasonally-restricted snowmobile access (October 15 through December 1 closures that are proposed on parts of the Forest) are not reflected in this analysis, only the yearlong closures are reflected.

Table 3.16. 13 Winter ROS classes approximate acres by mountain range, by alternative.

ROS Class - Rural							
Mountain Range	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7-M
Absaroka Beartooth	28,752	28,752	28,772	28,772	28,772	28,772	28,772
Bridger Bangtails	1,491	1,491	1,491	1,491	1,491	1,491	1,491
Crazy	0	0	0	0	0	0	0
Gallatin	15,832	15,832	15,881	15,881	15,832	15,832	15,881
Henrys	3,097	3,097	3,097	3,097	3,097	3,097	3,097
Madison	19,036	19,036	19,015	19,014	19,014	19,014	19,015
TOTAL	68,208	68,208	68,256	68,255	68,206	68,206	68,256

ROS Class – Roaded Natural							
Mountain Range	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7-M
Absaroka Beartooth	875	875	915	915	915	915	915
Bridger Bangtails	661	661	661	661	661	661	661
Crazy	288	288	588	588	588	588	588
Gallatin	3,069	7,951	9,090	5,611	8,140	8,140	9,082
Henrys	95,485	95,485	98,513	95,965	95,572	92,255	92,874
Madison	4,081	4,081	3,616	3,616	3,272	3,272	3,616
TOTAL	104,459	109,341	113,383	107,356	109,148	105,831	107,736

ROS Class – Semi-Primitive Motorized							
Mountain Range	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7-M
Absaroka Beartooth	186,950	185,844	185,587	184,096	169,979	183,727	184830
Bridger Bangtails	80,718	79,526	64,390	64,390	43,934	64,390	72778
Crazy	105,316	105,316	67,970	67,970	35,537	67,970	45920
Gallatin	242,636	237,755	188,160	144,744	110,876	98,785	121982
Henrys	0	0	0	0	0	0	0
Madison	147,012	147,012	125,782	120,872	118,421	44,626	113131
TOTAL	762,632	755,453	631,889	582,072	478,747	459,498	538641
% Change from Alt. 2			- 16%	- 33%	- 37%	- 39%	- 28%

ROS Class – Semi-Primitive Non-Motorized							
Mountain Range	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7-M
Absaroka Beartooth	42,048	43,153	40,433	41,924	56,017	42,293	41279
Bridger Bangtails	6,101	7,270	22,359	22,359	42,838	22,359	14038
Crazy	9,930	9,930	46,979	46,979	79,412	46,979	69026
Gallatin	84,514	84,514	133,008	179,899	211,296	223,381	200138
Henrys	26,714	26,714	23,685	26,234	26,627	29,943	28703
Madison	33,223	33,223	52,676	57,586	60,381	134,172	64206
TOTAL	202,530	204,804	319,140	374,981	476,571	499,127	417390
% Change from Alt. 2			+56%	+83%	+133%	+144%	+104%

ROS Class - Primitive							
Mountain Range	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7-M
Absaroka Beartooth	580,733	580,733	583,651	583,651	583,675	583,651	583,651
Bridger Bangtails	0	0	0	0	0	0	0
Crazy	0	0	0	0	0	0	0
Gallatin	0	0	0	0	0	0	0
Henrys	0	0	0	0	0	0	0
Madison	131,462	131,462	133,727	133,727	133,727	133,730	133,727
TOTAL	712,195	712,195	717,378	717,378	717,402	717,381	717,378

The ROS geographic information system model displays areas where motorized routes are within ½-mile of each other as either roaded natural or semi-primitive motorized. However, within each of these large polygons, there may be a significant number of non-motorized trails. The mapping convention for these two classes buffer open motorized roads or trails by ½-mile on either side, creating the gross polygon. During map refinement, small polygons of semi-primitive non-motorized lands less than 2,500 acres are dropped and absorbed into the more prevalent ROS class. Still, within these areas, there are trails that provide some non-motorized recreation opportunities. Table 3.16. 14 below shows how many miles of non-motorized trails fall within the roaded natural and semi-primitive motorized ROS mapped units in each alternative, in summer. The table shows that while the acreage of roaded natural changes little among alternatives (see Table 3.16. 12 above), the miles of trail managed as non-motorized within this ROS class increases in all action alternatives. In Alternatives 2 through 7-M, the acres of SPM decreases from existing conditions, and the miles of non-motorized trails within the SPM class increases.

Table 3.16. 14 Miles of non-motorized trails within spring/summer/fall motorized ROS classes, by mountain range, by alternative.

ROS Class – Roaded Natural							
Mountain Range	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7-M
Absaroka Beartooth	12	12	30	31	32	34	31
Bridger Bangtails	10	10	23	26	26	29	25
Crazy	3	3	1	4	6	14	12
Gallatin	23	23	38	54	58	61	49
Henrys	2	2	4	4	7	13	7
Madison	11	11	12	14	14	25	13
TOTAL	61	61	108	132	142	176	137

ROS Class – Semi-Primitive Motorized							
Mountain Range	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7-M
Absaroka Beartooth	13	14	34	43	41	43	34
Bridger Bangtails	4	4	13	16	16	17	18
Crazy	3	3	9	8	9	12	14
Gallatin	20	20	27	32	39	22	36
Henrys	1	1	1	3	1	3	1
Madison	22	22	19	26	27	15	22
TOTAL	62	63	102	128	133	113	125

Recreation Effects Analysis – A Comparison of Recreation Opportunities

All alternatives would have direct and indirect effects on the amount, spatial distribution and quality of different recreation opportunities potentially available. Alternative 2 best represents current conditions for this portion of this analysis and is used as the baseline of comparison for effects in this section.

The following section summarizes differences in potential recreation opportunities among alternatives. The data summarized in Table 3.16. 15 through Table 3.16. 28 , and Figure 3.16. 2 through Figure 3.16. 15 group winter motorized recreation opportunities (snowmobiling on marked or groomed trails or in the backcountry), winter non-motorized opportunities (cross-country and backcountry skiing and snowshoeing), summer non-motorized trail opportunities (hiking, mountain biking and recreational stock use), summer motorized recreation opportunities (ATVs, motorcycles, 4x4 high clearance driving on backcountry roads and passenger car driving for pleasure on more developed roads) into separate tables.

In this analysis, information is provided about the number of opportunities, as well as miles or acres in some cases, of different recreation activities potentially available. All data displayed in charts, graphs and tables are approximate numbers. The tables also show where an activity (e.g., hiking) can be found in a completely non-motorized setting, and where typical non-motorized activities would be shared with motorized users. A brief narrative elaborating on data in the tables is also provided by activity, with additional tabular data provided to clarify certain issues about the

opportunities that would be provided in each alternative. This data is aggregated for the Forest, but is also available by mountain range (see the project file for Recreation, recreation comparison spreadsheets).

A Forest overview of the miles of trails outside of designated Wilderness that provide for motorized and non-motorized uses is provided below in Table 3.16.15.

Table 3.16. 15 Approximate miles of motorized and non-motorized trail outside of designated Wilderness, by alternative.

	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7-M
Total miles of non-Wilderness trails	1,250	1,251	1,317	1,317	1,314	1,311	1,290
Total miles of motorized trails	751	739	618	428	279	51	424
Total miles non-motorized trails outside Wilderness	499	512	699	889	1035	1,260	866
Percent of non-Wilderness trails that are non-motorized	40%	41%	53%	68%	79%	96%	67%
Percent non-Wilderness trails open to motorized trail vehicles	60%	59%	47%	32%	21%	4%	33%

Table 3.16. 15 and Table 3.16. 16 do not represent the total miles of motorized vehicle route opportunity – as many of the loops and routes use old roads, or backcountry roads to connect between trails, and are not tallied in these tables. See Table II-1 in the "Detailed Description of the Alternatives" section for a complete description of motorized route opportunities.

Table 3.16. 16 describes the total proportion of all trails on the Forest, including Wilderness trails, which are open or closed to motorized trail vehicles.

Table 3.16. 16 Approximate total miles of motorized or non-motorized trail, including trails inside of designated Wilderness.

	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7-M
Total trail miles	2,116	2,117	2,183	2,183	2,180	2,177	2,156
Total miles of motorized trails	751	739	618	428	279	51	424
Total miles non-motorized trails	1,365	1,378	1,565	1,755	1,901	2,126	1,732
Percent of all trails non-motorized	64%	65%	71%	80%	87%	97%	81%
Percent of all trails open to motorized trail vehicles	36%	35%	29%	20%	13%	3%	19%

Note: "Total Miles" in this table was derived from either the total number of miles of hiking trails or the total number of miles of Stock Trails – whichever was greater.

Recreation Opportunity Tables and Figures

Table 3.16. 15 through Table 3.16. 28 and Figure 3.16. 2 through Figure 3.16. 15 provide a characterization of different recreation opportunities that would be provided in each alternative, and a brief explanation of the logic that was used to describe the differing quality scale for each opportunity displayed. Opportunities are displayed without a measure like miles in most cases.

This system was developed to look at the relative abundance or scarcity of opportunities. For example, one mountain range may have 24 miles of hiking trail equating to seven different separate routes or opportunities. In contrast, a neighboring mountain range may have 24 miles of hiking trail that is a single trail and really only equates to one recreation opportunity. Categories were designed to represent the most common road and trail recreation activities, and an analysis was then completed to compare the differences among alternatives regarding the relative abundance and quality of opportunities.

The data displayed in the following Table 3.16. 15 through Table 3.16. 28 and Figure 3.16. 2 through Figure 3.16. 15 provides a Forest summary, and is also available in detail for each mountain range. The detail data is contained in spreadsheets in the recreation section of the project record (see "06.04.14 – 06.04.15 Schlenker Kempff" spreadsheets in the project record).

Table 3.16. 17 Summer hiking trail opportunities, Forest-wide.

Hiking Type	Quality Scale	Number of Hiking Opportunities Forest-wide M = Shared with Motorized Trails NM = Non-Motorized Trails													
		Alt.1		Alt. 2		Alt. 3		Alt. 4		Alt. 5		Alt. 6		Alt. 7-M	
		NM	M	NM	M	NM	M	NM	M	NM	M	NM	M	NM	M
Short Day Hikes	# 1	14	9	14	9	18	5	18	5	22	1	23	0	20	3
	# 2	29	26	29	26	36	20	48	8	49	7	55	0	41	15
	# 3	59	75	59	75	84	54	103	35	116	22	132	6	109	28
	Total	102	110	102	110	138	79	169	48	187	30	210	6	170	46
Long Day Hikes	# 1	19	15	19	15	22	13	24	11	29	6	34	1	31	7
	# 2	26	24	26	24	20	31	39	12	43	8	50	1	39	18
	# 3	29	34	29	34	38	25	47	16	51	12	61	2	61	19
	Total	74	73	74	73	80	69	110	39	123	26	145	4	103	44

Explanations and Definitions for Table 3.16. 17 and Figure 3.16. 2 through Figure 3.16.4 :

Short day hikes:
< 3 miles in length, often with scenic attractions or destinations, gentle trails, grades typically < 5%, gentle side slopes.

Long day hikes/backpacking:
3-15 miles in length, steeper trails, more difficult to access (> ½ hour from communities), more challenging trails, access to scenic attractions and destinations may be more arduous.

Quality rating scale for short day hikes:
#1 - Provides the best opportunity for easy short day hikes. Well-built gentle trails, trail gradient <5%, hikes <3 miles; outstanding scenery and numerous attractions (waterfalls, interesting geology, lakes, etc); typically within ½-1 hour from communities.
#2 - Provides good opportunities for easy short day hikes. somewhat more challenging trails; trail gradient 5-10%; <3 miles; pleasant scenery and some attractions; typically within 1 hour of communities.
#3 - Provides average opportunities for easy short day hikes. Challenging short hikes; steep gradients and side slopes, pleasant but common scenery, few or no attractions or water destinations.

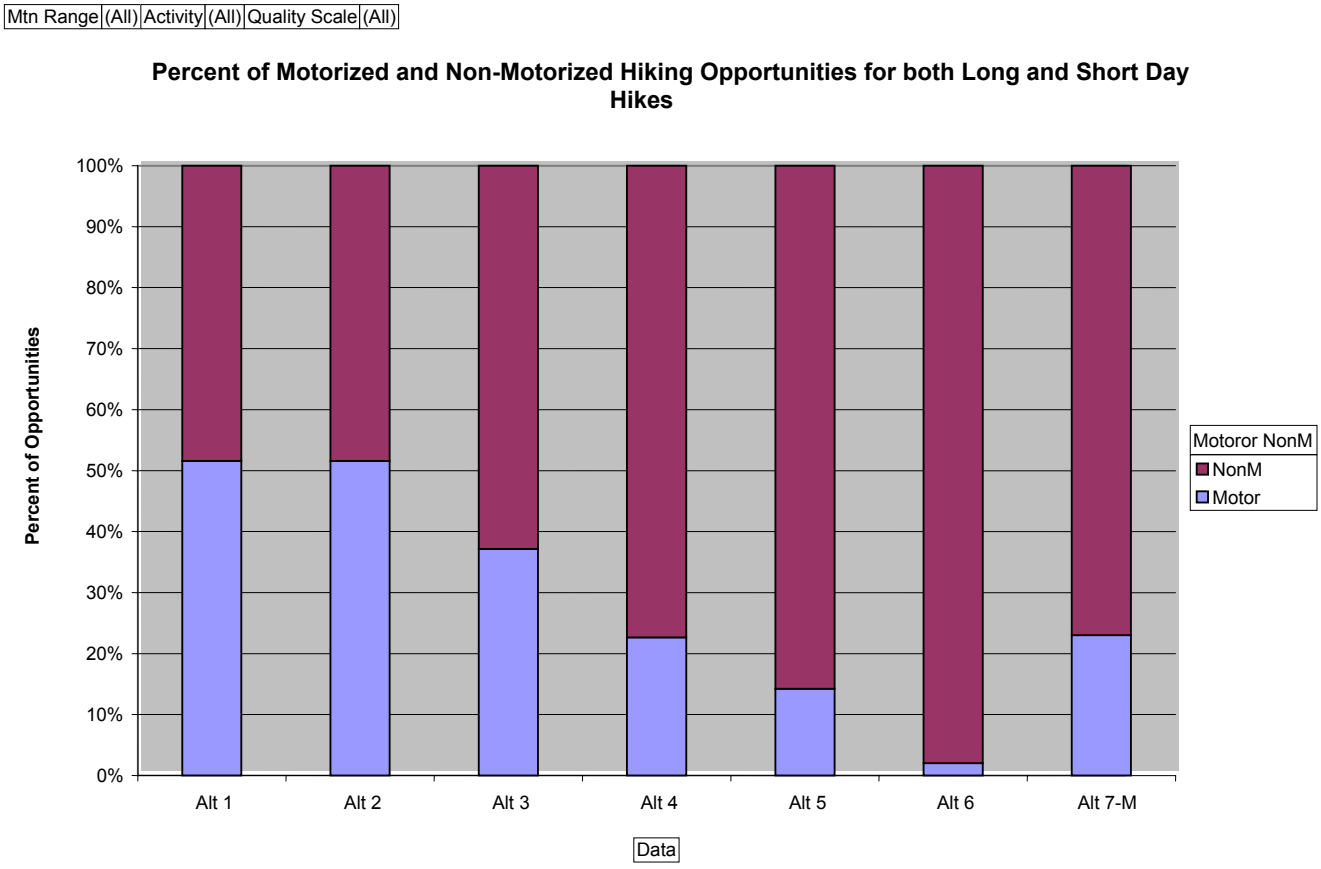
Quality rating scale for long day hikes/backpacking:
#1 - Provides the best opportunity for backpacking and longer day hikes. Trail gradient 5-15%; hikes 3-15 miles, outstanding scenery and numerous attractions, loop opportunities possible.

#2 - Provides good opportunities for backpacking and longer day hikes. More challenging trails, steeper trail gradients in short segments; hikes 3-15 miles, pleasant scenery and some attractions, access may be more difficult.
#3 - Provides average opportunities for backpacking and longer day hikes. Lower standard trails, steeper gradients and side slopes, pleasant but common scenery, limited or no water or scenic attractions, mixed traffic likely.

Mountain biking:
The number of short mountain bike rides is somewhat analogous to short day hikes, and the longer enthusiast rides are analogous to long day hikes. No separate tally of mountain biking opportunities or quality rating is provided, but rather compared with hiking.

Horseback riding:
While the table does not specifically break out horseback opportunities, the number of opportunities for short or long rides are mostly analogous to short or long hikes, as are the quality ratings.

Figure 3.16. 2 Comparison of motorized and non-motorized hiking opportunities.



See "06.04.15 Schlenker Kempff SNM_w_charts.xls" in the project record for background data on Figures 3.16.2 – 3.16.4. and information displayed by mountain range.

Figure 3.16. 3 Number of short day hiking opportunities Forest-wide, by quality scale.

