

## **CURRENT AND POTENTIAL USE LEVELS BY ACTIVITY.**

The public has the perception that current levels of participation are likely to increase for all types of recreational activities. There is public disagreement about the effects that levels of use are likely to have on the environment. Some elements of the public believe that the current level of motorized use is causing environmental damage, and that significant environmental damage could result if there is an increase of certain types of motorized use. In particular, some elements of the public are concerned about the amount of ATV, motorcycle, and snowmobile traffic, and the potential for increased participation in these activities. Other elements of the public dispute the effects motorized activities have on the environment, but they do believe that levels of participation are likely to increase and the Forest Service should be providing opportunities to accommodate those increases. There is a need to evaluate trends in recreational participation, and the potential for increased levels of participation in various activities. The selected action should try to accommodate a variety of recreational activities.

### ***1. EXISTING CONDITION***

#### **a. Participation in Outdoor Recreation**

Responding to the issue of potential recreational use requires not just an assessment of trends in various forms of recreation, but an assessment of the recreating public, its' demographics and perceptions of recreation settings. National, regional, and state recreation activity participation rates from several studies are analyzed. Perceptions of whether there is crowding on the national forest are reported. Local recreation trend projections are developed from national and regional projections in future recreation participation rates.

Michael Tarrant, et. al. (1999) reported that the current rate of increase in recreation participation mirrors the slowing rate of population increase. In addition to the increase in demand for outdoor recreation experiences, there is potential for other highly important changes in outdoor recreation. Tarrant, et. al. (ibid) suggested that "factors such as an aging population, a decline in leisure time, geographically uneven population growth, increasing immigration, changes in family structures, and increasing levels of education, among other factors, have significantly changed the way Americans recreate in the outdoors. Examples include (a) a change in the nature of vacations with a trend toward shorter, more frequent excursions, (b) an increasing diversity of participation patterns across groups, (c) a resurgence in wilderness recreation visits, (d) a growth in non-recreational values of wilderness such as scenic, scientific, educational, conservation, and historical, and (e) an increase in more passive activities appropriate for an aging population."

A national survey conducted by the Forest Service (Cordell, H.K., J. Teasley, and G. Super, 1997) indicates that almost 98% of Americans participate in some type of outdoor recreational activity on an annual basis.

Data in Table III-21 were developed from a survey of 57,868 people across the U.S. between July 1999, and July 2002 (USDA Forest Service, 2003).

**Table III-21  
National Participation in Selected Outdoor Activities**

<b>Type of Outdoor Activity</b>	<b>Percent of Population 16 or Older</b>	<b>Number of People In Millions</b>
Participated in any Type of Activity	97.6	207.9
<b>Trail / Street / Road Activities</b>		
Bicycling	39.4	83.9
Mountain Biking	21.2	45.2
Walking	82.3	175.4
Horse Riding and Equestrian	9.6	20.5
Hiking	32.7	69.7
<i>Backpacking &amp; Camping Activities</i>		
Backpacking	10.4	22.2
Developed Camping	26.4	56.3
Primitive Camping	15.9	33.9
Visit a Wilderness or Primitive Area	32.0	68.2
<b>Viewing &amp; Photographing Activities</b>		
Bird-Watching	31.8	67.8
Viewing Other Wildlife	44.1	93.9
Viewing Natural Scenery	59.5	126.8
<b>Hunting