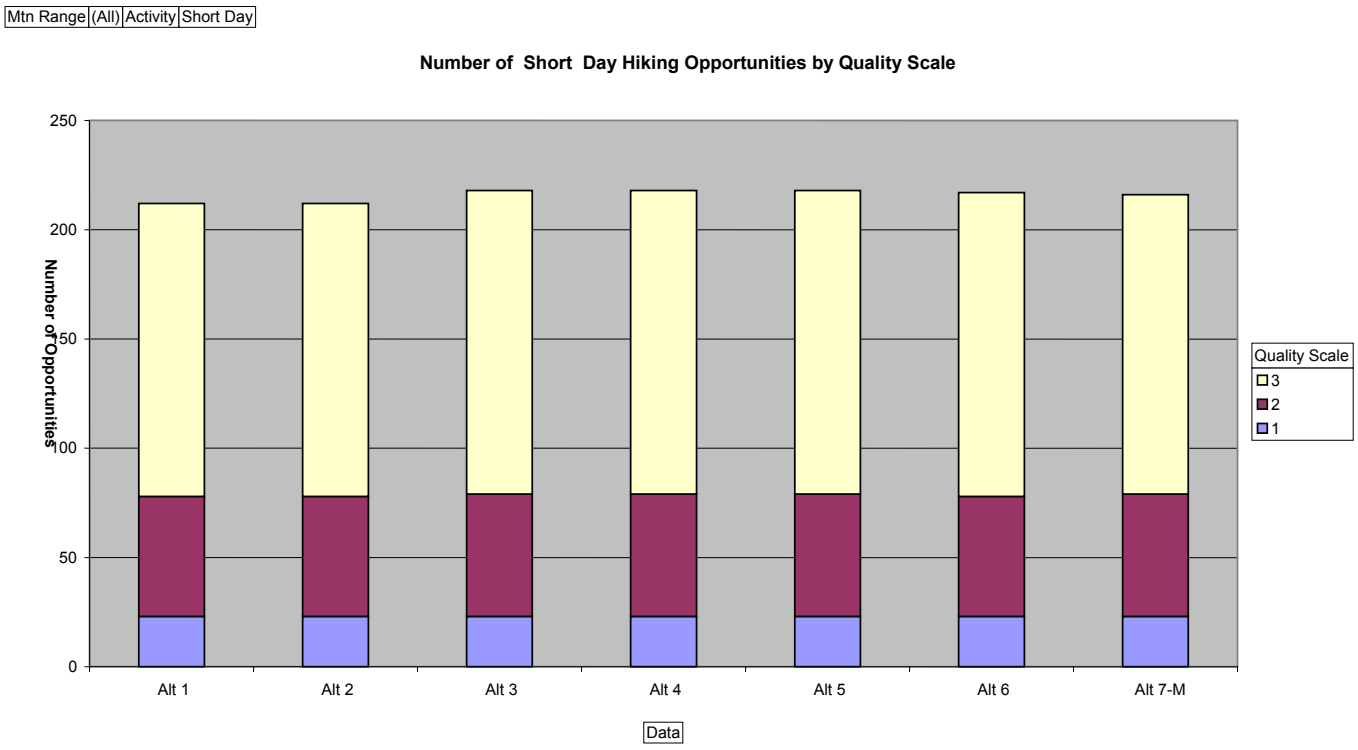


Figure 3.16.4 Number of long day hiking/backpacking opportunities Forest-wide, by quality scale.

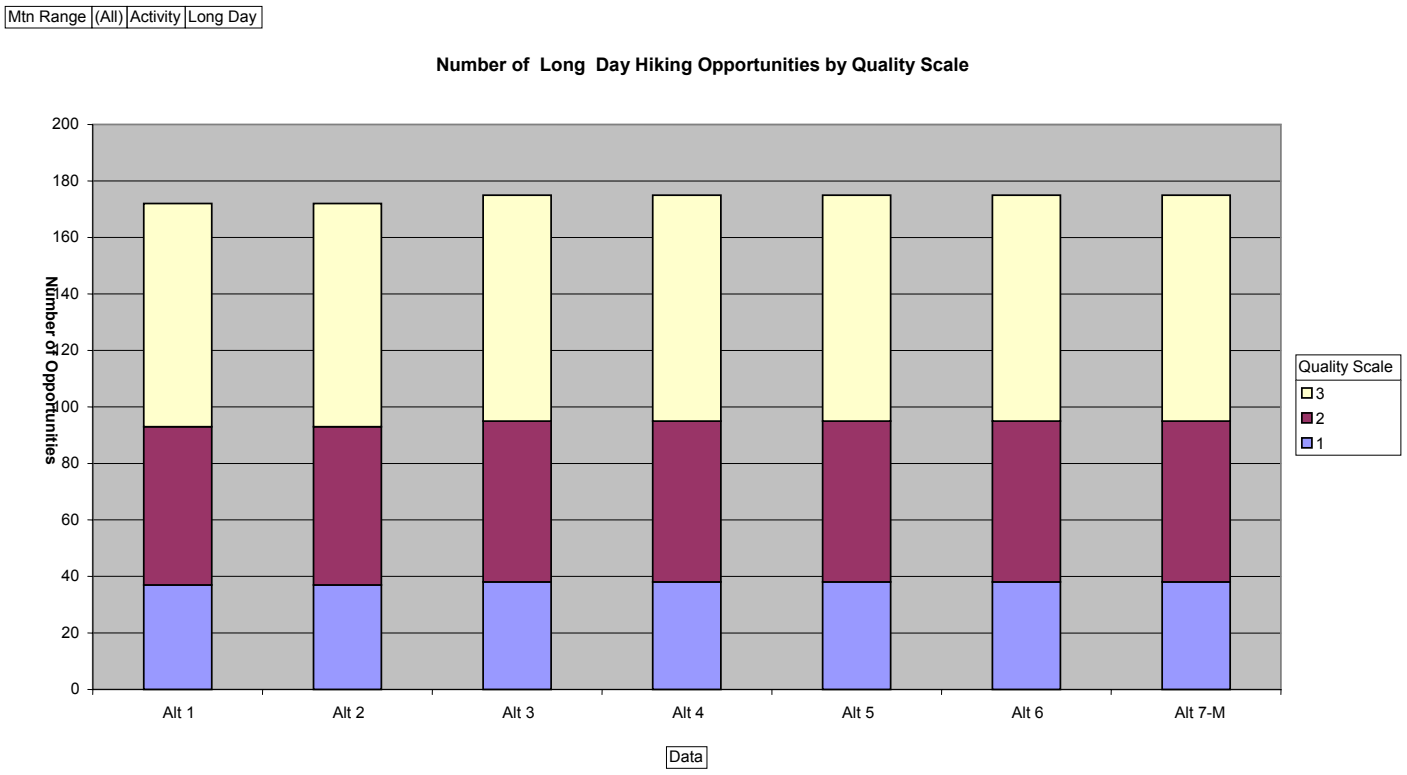


Table 3.16. 18 Summary of summer motorized routes, Forest-wide.

Summer Motorized Recreational Activity	Quality Scale	Unit of Measure	Alt.1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7-M
Passenger Car Road Opportunities	N/A	Miles	321	327	421	416	398	402	400
Backcountry Road Opportunities	N/A	Miles	418	412	355	360	325	292	347
ATV Opportunities	# 1	Opportunities	*	11	15	16	6	2	11
	# 2	Opportunities	*	18	19	13	15	8	12
	# 3	Opportunities	*	6	8	10	14	19	14
	Total		**	35		39	35	29	37
ATV Opportunities	# 1	Miles	*	214	309	311	122	43	246
	# 2	Miles	*	128	163	133	170	95	170
	# 3	Miles	*	13	120	126	145	195	119
	Total		758	355	592	570	437	333	535
ATV Areas within 30 Miles of Communities	N/A	Areas	11	10	14	14	13	12	13
ATV Trailheads	N/A	Trailheads	0	41	47	46	39	26	38
Motorcycle Opportunities	# 1	Opportunities	32	32	29	19	11	0	21
	# 2	Opportunities	14	14	17	11	6	2	14
	# 3	Opportunities	19	19	20	18	21	24	19
	Total		65	65	66	48	38	26	54
Motorcycle Opportunities	# 1	Miles	547	541	464	306	210	0	394
	# 2	Miles	203	205	288	229	107	53	195
	# 3	Miles	85	91	245	237	277	278	242
	Total		835	837	997	772	594	331	831
Motorcycle Areas within 30 Miles of Communities	N/A	Areas	12	11	15	14	14	11	14
Motorcycle Trailheads	N/A	Trailheads	71	73	69	52	46	22	54

Explanations and Definitions for
Table 3.16. 18 :

The number of miles of ATV routes in Alternative 1 that are currently open are not necessarily suitable, nor specifically managed for ATVs, thus no estimate of the number of miles by quality scale is given, nor are the number of opportunities estimated.

Quality rating scale for ATVs:
#1 - Provides the best ATV opportunities. Routes are located primarily on trails (not old roads), more challenging routes, >15 miles, outstanding scenery and numerous attractions, numerous loop routes available, 1 hour or less from communities.
#2 - Provides good ATV opportunities. Routes may be a mix of trails and old roads, somewhat challenging routes, 5-15 mile routes, some loops, pleasant scenery and some attractions, >1 hour from communities.

#3 - Provides average ATV opportunities: routes are mostly old roads or dual designated passenger car roads, < 5 miles of opportunity, pleasant but common scenery, few or no loop opportunities, few or no scenic or water attractions, difficult access.

Quality rating scale for motorcycles:
#1 - Provides the best motorcycle opportunities. Challenging rides on single-track trails, >30 miles of routes, outstanding scenery and numerous attractions, numerous loops, 1 hour or less from communities.
#2 - Provides good motorcycle opportunities. Less challenging rides on a mix of single-track trails and roads, 5-15 mile routes, some loops, pleasant scenery and some attractions, > 1 hour from communities.
#3 - Provides average motorcycle opportunities. Wide, gentle routes, little challenge, primarily old roads or shared with ATVs, <10 miles of routes, pleasant but common scenery, few or no loop opportunities, no attractions, difficult access.

Table 3.16. 19 Driving for pleasure, opportunities by mountain range.

Driving for Pleasure Type of Road	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7-M
Absaroka Beartooth Mountains							
Passenger Car Roads	57	57	69	67	67	67	68
Backcountry Roads – 4x4	124	124	117	119	111	103	122
Bridger Bangtail Mountains							
Passenger Car Roads	37	37	46	46	46	46	45
Backcountry Roads – 4x4	34	34	32	32	17	27	26
Crazy Mountains							
Passenger Car Roads	22	22	23	23	23	23	23
Backcountry Roads – 4x4	22	22	26	26	26	21	27
Gallatin Range							
Passenger Car Roads	94	94	109	109	109	109	101
Backcountry Roads – 4x4	113	113	115	115	109	98	109
Henrys Mountains and Hebgen Basin							
Passenger Car Roads	84	90	131	131	115	117	123
Backcountry Roads – 4x4	103	97	58	58	52	33	53
Madison Range							
Passenger Car Roads	27	27	43	40	38	40	40
Backcountry Roads – 4x4	22	22	7	10	10	10	10

Explanation and Definitions for Table 3.16. 19 :

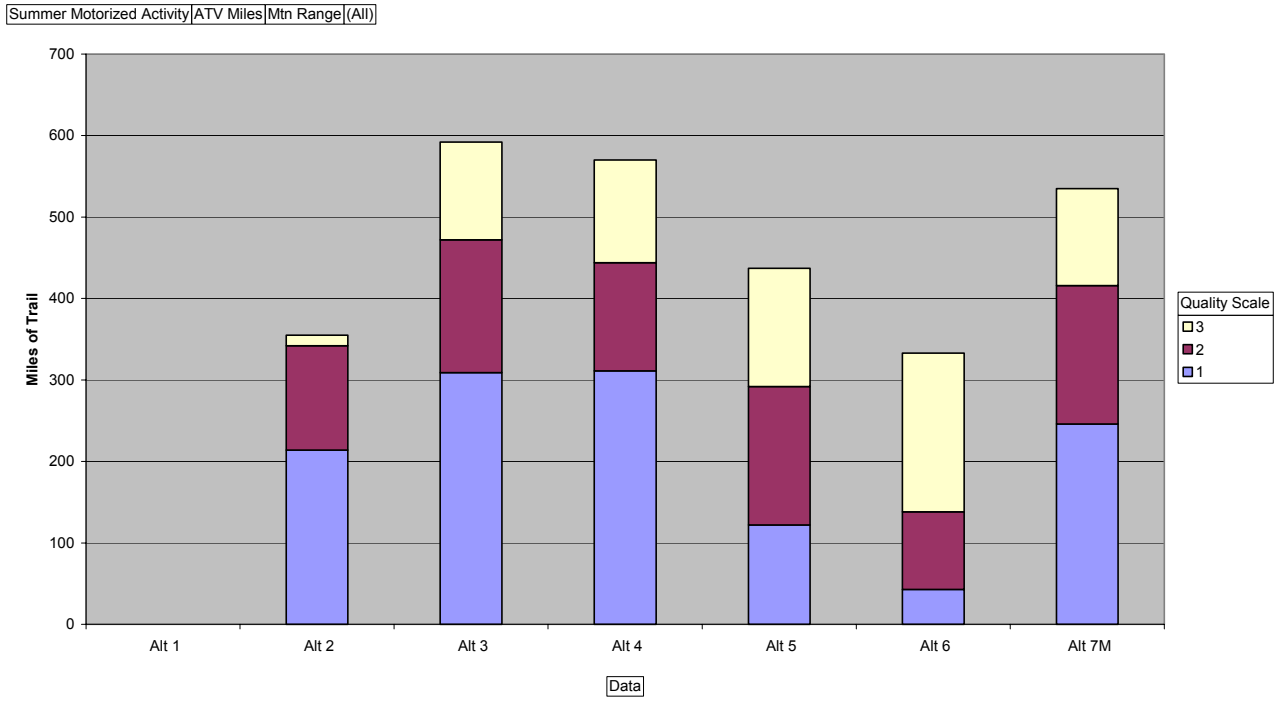
No quality scale was assigned for backcountry or passenger car roads.

Passenger car roads:
These include public Forest Service roads and passenger car routes. Typical passenger car routes are suitable for sedans or two-wheel drive vehicles.

Backcountry roads:
These include all maintenance Level 2 roads, 4x4 high clearance driving on minimally constructed and maintained roads (includes old jeep roads).

See the spreadsheet "06.04.15 Schlenker_Kempff_SM_w_charts.xls" in the project record for the baseline information in Figure 3.16.5 – Figure 3.16.8. This information is also available by mountain range in these spreadsheets.

Figure 3.16. 5 Miles of ATV routes Forest-wide, by quality scale.



Note: the number of miles of ATV routes in Alternative 1 that are currently open are not necessarily suitable, nor specifically managed for ATVs, thus no estimate of the number of miles by quality scale is given, nor are the number of opportunities estimated.

Figure 3.16. 6 Number of ATV opportunities Forest-wide, by quality scale.

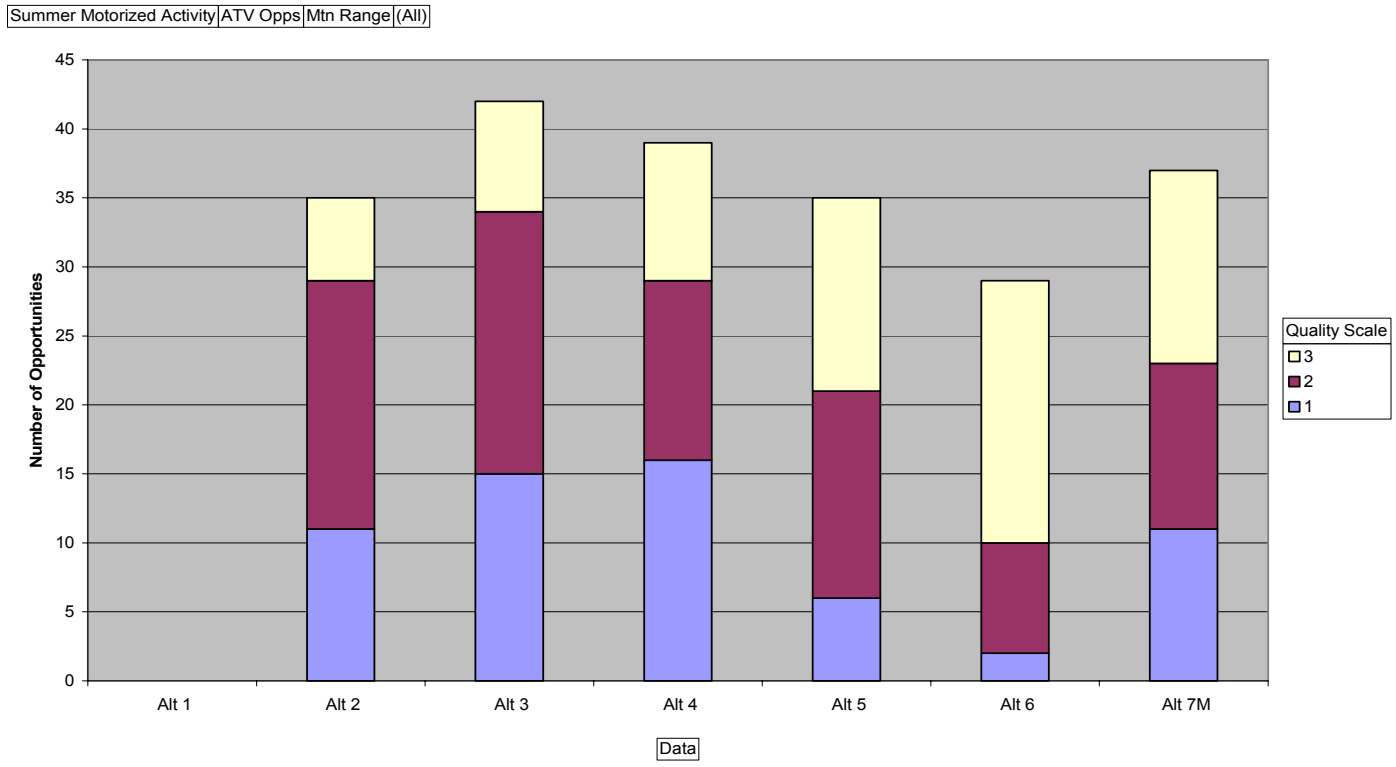


Figure 3.16. 7 Miles of motorcycle trail Forest-wide, by quality scale.

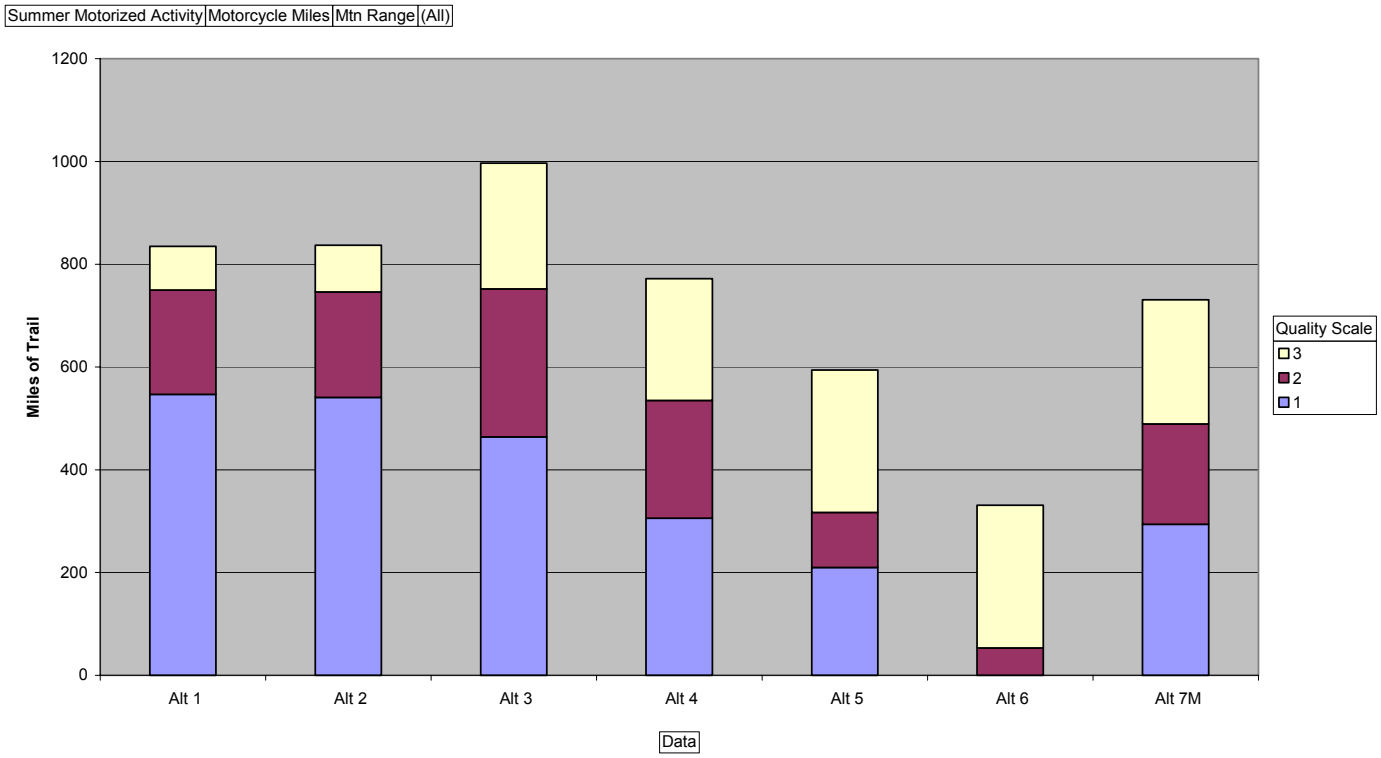


Figure 3.16. 8 Number of motorcycle opportunities Forest-wide, by quality scale.

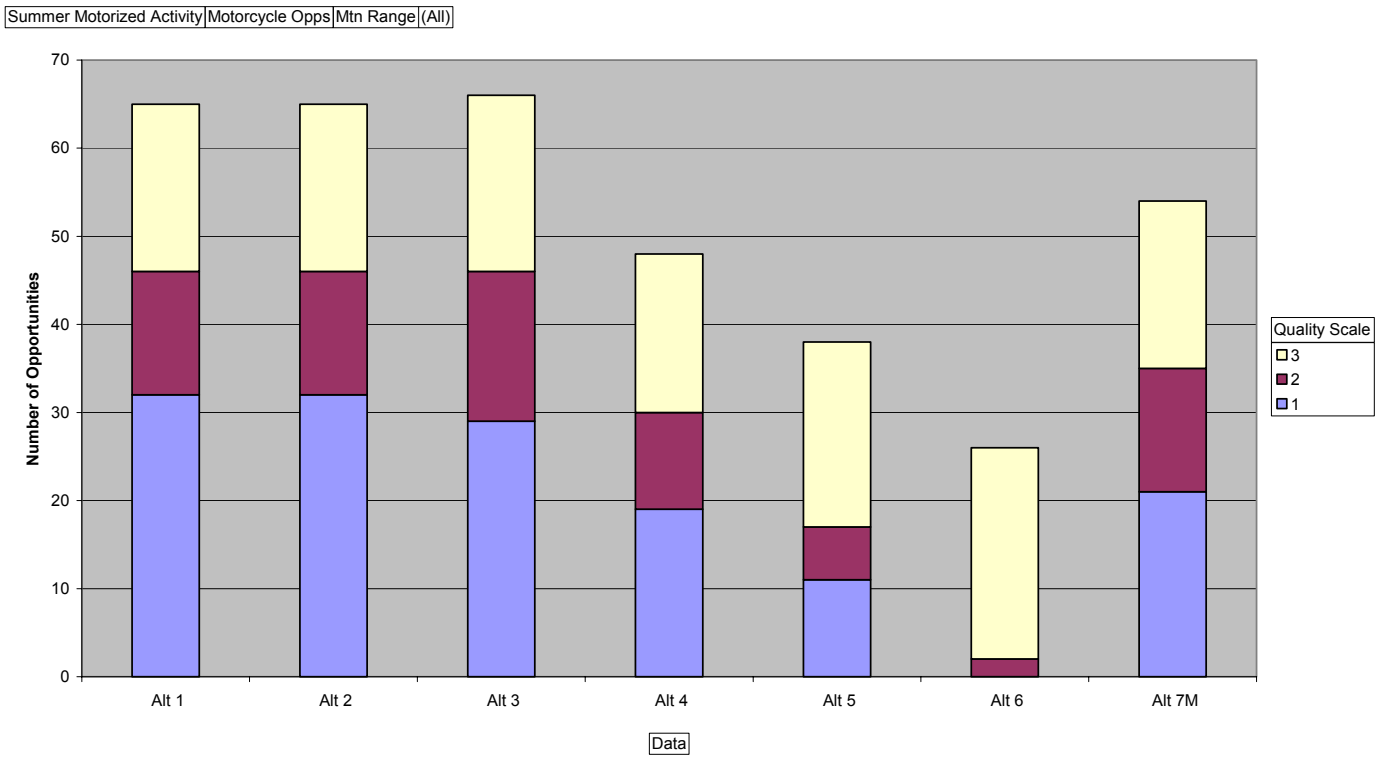


Table 3.16. 20 Skiing and Snowshoeing Opportunities, Forest-wide.

Winter Non-Motorized Recreational Activity	Quality Scale	Unit of Measure	**Winter Non-Motorized Opportunities, Forest-wide** **M = Shared with Motorized** **NM = Non-Motorized Routes**													
			Alt 1		Alt 2		Alt 3		Alt 4		Alt 5		Alt 6		Alt 7-M	
			NM	M	NM	M	NM	M	NM	M	NM	M	NM	M	NM	M
Short Cross-Country Ski/Snowshoe Groomed or Marked Opportunities	# 1	Opps.	5	7	5	11	14	5	14	4	13	3	13	3	12	2
	# 2	Opps.	2	6	2	6	2	6	2	7	6	2	4	7	4	5
	Total		7	13	7	17	16	11	16	11	19	5	17	10	16	7
Long Cross-Country Ski/Snowshoe Groomed or Marked Opportunities	# 1	Opps.	8	7	9	6	14	2	14	2	12	2	14	8	12	3
	# 2	Opps.	0	5	2	3	4	3	4	2	2	3	4	3	5	4
	Total		8	12	11	9	18	5	18	4	14	5	18	11	17	7
Plowed Access Points	# 1	Points	12	3	12	5	14	5	15	5	16	2	17	8	14	5
	# 2	Points	3	8	3	7	4	6	4	6	6	3	7	3	5	2
	Total		15	11	15	12	18	11	19	11	22	5	24	11	19	7
Backcountry Accessible Ski Terrain (acres w/in 5 mi of plowed road, M and NM)	N/A	Acres	337,552	862,733	356,717	879,832	475,271	775,769	580,113	795,234	575,008	664,597	604,643	635,279	550,984	669,645

See the spreadsheet " 06.04.14 Schlenker_Kempff_WNM_w_charts.xls" in the project record for the baseline data in Figure 3.16.9 – Figure 3.16.12. This information is also available by mountain range in this document.

Explanations and Definitions for Table 3.16. 20 and Table 3.16. 21 (winter sports):

Short ski tour opportunities:
<5 mile cross-country ski trail, ½-1 hour of communities, trails <5% gradient, gentle side slopes, family-friendly.

Long ski tour opportunities:
More challenging routes, >5 miles long, varied side slopes and steeper terrain, can be longer drives from communities to access, more appropriate for experienced skiers.

All marked or groomed cross-country ski and snowmobile routes receive a quality scale rating of #1 or #2. There are no #3s.

No attempt was made to assign a quality scale to backcountry ski opportunities.

Quality rating scale for winter activities (including backcountry snowmobiling):
#1 - Provides the best setting/opportunity for winter recreation. Extensive open play areas with mixed forest canopy, high quality scenery and unique attractions, generally <30 degree slopes, easily accessible, trailheads almost always plowed, abundant and consistent snowpack, long season. Additional criteria for snowmobile trails: high quality/frequency of grooming, loops, and ride opportunities > 5 miles.
#2 - Provides good setting/opportunities for winter recreation. Mixed open areas and forest, smaller play areas, access somewhat more difficult, trailheads not always plowed, scenery attractive but not outstanding, fewer unique attractions, snowpack more inconsistent. Additional criteria for snowmobile trails: fewer loops, inconsistent grooming, shorter lengths.
#3 - Provides an average setting/opportunity for winter recreation. Heavily timbered, few small openings, many steep slopes >40 degrees, limited access, often not plowed, scenery is pleasant or common, few outstanding attractions, inconsistent snowpack, short season.

Figure 3.16. 9 Number of plowed access points for cross-county skiing and snowshoeing.

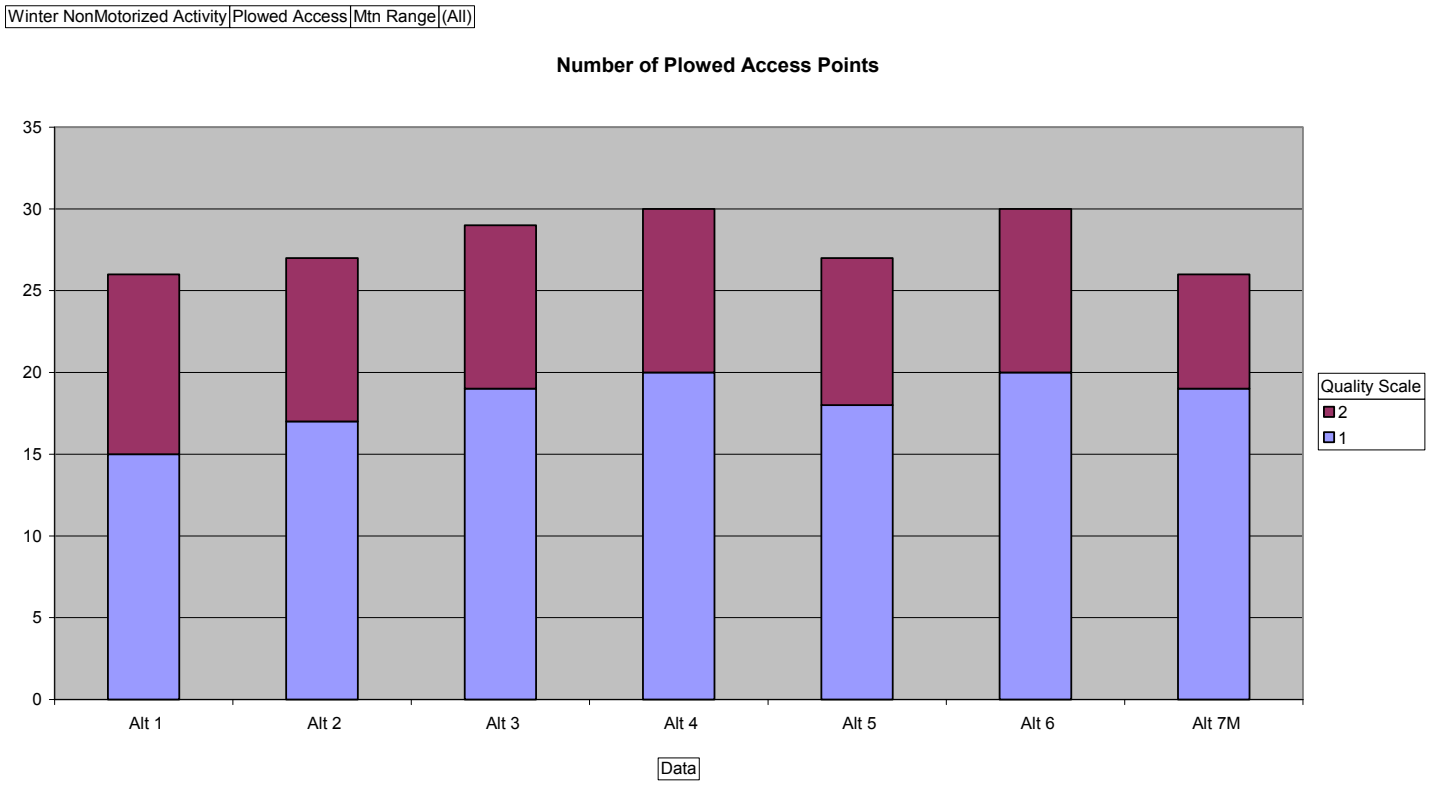


Figure 3.16. 10 Number of long (enthusiast) cross-country ski/snowshoe opportunities.

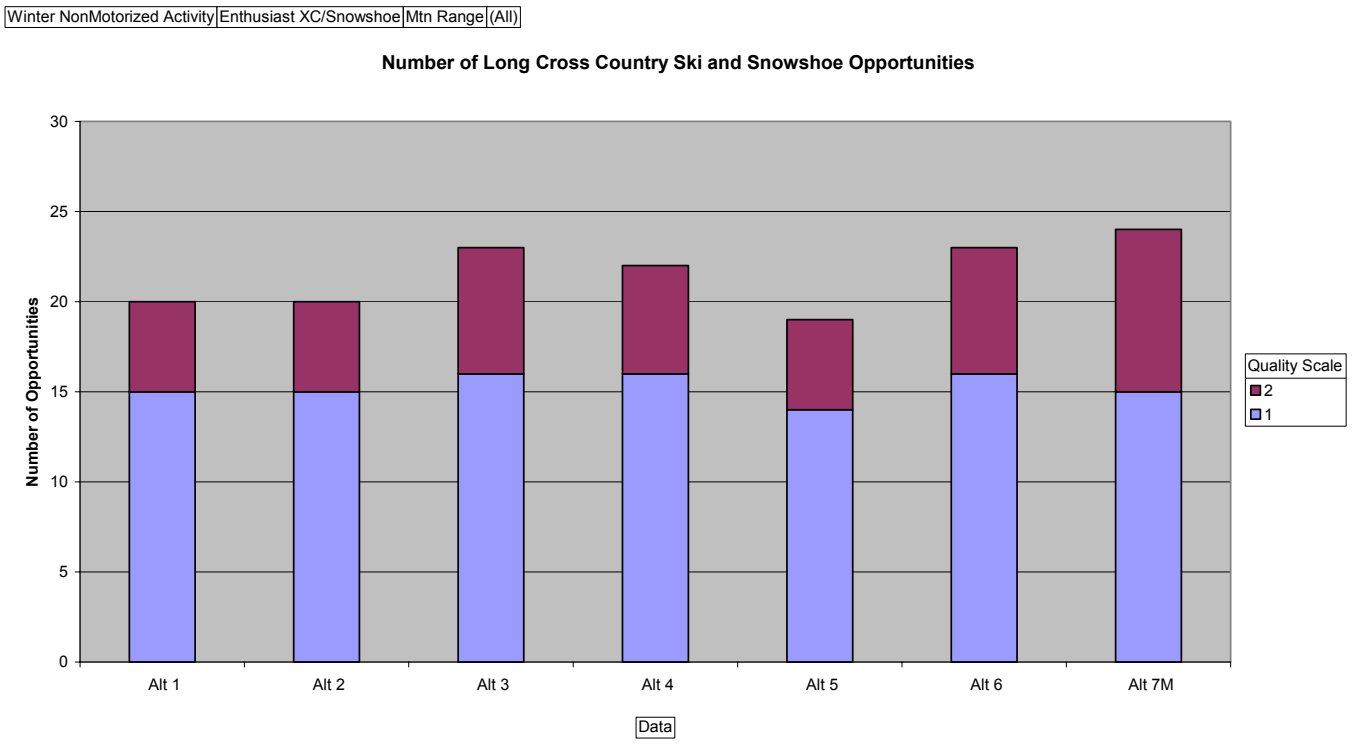


Figure 3.16. 11 Number of short cross-country ski/snowshoe opportunities.

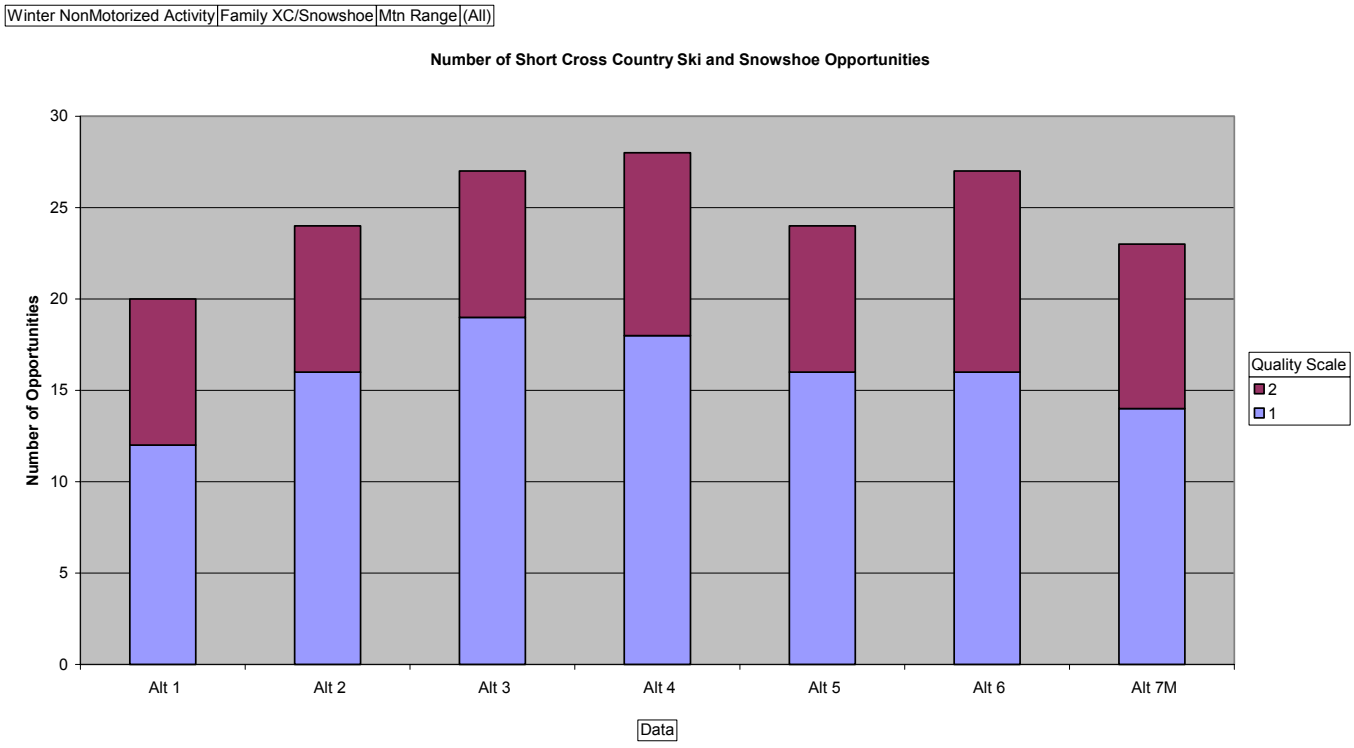


Figure 3.16. 12 Forest-wide comparison of acres of non-motorized backcountry ski terrain vs. those areas shared with snowmobiles.

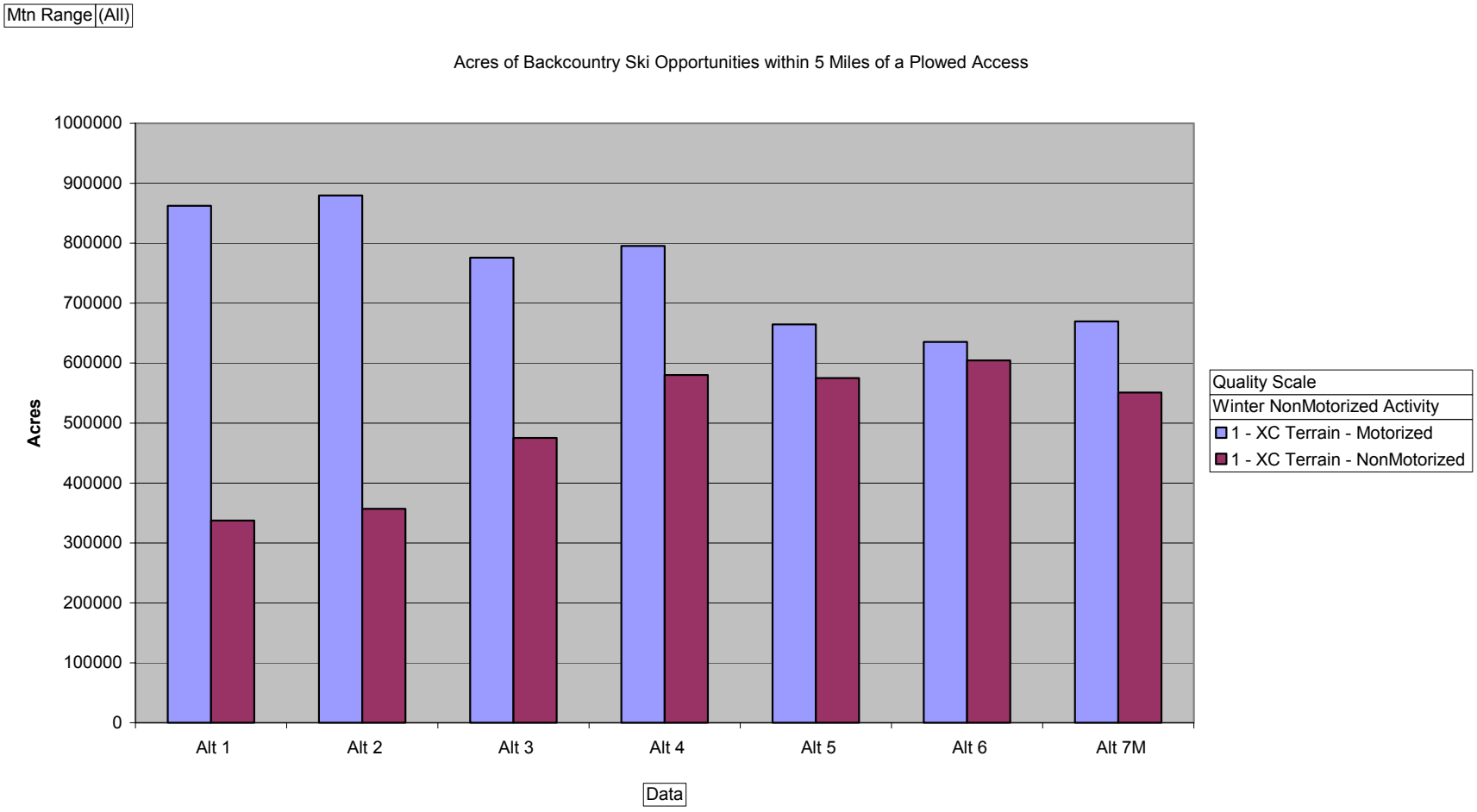


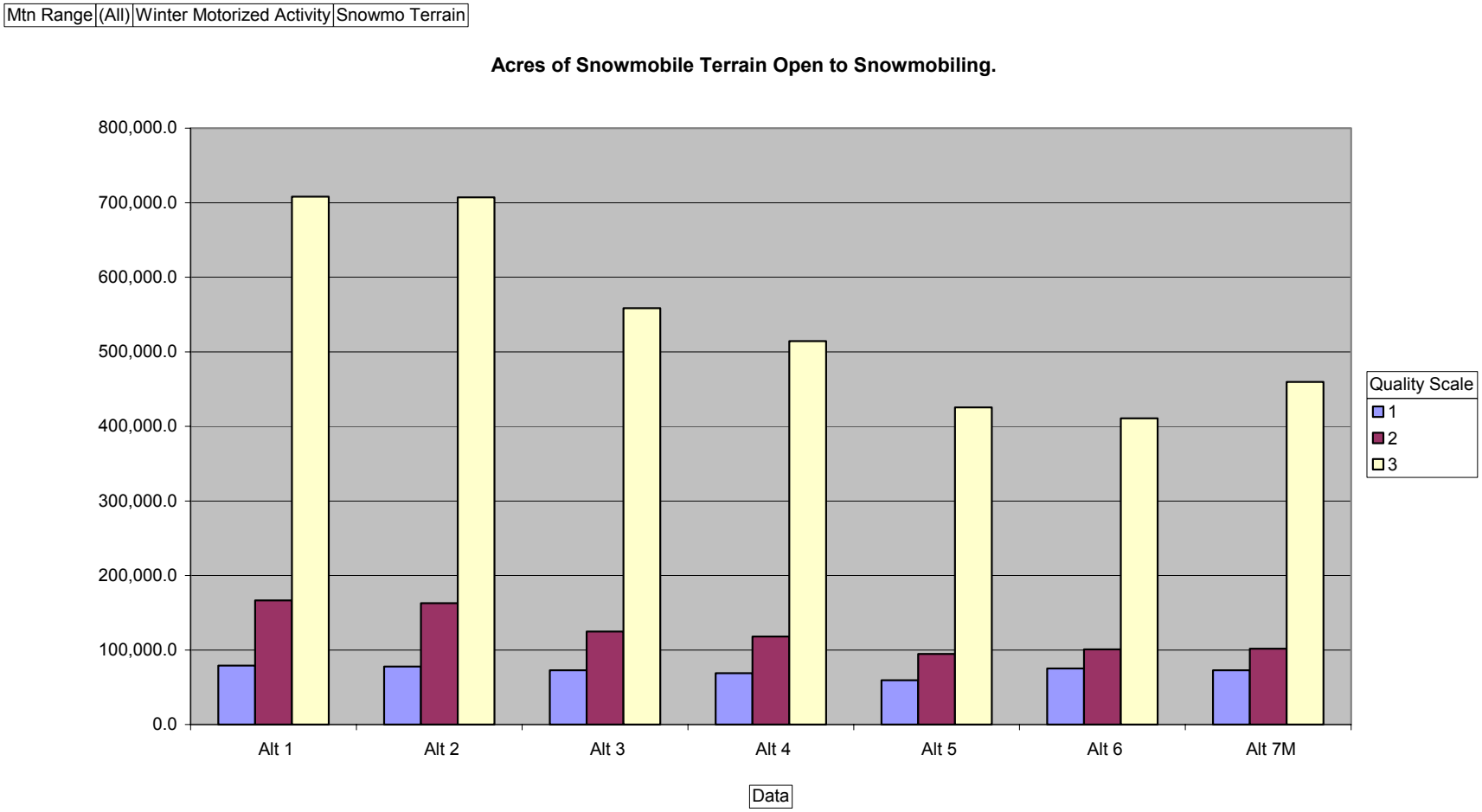
Table 3.16. 21 Winter motorized recreational opportunities, Forest-wide.

Winter Motorized Recreational Activity	Quality Scale	Unit of Measure	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7-M
Snowmobiling on Groomed and Marked Trails	# 1	Miles	298	311	349	323	287	283	297
	# 2	Miles	101	101	176	160	133	132	184
	Total		399	412	525	483	420	415	481
Plowed Access Points	# 1	Trailheads	14	15	27	27	21	24	24
	# 2	Trailheads	16	15	2	2	2	2	2
	Total		30	30	29	29	23	26	26
Open Snowmobiling in Suitable Terrain	# 1	Acres	78,939	77,817	72,737	68,856	59,543	75,308	72,641
	# 2	Acres	166,538	162,851	124,754	117,964	94,736	100,930	101,712
	# 3	Acres	707,915	707,103	558,421	514,434	425,385	410,583	459,446
	Total		953,392	947,771,	755,912	701,254	579,664	586,821	633,799

See the spreadsheet "06.04.14 Schlenker_Kempff_WM_w_charts.xls" in the project record for the baseline data for Figure 3.16.13 through Figure 3.16.15. Information is also available by mountain range in these spreadsheets.

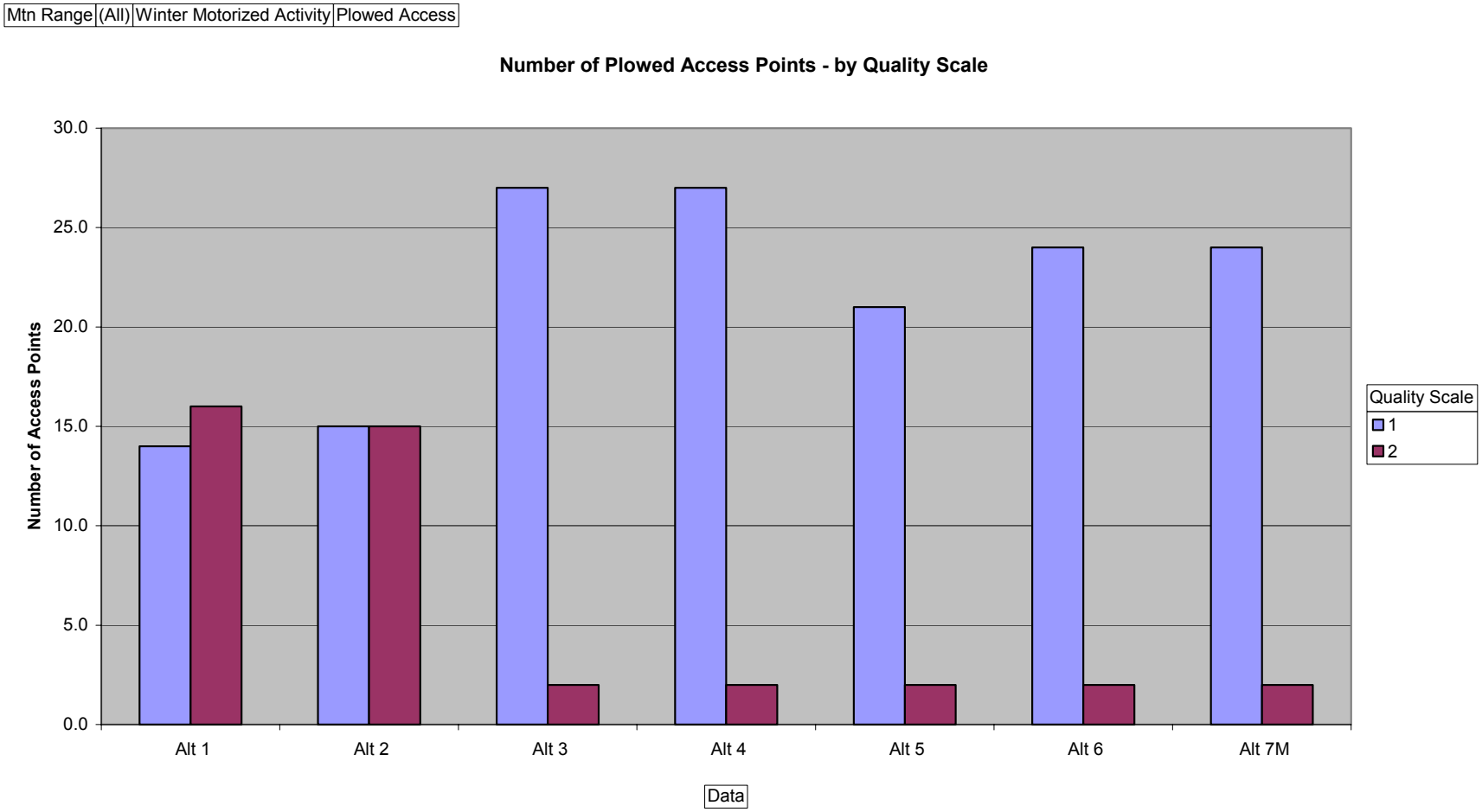
Figure 3.16. 13 Miles of groomed or marked snowmobile trail, by quality scale.

Figure 3.16. 14 Acres of snowmobile terrain open to snowmobiling.



Note: quality 3 acres are steeper slopes (> 40 degrees), often heavily timbered, having inconsistent snow/shorter winter season, or difficult access. Quality 1 and 2 acres provide the best snowmobiling opportunities.

Figure 3.16. 15 Number of plowed access points for snowmobiling, by quality scale.



Summer Non-Motorized Opportunities

Hiking/Backpacking

Hiking, in any form, is allowed anywhere on the Gallatin National Forest, on any route or cross-country in all alternatives. The number of miles of trail where hiking is emphasized varies between alternatives, recognizing that we do not want to direct recreationists to trails where user conflicts are likely with heavy traffic from other user groups.

In Alternatives 2 through 7-M, the number of miles of front country non-motorized hiking opportunities would increase, providing more segregated areas for hiking and mountain biking closer to communities than today. Alternatives 1-3 would provide the fewest opportunities close to communities, Alternatives 5 and 6 would provide the most. The number of high quality short day hikes on non-motorized trails close to communities would increase in all action alternatives. This potential outcome is responsive to recreation trends noted in earlier sections of this report where the largest increase in demand for recreation activities within the next 10 to 15 years will be for those activities that typically occur in semi-primitive non-motorized settings.

Mountain Biking

Mountain biking is a growing use on the Gallatin Forest. The popularity of this sport will place increasing pressures on Forest managers to provide quality opportunities and address user conflicts and resource damage as use escalates. It is possible that within the planning period (10-15 years), additional management measures beyond those described in this document will need to be taken to address resource and social concerns associated with increasing biking pressure on some parts of the Forest.

In all alternatives, mountain biking is allowed anywhere it is not expressly prohibited. No alternative studied in detail proposes to restrict mountain biking only to designated routes, at this time. This means that mountain biking would be allowed on user-created routes that are not part of the trail system in all alternatives. Alternative 7-M identifies a handful of routes close to Bozeman where "staggered use" may be employed to mitigate user conflicts on heavy use routes. That is, mountain biking would be prohibited on certain routes, certain days of the week or month.

Table 3.16. 22 shows the total miles of mountain biking trails where this use is allowed or emphasized, the total miles of trails where mountain biking is prohibited by alternative, and the miles of Forest roads where mountain biking is emphasized. While mountain biking is allowed on any Forest road, the table displays only those roads and routes that would provide good mountain biking opportunities where biking is emphasized.

Table 3.16. 22 Comparison of mountain bike opportunities, by mountain range.

Mountain Bike Opportunity Type	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7-M
Absaroka Beartooth Mountains							
Miles of Trail - Mountain Bikes Emphasized	224	202	106	96	85	90	109
Total Miles Mountain Bike Trail (miles emphasized and allowed)	234	212	193	193	184	189	198
Percent Mountain Bike Trails Non-Motorized	35%	25%	58%	70%	87%	98%	59%
Miles of Trail Mountain Bikes Prohibited	611	633	671	670	678	673	649
Miles of Mountain Biking Emphasized on Roads	246	246	166	149	144	144	182
Bridger/Bangtail Mountains							
Miles of Trail - Mountain Bikes Emphasized	142	140	85	85	85	85	98
Total Miles Mountain Bike Trail (miles emphasized and allowed)	146	144	145	145	145	145	145
Percent Mountain Bike Trails Non-Motorized	34%	33%	62%	80%	88%	96%	59%
Miles of Trail Mountain Bikes are Prohibited	0	2	2	2	2	2	2
Miles of Mountain Biking Emphasized on Roads	115	115	82	82	82	82	85
Crazy Mountains							
Miles of Trail - Mountain Bikes Emphasized	91	91	56	56	56	56	58
Total Miles Mountain Bike Trail (miles emphasized and allowed)	92	92	81	81	81	81	135
Percent Mountain Bike Trails Non-Motorized	27%	27%	21%	37%	63%	100%	81%
Miles of Trail Mountain Bikes are Prohibited	23	23	35	35	35	35	43
Miles of Mountain Biking Emphasized on Roads	73	73	59	59	59	59	52
Gallatin Mountains							
Miles of Trail - Mountain Bikes Emphasized	481	473	298	265	144	153	269
Total Miles Mountain Bike Trail (miles emphasized and allowed)	482	475	487	470	227	235	413
Percent Mountain Bike Trails Non-Motorized	40%	40%	41%	56%	76%	79%	54%
Miles of Trail Mountain Bikes are Prohibited	0	8	19	31	256	256	84
Miles of Mountain Biking Emphasized on Roads	306	306	142	146	143	143	144
Hebgen Basin/Henrys Mountains							
Miles of Trail - Mountain Bikes Emphasized	89	89	76	76	76	67	77
Total Miles Mountain Bike Trail (miles emphasized and allowed)	89	89	92	92	92	69	95
Percent Mountain Bike Trails Non-Motorized	61%	61%	72%	72%	82%	95%	80%
Miles of Trail Mountain Bikes are Prohibited	0	0	0	0	0	23	0
Miles of Mountain Biking Emphasized on Roads	255	255	47	47	47	47	70
Madison Range							
Miles of Trail - Mountain Bikes Emphasized	287	272	165	165	165	151	157
Total Miles Mountain Bike Trail (miles emphasized and allowed)	289	272	237	237	236	226	243
Percent Mountain Bike Trails Non-Motorized	56%	60%	33%	32%	36%	100%	42%
Miles of Trail Mountain Bikes are Prohibited	167	186	230	230	231	231	224
Miles of Mountain Biking Emphasized on Roads	76	76	13	13	13	13	12
Forest-wide Totals							
Miles of Trail - Mountain Bikes Emphasized	1315	1269	787	743	609	599	769
Total Miles Mountain Bike Trail (miles emphasized and allowed)	1333	1286	1234	1216	962	940	1169
Percent Mountain Bike Trails that are Non-Motorized	43%	42%	45%	55%	68%	94%	57%
Miles of Trail Mountain Bikes are Prohibited	802	852	958	969	1205	1222	1002
Miles of Mountain Biking Emphasized on Roads	1071	1071	509	496	488	488	545

Alternative 7-M would prohibit mountain bikes from riding on 200 miles of trail that are currently not restricted. The majority of prohibitions are concentrated in the Hyalite/Porcupine-Buffalo Horn Wilderness Study Area, in areas where little or no historic motorcycle use was present on the trail system, and in the Crazy Mountains where trail easements across private land in-holdings prohibit mountain biking. Scattered around the Forest, short segments of trail that lead into designated Wilderness would have mountain bikes prohibited (Alternatives 4 through 7-M). Other short segments of trail where bikes would be prohibited are near dude ranches where the trails receive inordinately heavy stock traffic and are creating a safety concern. In Alternative 7-M, two popular trails (Main Hyalite and the Bridger foothills trail where it leaves the M parking lot) would allow mountain biking at least part of the time. Biking would be prohibited on these routes in Alternatives 4-6.

Alternative 7-M proposes to develop a "staggered use" system for biking on the Heather/Emerald Trail # 434, Sypes Canyon # 534, Bridger Foothills #534 between the "M" parking lot and Truman Gulch and on Middle Cottonwood #586 where on certain days of the week or month (or possibly times of the day), these trails would be managed for pedestrian and stock travel only. This system is also proposed to apply to motorcycles in Alternative 7-M on routes listed above where they would be open to motorcycles (Middle Cottonwood, Heather Emerald, Truman). The exact system of restrictions would be developed with input from interested user groups after the travel plan decision is made. Mitigation proposed to manage user conflicts between hikers and bikers on popular routes in Alternatives 1-6 would be to voluntarily request that bikers avoid those routes on weekends, holidays and busy evenings, through an educational campaign. If monitoring shows that this trail-sharing philosophy does not work, a closure to biking on certain days may be necessary in the future on popular routes in these alternatives.

In all alternatives, suitable mountain bike routes were also identified on shared routes with motorized users, including old roads. Many of these old roads would be managed as ATV and motorcycle routes in some alternatives, and could provide good entry-level mountain biking opportunities.

A concern was raised during the scoping period for the six draft alternatives that mountain biking as an opportunity had been lumped with motorized users. This is not the case. In Alternatives 3 through 7-M, the total percent of non-wilderness trails managed as single-track non-motorized mountain biking opportunities increase over current condition. In alternative 1 and 2 approximately 43 % of mountain bike routes are managed as non-motorized. In Alternatives 3-6 that number ranges from 45% - 94%. Alternative 7-M would manage approximately 57% of all mountain bike trails as non-motorized. See Table 3.15. 22 for complete details for each alternative. In Alternatives 3 through 7-M, the number of miles of trail where mountain biking is emphasized decreases. This decrease is a result of a basic tenet of travel planning, that not all routes make great opportunities for all uses. Typically mountain biking was not emphasized on routes where heavy mixed stock or pedestrian traffic was anticipated, or where the physiography of the trail system itself was not conducive to quality biking (like the proposed Bridger Ridge trail). However, in most cases biking would still be allowed on those routes, just not encouraged.

An analysis of the quality of different mountain bike rides was not completed, but rather compared to the analysis done for hiking opportunities. Many of the favored mountain bike rides today occur

on what were originally designed as hiking or stock trails. Quality factors for mountain bike riding are a function of the skills of the rider and the type of experience they are seeking. Short, relatively easy mountain bike opportunities are somewhat analogous to short day hikes (see Table 3.16. 17 and Figure 3.16. 2 through Figure 3.16. 3 for that summary). More arduous, longer bike rides are somewhat analogous to long hike opportunities (see Table 3.16. 17 and Figure 3.16.4 for that summary).

Alternatives 3-6 propose various seasonal restrictions for mountain bike use on trails during the spring breakup/freeze-thaw period of April 1 to either May 15, June 1, June 15 or July 15. Trails that are particularly susceptible to early spring damage from stock and bikes would be closed during this brief period to protect the trail resource and minimize soil and vegetation damage. Most trails under this scenario would be open by mid-June. In years when there are warm dry springs and closures are not warranted, they would be opened early. Likewise, in extraordinarily wet, long springs, closures could be extended to protect the trails until they dry out. Forest roads would not be closed to bikes at any time, and particularly during the spring when roads may be closed to vehicles, they would provide good alternative routes to closed trails. See the individual TPA route tables in the "Detailed Description of the Alternatives" section for proposed closure dates.

Not all trails would have spring closures to mountain bikes in Alternative 7-M, just those particularly susceptible to spring damage, or where snow conditions force users off the routes, causing unacceptable resource damage off-trail. Specific trails proposed for spring closure to mountain bikes in Alternative 7-M include: Buffalo Horn #1, North Cottonwood #545, Swan Creek #186, Porcupine Creek #34, Two Top Divide #39, Bear Canyon Loop #440, Rock Creek South # 178, First Yellowmule #162, West Pine #139, and Chestnut Mountain #458. Several of these routes are proposed new construction and would only be closed seasonally to bikes until the trails had "hardened" after being built.

Recreational Livestock (Pack and Saddle Stock)

Few changes are proposed in any alternative that would drastically change the current outstanding opportunities for riding horses or other pack stock. In Alternatives 2 through 7-M, a few miles of trail would be closed to stock, primarily to address user safety concerns, either because of heavy mixed traffic, or trails that are poorly suited to stock traffic and cannot be fixed. In Alternatives 3-6, the trail-less portion of the Beartooth Plateau in the Absaroka Beartooth Wilderness would be closed to stock (see the summer non-motorized alternative maps). Little stock traffic occurs there now, and sensitive soils and tundra habitats make the area particularly vulnerable to resource damage from cross-country travel by stock (see Issue 19: Soils and Vegetation and Issue 21: Wilderness). Alternative 7-M would employ a seasonal restriction to stock in the restricted area on the Beartooth Plateau, with stock prohibited from December 2 – August 1, as opposed to an outright prohibition yearlong as in Alternatives 3-6. No over-night stock use would be allowed within the restricted area during the open season. See Issue 21: Wilderness, for a more detailed description of Alternative 7-M and its projected effects. The recreation opportunity table (Table 3.16. 17) that precedes this section displays the number of day hiking opportunities. These are analogous to stock opportunities in most cases, both exclusively non-motorized, and those shared with motorized trail vehicles. The following tables (Table 3.16. 23 and Table 3.16.24) summarize the number of miles of trails emphasized for stock, and the number of miles where stock would be prohibited.

Table 3.16. 23 Approximate miles of trail where recreational livestock use would be emphasized, by alternative.

Mountain Range	Approximate Miles of Trail with Emphasis on Recreational Livestock Use						
	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7-M
Absaroka Beartooth	851	849	818	807	858	867	754
Bridger Bangtail	147	104	75	75	138	138	105
Crazies	115	112	72	72	120	120	90
Gallatin	481	457	363	358	425	425	378
Henrys/Hebgen Basin	63	56	51	51	55	55	51
Madison Range	456	453	386	386	419	426	389
Forest Total	2113	2031	1765	1749	2015	2031	1767

Table 3.16. 24 Miles of trail and acres of area where recreational livestock would be prohibited, by alternative.

Mountain Range	Approximate Miles of Trail/Acres of area where Recreational Livestock Use Would be Prohibited						
	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7-M
Absaroka Beartooth	0	0	3	3	9	4	7
Bridger Bangtail	0	0	18	18	18	18	0
Crazies	0	0	4	4	4	4	0
Gallatin	0	2	9	9	1	1	2
Henrys/Hebgen Basin	0	0	0	0	0	0	26
Madison Range	0	0	0	3	10	3	3
Forest Total	0	2	34	37	42	30	38
Forest Total Acres of Stock Closure	0	0	33,561	32,860	34,809	34,809	0
Forest Total Acres of Seasonal Stock Closure	0	0	0	0	0	0	34,576

An analysis of the quality of different recreational livestock opportunities was not completed, but rather compared to the analysis done for hiking opportunities. Short, relatively easy recreational livestock opportunities are somewhat analogous to short day hikes (see Table 3.16. 17 and Figure 3.16. 2 through Figure 3.16. 3 for that summary). More arduous longer rides are somewhat analogous to long hike opportunities (see Table 3.16. 17 and Figure 3.16.4 for that summary).

All **areas** where stock use would be prohibited are on the Beartooth Plateau. (See the summer non-motorized alternative maps.) The trails proposed to be closed to stock in Alternative 7-M include the Rendezvous ski trail system near West Yellowstone, the Lava Lake trail in the Spanish Peaks, Pine Creek Falls and Lake trails south of Livingston, and two short segments of trail on the Beartooth Plateau that access Lower Aero and Zimmer Lakes. In Alternative 7-M, stock use on the Pine Creek Trail #47 would be prohibited seasonally: from December 2 – September 15, with no over night stock use yearlong in the Pine Creek Lake Basin. After September 15 the trail would be open for day use stock traffic.

Alternatives 3-6 propose various seasonal restrictions for stock use on trails during the spring breakup/freeze-thaw period of April 1 to either May 15, June 1, June 15 or July 15. Trails that are

particularly susceptible to early spring damage from stock (and motorized or mountain bike travel) would be closed during this brief period to protect the trail resource and minimize soil and vegetation damage. Most trails under this scenario would be open by mid-June. In years when there are warm, dry springs and closures are not warranted, they would be opened early. Likewise, in extraordinarily wet, long springs, closures could be extended to protect trails until they dry out. Forest roads would not be closed to stock at any time, and particularly those closed to motorized use in the spring would provide early riding opportunities. See the individual TPA trail matrices in the "Detailed Description of the Alternatives" section for proposed closure dates.

Not all trails would be closed seasonally to stock in Alternative 7-M, just those particularly susceptible to spring damage, or where snow conditions force stock users off the routes, causing repeated unacceptable resource damage off trails. Specific trails proposed for spring closure to stock in Alternative 7-M include: Buffalo Horn #1, North Cottonwood #545, Swan Creek #186, Porcupine Creek #34, Two Top Divide #39, Bear Canyon Loop #440, Rock Creek South # 178, First Yellowmule #162, West Pine #139, Thompson Lake # 282, and Chestnut Mountain #458. Most of these routes would be closed to stock between April 1 and June 15. Several of these routes are proposed new construction and would only be closed until the trails had "hardened" after being built.

Snowmobiling

The Gallatin Forest's reputation for being a snowmobile haven is well deserved due to abundant snow, hundreds of miles of trails and outstanding backcountry opportunities. Analysis shows though that a relatively small portion of the Forest's 1.8 million acres are actually desirable snowmobile terrain. Approximately one-third of the total acreage is desirable for snowmobiling (slopes less than 40 degrees, adequate snow cover and open enough timber cover to be able to travel through the trees). Of those snowmobile-friendly acres, about 56% are currently closed to snowmobiling, many acres are inside designated Wilderness. The winter recreation opportunity data (Table 3.16. 21 and Figure 3.16. 13 through Figure 3.16. 15 preceding this section) describes the number of miles of marked and groomed trails, and acres of backcountry snowmobile terrain available in each alternative. Alternative 6 would decrease total acres of backcountry snowmobiling opportunity the most, primarily by requiring users to stay on a designated trail in the popular Cabin Creek area, and by prohibiting snowmobiles in the Hyalite/Porcupine-Buffalo Horn Wilderness Study Area.

Alternative 7-M would reduce the number of acres of the best (#1 and #2 quality) open snowmobile-friendly terrain by approximately 71,000 acres from current condition (see Table 3.16. 21). Most of the desirable backcountry snowmobiling areas currently being used that would be restricted in Alternatives 5, 6 or 7-M are located in the Gallatin Range and the northeast Bridgers or in Cabin Creek in the case of Alternative 6. These areas currently provide good opportunities for challenging backcountry riding. Steep slopes, avalanche terrain, and deep powder limit the number of riders capable of accessing these areas today, though they are very popular with a growing number of expert riders.

Alternatives 2 through 7-M would increase the total number of marked and groomed trails from 399 miles today, to a high of 520 miles in Alternative 3 and a total of 480 miles in Alternative 7-M.

Most of the additions to the trail system would be in areas with existing snowmobile trail systems, adding loops and additional routes to expand opportunities in favored areas.

Many people commented about the potential loss of snowmobiling opportunities in the Hyalite Drainage during the DEIS comment period. Alternative 7-M would provide a separated opportunity for family snowmobile activities in Hyalite, snowmobile access to Grotto Falls Trailhead for ice climbers, and snowmobile access to the East Fork of Hyalite/Heather Emerald Basin for backcountry snowmobiling opportunities. Alternative 7-M proposes to plow the main Hyalite Road to the Blackmore Day Use area as in Alternative 6, managing all of the area around the reservoir as closed to snowmobiles and emphasizing cross country ski trail opportunities. Additionally Alternative 7-M would add an open snowmobile area lower in the canyon between the Moser Road on the south, the Bozeman Ck. Divide on the east and the main Hyalite Road on the west. Snowmobile parking would be provided only at the Moser Creek Road turn off, and a designated snowmobile trail through a closed area provided to the reservoir, Grotto Falls Trailhead, and East Fork of Hyalite Creek. (See the Alternative 7-M winter map.) This alternative would still provide high quality non-motorized ski trails throughout a large portion of the Hyalite drainage, while providing snowmobile access for ice climbers to Grotto Falls Trailhead, and challenge snowmobiling opportunities in the Heather/Emerald Basins.

Cross-Country/Backcountry Skiing and Snowshoeing

Cross-country skiing is a growing and popular activity on the Gallatin National Forest. Table 3.16.25 and Figure 3.16. 9 through Figure 3.16. 12 (preceding this section) describe the numbers of cross-country ski and snowshoe opportunities, broken out by those shared with motorized winter use and those exclusively non-motorized for each alternative. Table 3.16. 25 below displays the same information by miles of routes.

Table 3.16. 25 Approximate miles of cross-country ski trails marked or groomed in areas open to snowmobiles and in areas closed to snowmobiles.

Mountain Range	**Approximate Miles of Groomed Cross-Country Ski Trails** M = Shared with Motorized Trails NM = Non-Motorized Trails													
	Alt.1		Alt. 2		Alt. 3		Alt. 4		Alt. 5		Alt. 6		Alt. 7-M	
	NM	M	NM	M	NM	M	NM	M	NM	M	NM	M	NM	M
Absaroka Beartooth	0	16	1	15	1	32	9	25	1	18	1	18	2	18
Bridger Bangtails	0	0	0	0	7	0	7	0	0	0	0	0	0	0
Crazy	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gallatin	8	2	8	4	8	2	14	3	9	3	9	3	8	2
Henrys/Hebgen	22	0	22	0	21	0	22	0	22	0	22	0	22	0
Madison	0	0	0	0	0	1	0	1	0	1	0	1	0	1
Forest-wide Total	29	19	30	19	36	35	51	28	32	21	32	21	32	21
Percent	61%	39%	61%	39%	50%	50%	64%	36%	60%	40%	60%	40%	60%	40%

Mountain Range	Approximate Miles of Marked Cross-Country Ski Trails M = Shared with Motorized Trails NM = Non-Motorized Trails													
	Alt.1		Alt. 2		Alt. 3		Alt. 4		Alt. 5		Alt. 6		Alt. 7-M	
	NM	M	NM	M	NM	M	NM	M	NM	M	NM	M	NM	M
Absaroka Beartooth	2	29	6	24	14	14	13	12	14	12	14	12	20	21
Bridger Bangtails	5	25	16	15	25	9	25	9	6	11	25	9	9	8
Crazy	0	3	0	3	0	5	0	9	7	6	0	13	9	9
Gallatin	13	61	13	55	51	31	61	17	57	12	61	15	50	17
Henrys/Hebgen	0	0	0	0	0	3	0	3	0	0	0	3	3	0
Madison	2	27	2	27	13	18	13	18	11	18	13	18	11	18
Forest-wide Total	22	144	37	122	103	80	112	67	94	58	112	69	102	73
Percent	13%	87%	23%	77%	56%	44%	62%	38%	62%	38%	62%	38%	66%	34%

While the area surrounding these groomed cross country ski trails (Table 3.16. 25) may not be closed to snowmobiles, proposed Forest Plan Standard A (9) in Alternatives 2-6 and Standard A (11) in Alternative 7-M would prohibit snowmobiles from traveling on groomed ski trails. Snowmobiles would not be prohibited from traveling on marked ski trails in any alternative unless they were in an area where snowmobiles were prohibited.

Table 3.16. 26 Total miles of cross-country ski trails, groomed or marked, by alternative.

	Alt. 1	Alt. 2	Alt.3	Alt.4	Alt.5	Alt.6	Alt.7-M
Total Miles of Cross-Country Ski Trail	214	209	251	258	204	235	226

Table 3.16. 26 above displays the total miles of marked or groomed cross country ski trails, by alternative. Alternative 4 proposes the most miles of new cross-country ski trails of all alternatives. This alternative would be most responsive to a growing demand for cross-country ski opportunities. Alternatives 4 and 7-M would best respond to the need identified in the Greater Yellowstone Area study, "Winter Use Management: A Multi-Agency Assessment" (USDI 1999) to provide more segregated (non-motorized) family-friendly cross-country ski opportunities close to population centers.

Table 3.16. 20 and Figure 3.16. 12 display the difference between cross-country ski opportunities that are in motorized or non-motorized settings, by alternative.

While the difference in miles of opportunity may not appear very marked among alternatives, the ability to easily access these areas does differ between alternatives. In the Gallatin Mountain Range, access for front country non-motorized ski or snowshoe opportunities markedly improves in Alternatives 4 through 7-M, where the Hyalite Canyon road would be plowed. Many of the ski trails displayed in different alternatives exist in this area now, but are virtually inaccessible during the bulk of the winter due to poor road conditions. Alternative 4 would also provide additional marked or groomed ski trails in the Bridgers, Gallatin Range in the Porcupine drainage and near Cooke City. Alternatives 5 and 7-M would provide additional dedicated non-motorized cross-country trails in the Crazies along the Lowline trail and in Sunlight Basin in the Shields TPA.

Alternative 7-M would also provide a short non-motorized winter ski trail in Bear Canyon, from the trailhead to the junction of the 440 loop trail.

People who commented on the DEIS were concerned about the likelihood of the Hyalite road not being plowed due to insufficient funds, and how the Hyalite area would be managed if the road were not plowed. Several scenarios were developed under Alternative 7-M that would be feasible alternatives to plowing the road all the way to Blackmore:

1. If some funds were available but not enough to plow the entire length for the whole season (approximately Dec. 1 – March 31) the road would be plowed only to Langohr Campground for all or part of the winter. A winter parking lot would be provided to skiers at Langohr, and a snowmobile parking area at Moser – with the designated snowmobile trail to the reservoir and Grotto Falls/E. Fk Hyalite as in Alternative 7-M. The main Hyalite Road would then become part of the ski trail system from Langohr Campground to the reservoir.
2. If no or very limited funds were available, parking would be lower in the Canyon at one of the fishing access points. Wheeled vehicles would be prohibited south of this parking area during winter months. Snowmobiles and skiers would share the first 3 miles of the Canyon to the Moser Road junction, where snowmobiles would then be limited to the designated route to the reservoir and Grotto Falls/E. Fk. Hyalite Trailheads and the open snowmobile area between the Hyalite Road and the Bozeman Ck. Divide (see the Alternative 7-M winter map). Skiers would have the main canyon road above the Moser Road junction connecting to all the other dedicated ski trails further south in the canyon as non-motorized skiing opportunities. Adequate parking would be a concern under this scenario.

Driving for Pleasure on Forest Roads

Driving for pleasure on Forest roads has long been one of the most popular recreation activities on National Forests. The alternatives in the proposed Travel Plan would not significantly change the existing opportunities for pleasure driving. Most of the differences among alternatives simply change the level of maintenance that passenger car roads are receiving today, often improving those roads to a higher standard in cases where they provide primary recreation access to the Forest. Table 3.16. 19 provides a comparison of the miles of road for casual driving, by alternative. No new passenger car roads would be constructed in any alternative, but the maintenance levels of passenger car roads may change over time, which could affect people's comfort level while driving.

ATVs

The popularity of ATV use continues to grow across the country. These trail vehicles are typically easier to ride than motorcycles and attract a wider audience of users from young to old. The best ATV routes usually are not as challenging or rugged as single-track motorcycles trails, although as the technology advances, ATVs are able to traverse increasingly difficult terrain. ATV opportunities on the Forest are somewhat limited by rugged landscapes, designated Wilderness, Wilderness Study Areas and trail easement restrictions. Many of the Forest's current ATV opportunities are located on old roads, snowmobile trails or stock driveways that were constructed to accommodate larger vehicles or groups of animals. Table 3.16. 27 Approximate below summarizes the total number of miles of ATV routes available, by alternative. This table does not

reflect the number of miles of currently legal open user-created routes that are not part of the trail system (approximately another 300+ miles of roads and trails).

Table 3.16. 27 Approximate miles of ATV opportunities on system routes, by alternative.

Mountain Range	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7-M
Absaroka Beartooth	143	60	98	108	55	30	111
Bridger Bangtail	100	28	70	70	64	55	79
Crazies	82	56	101	73	55	31	45
Gallatin Range	267	98	144	141	123	122	132
Hebgen Basin/Henrys Mountains	40	29	115	119	104	94	120
Madison Range	126	84	62	59	35	0	47
Forest Total	758	353	591	571	437	332	534

The miles of ATV opportunities would decrease in Alternatives 2 through 7-M (758 miles of system routes, and approximately another 300 mile of user created routes are legally open under the 1999 Travel Plan). This numeric decrease is artificial however, in that not all 758 miles of legally open routes are used or passable by ATVs today. Alternative 2 reflects an estimate of the "ATV-able" system routes today (that is trails wide enough to accommodate ATV's within the existing tread), for a total of 353 miles of system routes (per the MT/ND Statewide OHV decision). Alternatives 3 through 7-M each actually add miles of new ATV trail (from 11 miles in Alternative 6 to 38 miles in Alternatives 3 and 4), even though there is a net decrease in overall mileage from Alternative 1. The largest increase in ATV opportunities would occur on roads that would become dedicated trails with a high of about 300 additional miles in Alternative 3 to a low of about 212 additional miles in Alternative 6. These additional miles are a combination of currently closed administrative or project roads, and roads now open to the public for street-legal vehicles. The potential addition of dedicated ATV trails on roads open to cars and trucks would range between a high of 209 miles in Alternative 7-M to a low 122 miles in Alternative 6. The net decrease in ATV routes legally open in Alternative 1 to miles open in all other Alternatives would mostly be a result of closing single-track trails from the opportunity base that aren't passable by ATV's now and were closed by the MT/ND OHV decision in 2001.

In that the largest increases in ATV opportunities would be provided on road systems in Alternatives 3 through 7-M, the setting that these trails would traverse would largely be a roaded natural setting on wide gentle routes. Access to destinations like lakes and high vistas would be limited. Alternative 3 would provide the most miles of ATV trail in a semi-primitive setting on more challenging trails accessing more primitive backcountry settings, and more popular destinations. Alternative 7-M would increase the total miles of ATV routes from current condition (Alternative 2) by 181 miles.

Alternatives 3 through 7-M concentrate ATV opportunities in smaller areas, and expand the ATV trail network in those areas. Significant improvements in the ATV trail system are proposed for the roaded portion of the Gallatin Range, the Shields drainage in the Crazies, South Plateau and Henrys Mountains, Cooke City, Buck Ridge and in the Mill Creek area. These alternatives focus on creating loops and connected routes to increase the total mileage of riding available within a given

area. It would be reasonable to expect with this concentration of use, that fewer opportunities for solitude along these trail systems would result over time.

Motorcycles

During public scoping for Travel Plan revision, recreation planners became aware that motorcyclists, as a group, seek very specific types of recreation opportunities, and are not generally comparable to other motorized trail vehicle users. In general, the settings they seek are a variety of single-track trails in natural and sometimes remote settings. Many voiced concern that all motorcycle opportunities should not be combined with wider gentler ATV trails, and that the challenge of narrow trails and difficult riding was the opportunity that many seek.
Table 3.16. 18 (in the preceding section) summarize the number of motorcycling opportunities in total, including connecting roads and shared ATV routes.

Table 3.16. 28 below compares the number of miles of motorcycle opportunities that are shared with ATVs versus the number of miles of motorcycle trails that would not be open to ATVs.

Table 3.16. 28 Comparison of dedicated motorcycle route miles to those shared with ATVs, by alternative.

Type of Route	Approximate Miles by Alternative and Mountain Range						
	Alt. 1	Alt. 2	Alt. 3	Alt. 4	Alt. 5	Alt. 6	Alt. 7-M
Motorcycle + ATV							
Absaroka Beartooth	143	150	166	109	58	30	174
Bridgers/Bangtail	104	104	137	86	71	55	124
Crazies	82	82	126	87	56	31	70
Gallatin	323	325	317	262	202	122	230
Henrys /Hebgen Basin	44	42	124	119	104	94	121
Madison	134	116	127	109	103	0	112
Total	830	818	996	772	595	332	831
Motorcycles Only							
Absaroka Beartooth	0	90	67	0	3	0	63
Bridger Bangtail	4	76	67	17	7	0	45
Crazies	0	26	25	14	1	0	25
Gallatin	56	227	173	121	79	0	98
Henrys/Hebgen Basin	4	13	8	0	0	0	0
Madison	8	32	66	50	68	0	65
Total Miles Single Track Motorcycle	73	465	405	201	158	0	296
Grand Total Miles of Motorcycle Opps	903	1283	1401	973	753	332	1127

Note that the motorcycle-only routes are largely located on trails (over 95%) where the combined motorcycle/ATV routes are a combination of closed roads, backcountry roads and trails. This becomes most apparent in Alternative 6, where 100% of the motorcycle routes on trails would be closed (as they are almost all in inventoried roadless areas). This alternative would not provide any high quality single-track motorcycle opportunities, as all use would be on routes shared with ATV or passenger cars.

Motorcycle and ATV routes are not currently separated on the Gallatin 1999 Travel Plan. The MT/ND statewide OHV decision did, however, make that change by definition. If system trails were too narrow for the trail vehicle to fit on the tread, they were closed to that vehicle type. Alternative 1 represents the 1999 Travel Map without the MT/ND OHV order imposed. Alternative 2 best represents current conditions, and restricts ATV's to system trails where the existing tread is wide enough to accommodate those vehicles.

Alternative 7-M would decrease the total number of miles of motorcycle routes available over the current condition (Alternative 2) by 156 miles - a 12% reduction, and eliminate many of the user-created routes. Motorcycle opportunities on single track trails would drop by 169 miles, a 36 % reduction in Alternative 7-M over current condition. Motorcyclists are not presently using all of the routes that currently are open to them (some routes, though legally open, are too difficult to ride). Even so, these proposed reductions would have a negative effect on quality and quantity of single-track motorcycling available today.

Ice Climbing

During scoping for the Benchmark and again for the six Draft Alternatives, many individuals raised concern about access to a popular, world-class ice climbing area in the Hyalite drainage. Currently the road up Hyalite Canyon is not plowed, but ice climbers, fishermen and other winter recreationists attempt to drive the road regardless of conditions for much of the year to access the canyon. The road quickly becomes a deeply rutted, ice-covered route that is very hazardous for driving, and is often impassible to wheeled vehicles after early January.

Alternative 2 proposes to plow the road to the reservoir (Blackmore parking lot) and allow wheeled vehicles to drive on the road above the plowed portion for as long as they are able. This would provide vehicle access to the Grotto Falls trailhead for climbers until snow conditions prohibited driving. Alternative 2 does not prohibit snowmobiles from the drainage, so snowmobiles could be used to access popular climbing areas above the end of the plowed road.

Alternative 3 proposes to plow the road to the Grotto Falls trailhead, providing climbers direct vehicle access to the end of the road system. Snowmobiles would be permitted above the trailhead in this alternative.

Alternative 4 proposes to plow the road to Langohr Campground, and prohibit snowmobiles in the canyon. Ice climbers and anglers would have to ski or snowshoe from the road end facility to the reservoir (about another 5 mi) or to the climbing area (about another 7 mi). The road system above Langohr would be part of a dedicated marked ski trail system.

Alternative 5 proposes to plow the road to the Chisholm Campground at the south end of the reservoir. Snowmobiles would be prohibited in the drainage. Wheeled vehicle travel would be allowed in Alternatives 5 on the main road from the Chisholm Campground to the Grotto Falls trailhead from December 2 through March 30, allowing climbers to access the trailhead as long as the road was drivable. Once the road was snowed-in, climbers would have to ski about two miles to the climbing area.

Alternative 6 proposes to plow the road to the Blackmore parking lot, and prohibit wheeled vehicle travel on the road above there. Snowmobiles would be prohibited in the drainage in this alternative; climbers would have to ski or snowshoe approximately 3.5 miles to access popular climbing areas.

Alternative 7-M proposes to plow the road to the Blackmore parking lot, and prohibit wheeled vehicle travel on the road above the dam after January 1. Ice climbers could either ski or snowshoe to ice climbs from Blackmore. Additionally, a designated snowmobile trail would provide ice climbers access via snowmobile from the Moser Creek turnoff to the Grotto Falls and East Fork Hyalite Trailheads. Snowmobiles would not be permitted south of the Grotto Falls Trailhead (see the Alternative 7-M winter map). This trail would be a designated snowmobile trail through a closed area specifically accessing the reservoir, Grotto Falls Trailhead and the East Fork of Hyalite Creek. Snowmobile parking would be restricted to the Moser turn off, with no snowmobiles leaving from Blackmore to provide separation from the ski trail system around the reservoir.

Accessibility of Forest Trails

During scoping for the Benchmark and the six Draft Alternatives, people expressed concerns that travel management decisions could affect the access provided to public lands for people with disabilities.

Under Section 504 of the Rehabilitation Act of 1973, no person with a disability can be denied participation in a Federal program that is available to all other people solely because of his or her disability. The Americans with Disabilities Act (ADA) of 1990 was based on the 1973 Rehabilitation Act, but expanded the coverage to apply to State and local government services, public accommodations and commercial establishments. The ADA with one exception does not apply to the programs conducted by federal land management agencies, because those programs were already covered under the accessibility requirements of the 1973 Rehabilitation Act. The one section that does apply: ADA Title V Section 507 (c), reaffirms that nothing in the Wilderness Act is to be construed as prohibiting the use of a wheelchair in a wilderness area by an individual whose disability requires the use of a wheelchair, and consistent with the Wilderness Act, no agency is required to provide any form of special treatment or accommodation, or to construct any facilities or modify any conditions of the lands within a wilderness area to facilitate such use.

Under Section 504 of the Rehabilitation Act of 1973, no person with a disability can be denied participation in a Federal program that is available to all other people solely because of his or her disability. In conformance with section 504 and FSM 2353.05, wheelchairs that meet the definition in 36 CFR 212.1 are welcome on all NFS lands that are open to foot travel. These wheelchairs are specifically exempted from the definition of a motor vehicle in 36 CFR 212.1, even if they are battery powered. Several people commented that the reduction of motorized routes proposed in several alternatives in the DEIS would be illegal in that the Agency would not be providing "reasonable accommodations" for people with disabilities. The term "reasonable accommodation: is only used in the laws in reference to employment, there is no such requirement for program access (personal communication, Janet Zeller).

There is no legal requirement to allow people with disabilities to use OHV's or other motor vehicles on roads, trails and areas closed to motor vehicle use because such an exemption would undercut

the resource protection afforded by the closure and therefore could fundamentally alter the nature of the Forest Service's travel management program (7 CFR 15e.103). Restrictions on motor vehicle use that are applied consistently to everyone are not discriminatory.

The Forest Service has created trail guidelines for meeting the requirement that NFS trails that are open to foot travel be considered for wheelchair traffic. In a nutshell, the guidelines define an accessible trail as a pedestrian route that provides barrier-free access that can be broadly characterized as a pedestrian trail 3-5 feet wide, centerline gradients of 5%, surfaces that are firm and slip resistant, minimal tread cross-slopes, and treads that are free of obstacles. No trails on the Gallatin National Forest completely meet these standards today, even though some met accepted standards of the day. Several trails, like Grotto Falls, Palisade Falls, and Langohr Loop in the Hyalite Travel Area or First Yellowmule in the Big Sky TPA, approach meeting today's standards, but fall short in one or more categories.

Trails in this proposed Travel Plan where hiking is emphasized are considered potential accessible pedestrian trails. When reconstruction of one of these trails is scheduled during Travel Plan implementation, the Forest is obligated to consider its accessibility potential. Other considerations when evaluating the potential for making a hiking trail accessible include protection of archeological and cultural elements of the site, physical feasibility, resource protection, setting, road access, and to a lesser degree cost effectiveness. Trails that meet these minimum criteria will be reconstructed to accessible standards. Since the Gallatin National Forest is seriously lacking in accessible trails, the forest may consider moving trails with high potential up the reconstruction priority list.

Recreation Effects Conclusions

The following section provides broad conclusions about potential effects to recreation opportunities by different proposed travel management alternatives. Recreation trend information is summarized to provide context for demand of recreation opportunities within the planning period.

Recent recreation use estimates and demand projections indicate that among dispersed recreation activities, the majority of dispersed recreationists in the Rockies are hiking, biking, participating in non-consumptive wildlife viewing activities, hunting and off-road driving. Other activities are also popular (see the discussion in the Affected Environment section). The number of participants driving off-road by 2010 in the Rockies is projected to be 3,270,000. The number of participants biking, hiking and pursuing non-consumptive wildlife viewing activities projected for 2010 in the Rockies is 22,535,000. The number of days that recreationists are projected to spend hiking, biking or participating in non-consumptive wildlife viewing activities in the Rockies in 2010 is estimated at over 1,000,000,000 days. The number of days people spend participating in non-consumptive wildlife viewing activities alone is projected to exceed 740,000,000 days by 2010. The number of days recreationists are projected to participate in off-road driving in 2010 in the Rockies is estimated at over 64,000,000. Of these activities, non-consumptive wildlife viewing activities are projected to have the fastest growth of all dispersed recreation activities studied in the Rockies; nearly 50% by 2020 (Cordell et. al. 1999:326-349). These recreation use projections would indicate that the largest future demand for supply of recreation opportunities would be for activities that typically occur in non-motorized settings.

Local demographic trends indicate that population growth anticipated proximate to the Gallatin Forest will continue to place competing pressures on limited supplies of recreation opportunities associated with roads, trails and the backcountry.

Alternatives 2 through 7-M would provide better separation of motorized and non-motorized opportunities, responsive to the projected demand. Alternatives 4 through 7-M would be the most responsive to projected demand for recreation opportunities in non-motorized settings, improving the quality of the setting for these activities.

Off-road driving as a recreation activity is also projected to grow (by 12% in 2010 and by 20% by 2020) (Cordell et al 1999:326-349). The amount of area or length of road/trail necessary to provide a quality half to full day motorized recreation opportunity is much larger than required by most non-motorized activities. This disparity leads to a difficult equation in balancing the much faster growing demand for non-motorized activities, with the demand for off-road driving opportunities which requires a larger land base. Alternative 6 would not be responsive to the growing demand for off-road driving.

ATV opportunities on system routes would be increased over current conditions (best represented by Alternative 2) in Alternatives 3-5 and 7-M. The total miles of ATV routes would be shifted to a trail system that is a combination of old roads and trails, with more mileage on old roads. While increasing the number of miles of opportunities, the number of backcountry opportunities and access to scenic destinations or lakes would decrease in these alternatives.

Closing user-created summer motorized routes not incorporated into the trail system in Alternatives 2 through 7-M would eliminate over 200 miles of currently legal motorized trail opportunities, often in a backcountry setting. Some of the current "user created routes" and old project roads are proposed to be incorporated into the trail system.

In Alternatives 1, and 3 through 7-M, the number of miles single-track motorcycle opportunities (not shared with ATVs) would decrease over what is available today (best represented by Alternative 2). Alternatives 4, 5 and 6 would reduce single-track motorcycle routes over 50%. Alternative 7-M would reduce available single track motorcycle routes by 36%. This reduction would affect the quality of motorcycling opportunities available on the Forest today, by shifting the bulk of open motorcycle routes to those shared with ATVs (over 70% of the open motorcycling routes in Alternative 7-M would be shared with ATVs). Alternative 6 would eliminate all of the highest quality motorcycle opportunities on the forest, moving 100% of the open routes to those shared with ATVs.

Seasonal restrictions would apply to motorized uses in all alternatives on many routes. Some dates would change from the current closure dates.

Alternatives 3 through 7-M would place additional restrictions on the number of miles of trail available for mountain biking outside of Wilderness. In Alternatives 5 and 6, this reduction would be the most substantial, with the proposed closure of trails in the Hyalite/Porcupine-Buffalo Horn Wilderness Study Area. Alternatives 3, 4 and 7-M do propose to close a number of miles of trail to

mountain biking that are currently open (ranging from 135 miles in Alternative 3 to 200 miles of closure in Alternative 7-M). Most of the proposed closures in Alternative 7-M are in the Hyalite/Porcupine-Buffalo Horn Wilderness Study Area, proximate to dude ranches with heavy stock traffic, or on short trail segments that lead to wilderness boundaries. Cross-country travel would not be prohibited in any alternative, leaving a large network of user-created routes open for biking. Spring restrictions to biking on trails would apply in Alternatives 2-6 in all locations and to a dozen specific routes in Alternative 7-M. Biking would not be prohibited on any road at any time of the year. In Alternatives 2 through 7-M the number of miles of single-track non-motorized mountain bike opportunities would increase.

Few changes are proposed in any alternative that would drastically change the current outstanding opportunities for riding horses or other pack stock. In Alternatives 2 through 7-M, a few miles of trail would be closed to stock, to primarily to address user safety concerns, either because of heavy mixed traffic or trails that are poorly suited to stock traffic and cannot be fixed. In Alternatives 3-6, the trail-less portion of the Beartooth Plateau in the Absaroka Beartooth Wilderness would be closed to stock (see the summer non-motorized alternative maps). Alternative 7-M would employ a seasonal restriction and a prohibition to overnight stock use within the restricted portion of the Beartooth Plateau as opposed to the outright prohibitions proposed in Alternatives 3-6. In Alternatives 2-6, seasonal closures to stock during spring break-up are proposed that would limit early riding opportunities in some areas from four to six weeks. Alternative 7-M would limit those spring time seasonal restrictions to a dozen specific routes.

Winter recreation activities, including snowmobiling, cross-country skiing, snowshoeing and ice climbing, are very popular on the Forest. The number of people participating in snowmobiling in the Rockies is projected to be 848,000 in 2010 and 880,000 in 2020. The number of people participating in cross-country skiing is projected to be 721,000 in 2010 and 987,000 in 2020. The number of days people snowmobile in the Rockies is projected to be 7,102,000 in 2010 and 8,040,000 in 2020. The number of days people cross-country ski in the Rockies is projected to be 6,048,000 in 2010 and 7,938,000 in 2020. Cross-country skiing was the fastest growing dispersed recreation activity in the Rockies (Cordell et al. 1999:326-349).

Alternatives 3 through 7-M are responsive to the concern raised that there are currently few accessible areas of family-friendly cross-country ski terrain that are not shared with snowmobiles outside of Wilderness. The most substantial increases in non-motorized cross-country ski terrain would be close to Bozeman, where the largest population of cross-country skiers reside, in the Hyalite drainage and the southern end of the Bridgers. Alternatives 3, 4, 6 and 7-M would increase the total number of miles of marked or groomed ski trails over current conditions.

Alternatives 2 through 7-M would all increase the number of miles of groomed or marked snowmobile trails, with the largest increase in Alternative 3. Alternatives 3 through 7-M would all reduce the number of non-Wilderness acres that are open to backcountry snowmobiling. Alternatives 5 and 6 would significantly decrease backcountry challenge riding opportunities substantially over current conditions in two popular areas: the Gallatin Range and Cabin Creek.

Alternatives 2 through 7-M are responsive to the current strategic recreation direction within the Forest Service to better address unmanaged recreation by discretely defining motorized trail opportunities.

Alternatives 2 through 7-M are in accord with the Final OHV management policies presented to the public in November, 2005 as a final rule change in managing motorized recreation (USDA 2005).

Cumulative Effects

Please see the specialist's report in the project record relative to recreation titled "06.04.01 Schlenker_recreation_cumulative_effects.doc" for a more complete discussion of cumulative effects.

Net Effects of Past and Present Programs and Activities

Years of unrelated, independent activities from travels of indigenous people to homesteading, mining, grazing, railroad land grants and timber management have shaped the face of the Gallatin National Forest's existing road and trail system and resulting recreation opportunities. The natural beauty of the forest, it's proximity to Yellowstone National Park, bountiful hunting, fishing, hiking, camping, and winter recreation activities have all affected separate, uncoordinated land management decisions that have influenced the availability of current recreation opportunities. The inherent wildlife and wildland values of the Gallatin National Forest have often tempered these decisions. The designation of wilderness and other special areas have influenced land use patterns as well. User competition for finite resources began surfacing as early as the 1930's when Primitive Areas were first designated to protect important wildland and recreation values. Throughout the 60's, 70's, 80's and 90's land management decisions regarding the appropriate recreation use of roads, trails and areas has become ever more contentious, and user conflicts ever more acute. During this time period many environmental laws that guide resource management decisions and public participation were promulgated. All of these factors have influenced the current configuration of road and trail recreation opportunities on the forest. It is a reflection of the needs and desires of our culture throughout the history of the Forest.

The net effect of all of these decisions is a nearly 2 million acre Forest with 716,365 acres of designated Wilderness, 155,000 acres of Congressionally protected Wilderness Study Area, a passenger vehicle road system of approximately 740 miles and 2100 miles of trail, 749 miles of which are open to motorized trail vehicles, with a variety of seasonal restrictions to certain uses. There are currently about 615 miles of winter trails designated, 400 miles of snowmobile trail and 215 miles of cross country ski trails. Presently, 953,406 acres of the Gallatin National Forest are legally open to snowmobiling, though only a fraction of those total acres provide quality snowmobile opportunities (about 250,000 acres). See previous section on the affected environment for a more detailed review of current conditions.

Projected Combined Effects of Reasonably Foreseeable Programs and Activities

A variety of factors could influence the combined effects of reasonably foreseeable activities relative to recreation opportunities and experiences on the Gallatin Forest. Some decisions made regionally, such as winter use decisions in Yellowstone Park, or travel management decisions on adjacent National Forests, have the potential to influence recreation use patterns on the Gallatin. Locally, projects on adjacent lands, landownership adjustments, and on-going resource management projects like timber harvest or fuels treatments have the potential to influence recreation opportunities on the Forest.

On the Gallatin Forest, project activities like timber harvest, fire suppression, weed treatments or fuel reduction projects may temporarily affect recreation opportunities in some areas during the life of the project. Roads or trails may be temporarily closed for safety reasons while activities were on-going. Noise and traffic from equipment, and general disruption could affect the quality of some user's experience proximate to these projects. Typically, these activities are of short duration (closures rarely occur for longer than several months, and most frequently are just for days or hours).

Access to public land has been an increasingly controversial issue in the west. As more ranches and private lands are subdivided, and for other reasons, traditional access to public land has been blocked in some locations. Recreationists accustomed to using certain public lands now encounter "no trespassing" signs and locked gates. Loss of these traditional access points changes the amount of area recreationists can easily access, and potentially affects their anticipated recreation experience by displacing the use to another location. This can result in a concentration of use, which negatively affects some user's experience. Access objectives for the Gallatin are detailed in the Forest-wide Goals and Objectives section of the "Detailed Description of the Alternatives". Acquisition of public access in these areas will provide opportunities to disperse recreation use over a wider area, providing more recreation settings in un-crowded areas.

Regionally, several conservation efforts underway to protect species on the threatened and endangered species list may have an effect on recreation opportunities. A final Environmental Impact Statement that prescribes goals, objectives and standards for the conservation of grizzly bears through Forest Plan Amendment was published for the Greater Yellowstone National Forests in April 2006 (USDA 2006c). The alternatives in this analysis each potentially affect recreation opportunities differently (see the Grizzly FEIS for complete disclosure). In general, the decision limits the expansion of the number of developed recreation sites in the recovery zone and would maintain or increase the amount of secure (non-motorized) habitat (see the Grizzly Bear Issue of this analysis for more detail). This decision will limit the Forest's ability to respond to growing recreation pressures by improving infrastructure and providing additional developed and motorized dispersed recreation opportunities in the recovery zone once the bear is de-listed under the Endangered Species Act. The net long term effect would be to concentrate growing recreation use to a finite set of areas and facilities which may ultimately affect the quality of recreation experience users perceive due to crowding or potentially displace some users.

The Canada Lynx Conservation Strategy, and associated amendments to existing Forest Plans to incorporate goals, objectives, standards and guidelines to provide conservation measures for lynx has the potential to affect some recreation activities (particularly winter recreation). The Forest Service published a Draft Environmental Impact Statement that proposes amendments to existing Forest Plans in northern Forests in early 2004 (USDA 2004c). Effects to winter recreation opportunities vary among alternatives, from tightly restricting expansion of future winter marked and groomed trails to merely recommending actions for voluntary limitations on expansion of winter recreation uses. In all likelihood, expansion of the existing winter trails program will be limited or constrained by this decision. The outcome of these constraints will be that increasing capacity for winter recreation on groomed or marked routes may be pushed to the private sector to accommodate.

See Issue 10: Grizzly Bear and Issue 13: Lynx for a more in-depth discussion of the potential cumulative effects of these conservation efforts on recreation activities.

Cumulative Effects of Past, Present and Reasonably Foreseeable Programs and Activities with the Travel Plan Alternatives

Cumulative Effects confined to the Gallatin National Forest – Alternatives 1 through 7-M

The Gallatin Travel Plan proposal is a comprehensive proposal affecting all roads, trails and areas on the Forest. In light of the scope of this proposal, cumulative effects relative recreation opportunities within the Gallatin NF are the same as the direct, and indirect effects disclosed in the previous portions of this chapter. Please review those sections for a summary of direct and indirect and cumulative effects for Alternatives 1 through 7-M relative to recreation opportunities within the Forest.

The projected combined effects of reasonably foreseeable activities articulated in the previous section in combination with the direct, indirect and cumulative effects of the travel plan decisions could further affect some recreation opportunities on the Forest. Short term impacts to recreation opportunities on roads and trails could be expected during project work associated with timber sales, wildfire/prescribed burning, noxious weed treatments, etc. that may temporarily reduce the number of recreation options available to the public, or diminish their quality through noise, smoke, traffic delays, physical disruption to road or trail facilities.

Cumulative Effects on the Gallatin NF and adjacent public Land for Alternatives 2 through 7-M

Cumulative effects relative to regional recreation opportunities are affected by decisions made by other land managing entities, in combination with outcomes of this proposed travel plan. Visitor use surveys taken from public lands in Montana indicate that the majority of recreationists on national forests are local or regional (nearby) residents (Kocis et al. 2004) and likely recreate within about 2+ hours from their home base. Management decisions about recreation opportunities on public land adjacent to the Gallatin NF have and will affect recreation opportunities for local residents who travel within the area/region to pursue their sports. This section discusses cumulative effects relative

to recreation opportunities on the Gallatin NF, Yellowstone NP, and the Custer, Targhee, Helena, Beaverhead-Deerlodge and Lewis & Clark National Forests.

Public land management of road and trail recreation opportunities peripheral to the Gallatin National Forest have historically effected the number and location of adjacent routes, and the management of use on those routes. Not infrequently, trails that cross administrative boundaries are managed for different activities on different Forests and certainly in National Parks. Motorized trail vehicles and mountain bikes are prohibited on all trails in Yellowstone NP, and automobiles and snowmobiles are confined to a limited number of primary roads within the park. All of these decisions taken together have defined what sorts of recreation opportunities are available for local/regional recreationists proximate to the Gallatin NF.

On adjacent public lands, travel management revision, Yellowstone Park plan updates, and other decisions that regulate how recreationists use roads and trails, have the potential to affect recreation opportunities on the Gallatin Forest. Projects that have been scoped with the public at this time include pending travel management decisions on the Beartooth Ranger District of the Custer National Forest, and winter use proposals in Yellowstone National Park. Coordination of travel management decisions on routes that cross administrative boundaries will occur, with the intent of maximizing recreation opportunities regardless of administrative boundaries, and addressing resource concerns.

Trails that cross the administrative boundary on the Big Timber Ranger District and Beartooth Ranger District, Custer NF that are currently open to motorized trail vehicles are proposed to be managed for foot and stock travel only in several Gallatin alternatives, and in the proposed action for travel revision on the Beartooth Ranger District. This will reduce the number of motorized trails currently available in the Deer Creek and Meyers Creek area in Alternatives 3 through 7-M.

Several trails that cross the administrative boundary of the Lewis and Clark NF, Musselshell Ranger District in the Crazy Mountains from the Gallatin may provide and increased opportunity for ATV loops pending travel planning decisions on the Lewis and Clark. Alternatives 3 and 4 provide some additional connector loops. Alternatives 5 and 7-M would provide connector ATV loop options that would significantly expand ATV opportunities in this area in combination with trails on the Lewis and Clark.

Yellowstone Park published its third version of a Winter Use Plan (designed as a temporary decision, pending outcome of litigation) in 2004, which regulates snowmobiles in the Park. In this decision, snowmobile traffic is limited to 720 snowmobiles per day, all led by commercial guides on clean, quiet 4-stroke snowmobiles (USDI 2004). In 2005, YNP began scoping for its fourth iteration of the winter use planning decision. Park winter recreation opportunities are often combined with snowmobiling on the adjacent National Forests therefore the outcome of the Park's decision will affect the total winter recreation "package" for recreationists traveling both in the Park and on the Forests. It is likely that snowmobilers traveling to the park will be constrained to a defined upper limit of total snowmobiles entering the Park daily, and will continue to be required to travel with a guide. This may dissuade some users from partaking in the Park experience. The total number of miles of snowmobile trails within the Park, and adjacent National Forest will likely remain static, but the number of visitors allow in the Park may decline from historic levels. The

final decision for YNP may displace winter visitors all together, decreasing traffic on the National Forest as well as in the Park, or it may simply displace use in the Park concentrating use on the National Forests.

All of the adjacent National Forests proximate to the Gallatin are either in the process of, or about to begin revising their travel management plans. The National OHV decision of 2005 directs that all National Forests manage summer motorized recreation use on designated routes or areas, and prohibit uncontrolled cross country travel. It is anticipated that the public involvement and environmental review process to bring all forests in compliance with the new OHV rule will take about 4 years (2010).

The outcome of these travel plan revisions taken with the Gallatin travel plan revision will have a cumulative effect on the number of road, trail and area opportunities that residents nearby the Gallatin NF will have within a reasonable commuting area. The types of opportunities are also likely to change (that is the mix of motorized and non-motorized opportunities). It is likely that through this process, the number of summer motorized routes available today will decrease. This is primarily due to the elimination of a network of "unauthorized user created routes" that are not "system trails" that were established prior to the Montana and National OHV decisions. Some of these "unauthorized user created routes" will be added to the official trail system through this process, increasing the number of "system routes" open to motorized use in certain locations. It is likely that a larger number of "unauthorized user created routes" will be closed than added to the trail system.

The open road system suitable for passenger vehicle travel in the region is not likely to change significantly through this process, the change will largely occur on trails.

Alternatives 2, 3 and 7-M in combination with decisions pending on adjacent units would retain the highest number of motorized trails within this region. Alternative 7-M would actually provide a slight increase in the number of miles of summer motorized system trails over current condition, primarily by increasing the number of miles of managed ATV trails on old project roads. Alternatives 4-6 would decrease motorized trail opportunities progressively, with Alternative 6 reducing motorized opportunities by more than half by eliminating motorized use on trails located within inventoried roadless lands.

While there is likely to be a small net decline in the total number of summer motorized trails available near the Gallatin NF, the supply of motorized trail opportunities is not limiting at this time. With the low population base of Montana, small proportion of OHV users to total recreation use, and the extensive trail systems on public land, ample opportunities for summer motorized recreation still exist within the analysis area. A Gallatin NF employee who rode several hundred of miles of trail during peak season while completing trail surveys on the Gallatin NF in 2004 and 2005 indicated that he rarely encountered other motorized users (Personal Communication, Todd Orr). This and other similar observations supports the idea that motorized use has not reached saturation on trails within much of this area, nor does supply appear to be limited at this time.

Another outcome of the National OHV decision will be better coordinated recreation opportunities across Forest boundaries, improved public information about what routes are open for summer

motorized vehicle travel, more concentrated efforts on improved route signing and maintenance of designated routes. Web based map applications are pending, which will provide timely details to users about where the best motorized and non-motorized opportunities can be found, and current information on trail conditions and seasonal restrictions.

Through the process of designating summer motorized routes, the number of summer non-motorized routes or areas available for hiking, biking, and horseback riding would likely increase. This change would be responsive to projected demand for recreation opportunities in a non-motorized setting which outpaces the projected demand for OHV opportunities (see the previous section on recreation trend and demand in this chapter).

Cumulative Effects on the Gallatin NF and adjacent public Land for Alternative 1

Alternative 1 represents the 1999 Gallatin NF travel map, without changes, and without the 2001 MT/Dakota OHV decision applied. Implementation of this alternative would essentially reverse the decisions made in the 2001 OHV decision, and continue to allow cross country summer motorized travel in all areas of the forest where it is not expressly prohibited by the 1999 plan. This alternative would create a disparity along the Forest boundary where the Gallatin abuts other National Forests, and potentially compound user confusion about permissible activities exacerbating motor vehicle trespass issues on those units. This alternative would maintain the most motorized recreation opportunities on forest trails and areas in the analysis area. This alternative would not be responsive to the purpose and need for travel planning, nor to the growing demand for separated non-motorized recreation opportunities, and would likely escalate user conflicts. This alternative would also not respond to the National 2005 OHV decision and direction to designate all summer motor vehicle routes.

Effects of Proposed Goals, Objectives, Standards and Guidelines

Alternatives 2 through 7-M propose a number of goals and objectives to provide for recreation opportunity, access and to improve other resource conditions that may have been adversely affected by the Forest's transportation system. Goals and objectives, by themselves, have no environmental effect because they do not constitute final agency decisions. Environmental effect under NEPA is more appropriately addressed at such time that specific actions are proposed to achieve these goals and objectives. The proposed Travel Management Plan does include the final agency decisions for management of public travel and this reflects implementation of the goals and objectives proposed for recreation opportunity (for example Forest-wide Goal A, Objective A-1, and Travel Planning Area Goals 1 and 2 and Objectives 1-1 and 2-1). The predicted direct, indirect and cumulative effects of public travel on recreation opportunities, and hence the implementation of these goals and objectives are addressed earlier in this section.

Alternatives 2 through 7-M also propose standards and guidelines to provide for protection of other resources during Travel Plan implementation. Standards and guidelines include protection measures within which future proposals for road and trail construction, reconstruction, maintenance and decommissioning must take place. These are considered final agency decisions because they set limitations within which future actions must take place.

The proposed goals, objectives, standards and guidelines that are relevant to the protection and improvement of quality recreation opportunities are discussed below."

For Alternatives 2-6:
Objective A-1: Specifies the number of miles of different recreation opportunities by alternative. Effects have been disclosed in the previous discussion.

Objectives A-3 through A-5, Standard N(1) and Guidelines N(2, 3): Ensures that a range of primitive Wilderness characteristics are maintained as they relate to trail development in Wilderness, providing primitive recreation opportunities.

Standard A-6: Restricts wheeled motorized vehicles to designated routes. Off-route travel would be permissible within 300 ft of those routes for camping only. This standard will eliminate some dispersed recreation activities adjacent to roads and trails using motorized vehicles for firewood gathering outside of designated areas, game retrieval, picnicking, etc. The standard will also eliminate motorized trail opportunities on approximately 250 miles of user-created roads and trails across the Forest that are not proposed to be added into the system in any alternative.

Objective A-6: Provides an objective to provide for backcountry airstrips in several areas (see Table I-3 in the Detailed Description of the Alternatives) to be managed under special use permit by project proponents. This objective would only apply to Alternative 3. In that this is only an objective to provide for future backcountry airstrips, there are no direct or indirect effects to recreation opportunities. Direct effects would be discovered during site specific NEPA tied to a specific airstrip proposal. Should the proposals be considered and implemented in the future, the opportunity for small plane or helicopter pilots to enjoy the challenge of landing on backcountry airstrips in somewhat remote locations would be provided. If airstrips were constructed, there are potential affects to other recreationists' sense of solitude and remoteness proximate to the airstrips.

Standard A-7: Restricts trail vehicles to those that are < 50 inches in width. This standard would prohibit larger trail vehicles from traveling on trails. This standard also describes what types of vehicles constitute "trail vehicles".

Standard A-8: Prohibits wheeled vehicles from traveling on groomed or marked snowmobile or ski trails. This standard would protect the quality of the trail surface for the intended use, eliminating wheel ruts on winter trails, improving the quality of the trail.

Standard A-9: Prohibits snowmobiles from traveling on groomed cross-country ski trails. The standard would protect the quality of the groomed surface, and ensure that skiers on groomed trails had non-motorized skiing opportunities.

Standard A-10: Disallows any newly designated use from traveling on a road or trail until the facility could be brought up to the applicable engineering standards. This standard would temporarily reduce the number of miles of certain types of recreation opportunities where the facility is not currently suitable for that use. For example, if an existing single-track trail were to be managed as an ATV trail in the future, the trail would not be opened to ATVs until the single-track had been reconstructed to accommodate ATVs.

Objective B-1: Lists a series of areas where legal access to the Forest is limited, and states as a goal obtaining access for the public. Securing the listed accesses would improve the public's opportunity to recreate on National Forest lands that may be inaccessible now.

Objectives C-1 through C-2: Remove or rehabilitate excess roads and trails (typically non-system routes). Restoration of these routes may eliminate some favored trails currently used. In contrast, rehabilitation of unnecessary routes will restore the natural-appearing landscape in the backcountry.

Standard C-4: Provides that motorized use for people with disabilities for hunting shall be restricted to those routes designated for public motorized use with the exception that hunters with disabilities may also be granted permits for hunting (provided they have the appropriate state licenses) on administrative roads by authority of the responsible line officer.

For Alternative 7-M:
Objective A-1: Specifies the number of miles of different recreation opportunities by alternative. Effects have been disclosed in the previous discussion.

Objectives A-3 through A-5, Standard J(1) and Guidelines J(2, 3): Ensures that a range of primitive Wilderness characteristics are maintained as they relate to trail development in Wilderness, providing primitive recreation opportunities.

Objective A-6: Provides an objective to consider proposals for backcountry airstrips to be managed under special use permit. In that this is only an objective to consider managing the candidate sites for future backcountry airstrips, there are no direct or indirect effects to recreation opportunities. Direct effects would be discovered during site specific NEPA tied to a specific airstrip proposal. Should the proposals be considered and implemented in the future, the opportunity for small plane or helicopter pilots to enjoy the challenge of landing on backcountry airstrips in somewhat remote locations would be provided. If airstrips were constructed, there are potential affects to other recreationists' sense of solitude and remoteness proximate to the airstrips.

Standard A-7: Would prohibit public recreational aircraft landings/take-offs except at designated and authorized sites (backcountry airstrips). This standard would be implemented under 36 CFR 261.58 (y) which prohibits "Landing of aircraft, or dropping or picking up any material, supplies, or person by means of an aircraft, including a helicopter." This CFR gives local enforcement officers the tools to enforce the illegal landing of aircraft as spelled out in the FAA Regulations FARAIM 7-4-6 which prohibits landing of aircraft on lands or waters administered by the US Forest Service (and other federal land management agencies). The Gallatin National Forest has been receiving an increasing number of complaints relative to aircraft landing in remote locations to drop off skiers, hikers, fisherman, and other dispersed recreationists. This standard will allow more proactive enforcement of an activity which is currently prohibited and becoming increasingly troublesome to some recreationists.

Standard A-8: Restricts wheeled motorized vehicles to designated routes. Off-route travel would be permissible within 300 ft of those routes for camping only. This standard will eliminate some dispersed recreation activities adjacent to roads and trails using motorized vehicles for firewood gathering outside of designated areas, game retrieval, picnicking, etc. The standard will also

eliminate motorized trail opportunities on approximately 250 miles of user-created roads and trails across the Forest that are not proposed to be added into the system in any alternative.

Standard A-9: Restricts trail vehicles to those that are < 50 inches in width. This standard would prohibit larger trail vehicles from traveling on trails. This standard also describes what types of vehicles constitute "trail vehicles".

Standard A-10: Prohibits wheeled vehicles from traveling on groomed or marked snowmobile or ski trails. This standard would protect the quality of the trail surface for the intended use, eliminating wheel ruts on winter trails, improving the quality of the trail.

Standard A-11: Prohibits snowmobiles from traveling on groomed cross-country ski trails. The standard would protect the quality of the groomed surface, and ensure that skiers on groomed trails had non-motorized skiing opportunities.

Guideline A-12: Disallows any newly designated use from traveling on a road or trail until the facility could be brought up to the applicable engineering standards. This standard would temporarily reduce the number of miles of certain types of recreation opportunities where the facility is not currently suitable for that use. For example, if an existing single-track trail were to be managed as an ATV trail in the future, the trail would not be opened to ATVs until the single-track had been reconstructed to accommodate ATVs.

Objective B-3: Lists a series of areas where legal access to the Forest is limited, and states as a goal obtaining access for the public. Securing the listed accesses would improve the public's opportunity to recreate on National Forest lands that may be inaccessible now.

Objectives D-1 through D-2: Remove or rehabilitate excess roads and trails (typically non-system routes). Restoration of these routes may eliminate some favored trails currently used. In contrast, rehabilitation of unnecessary routes will restore the natural-appearing landscape in the backcountry.

Standard D-4: Provides that motorized use for people with disabilities for hunting shall be restricted to those routes designated for public motorized use with the exception that hunters with disabilities may also be granted permits for hunting (provided they have the appropriate state licenses) on administrative or restricted roads by authority of the responsible line officer.

Objective 1-1b and Objective 2-1b: Alternative 7-M proposes to incorporate two objectives into the "Detailed Description of the Alternatives" for each travel planning area. Proposed Objective 1-1b states that future proposals to change uses specified in the route by route decisions made by this travel plan be done in consideration of the targeted recreation setting to be provided as shown on the ROS summer maps. Objective 2-1b for each travel planning area articulates the same language for the winter ROS setting. These objectives incorporate the summer and winter ROS maps into Alternative 7-M by reference. The importance of these objectives is that they provide guidance to future managers to carefully consider the desired future condition ROS setting as displayed in this travel plan before considering route by route decisions that could change the ROS setting, thereby reducing the chance of un-intended setting changes by future specific route decisions.

Consistency with Laws, Regulations, Policy, and Federal, Regional, State and Local Land Use Plans (including the Forest Plan)

Applicable Laws, Regulations and Policy

Federal laws, regulations and policy that guide recreation and trail management on the Gallatin National Forest:

1) National Trails System Act (P.L. 09-543).
2) Wilderness Act (P.L. 88-577).
3) Montana Wilderness Study Act (P.L. 95-150).
4) 36 CFR 261 (provides the current legal foundation for restricting different uses and occupancy of National Forest).
5) Forest Service Manual 2350 and 7723.
6) Forest Service Handbook 2309.18, Trails Management Handbook.
7) Executive Orders 11644 and 11989 and Forest Service rules in Title 36 CFR 212, which codify the direction in these executive orders.
8) Gallatin Forest Plan - 1987, Recreation goals, objectives and standards.
9) Montana Dakota Statewide OHV EIS and decision.
10) Final OHV Rule, 2005. Federal Register Vol. 70, No. 216.

The Gallatin Forest Plan (USDA 1987) provided the foundation for the current travel management plan. Goals outlined in the plan included direction to *"provide for a broad spectrum of recreation opportunities in a variety of Forest settings"* and state that *"dispersed recreation use will be managed to provide users with a wide range of opportunities to meet increasing demand, while protecting Forest resources."* These statements echo overarching public policy founded in a variety of laws targeted at National Forest Management that recognize recreation as one of the many important resources National Forest provide the public.

The Final OHV Rule, published on November 9, 2005 establishes regulations and policy for managing summer motor vehicle use as a system of designated routes and areas on National Forest System lands. (USDA 2005). See the Federal Register Vol. 70, No 216 for the complete text of this final rule.

Consistency with Laws, Regulations and Policy

All alternatives are consistent with broad policy or direction to provide a wide variety of recreation opportunities on National Forest lands.

Current Forest Plan direction regarding the ROS is impossible to assign to site-specific locations, as the standards often provide a range of ROS classes that could be appropriate in each management area. It is possible that several alternatives may not match the current ROS direction completely, though there is no way to complete an empirical analysis of that potential conflict, since no maps of record were ever created for ROS in the 1987 Forest Plan. However, as part of this proposal, those ROS standards would be deleted from the Plan through amendment. As a result, all action alternatives would be consistent with current guidance to incorporate ROS as a planning tool when

working on updating Forest Plan direction. The ROS planning tool was used to create the original Benchmark, and subsequently the Seven Alternatives displayed in this analysis.

Objective 1-1b and 2-1b in Alternative 7-M would provide a link to the final ROS maps for this alternative, stating that future route and area management decisions should consider this objective and protect the desired recreation setting shown on the map of record. This alternative with objectives 1-1b and 2-1b for each travel planning area are consistent with current Recreation Planning guidelines for ROS which suggest incorporating ROS objectives as the base of information for managing recreation settings.

Alternatives (2 through 7-M) are consistent with the laws, regulation and policy regarding recreation use of roads and trails in general. These alternatives are also consistent with final policy regarding the management of OHVs on roads and trails in National Forests. Alternative 1 would not be consistent with the Montana/Dakota OHV decision nor the 2005 Final OHV rule.

Some facets of specific alternatives that would allow ATV use in the Hyalite/Porcupine-Buffalo Horn Wilderness Study Area and the Cabin Creek Wildlife Management Area are inconsistent with specific laws relating to those areas (see the Wilderness and Roadless Effects sections in Chapter 3 of this document for more detailed discussions).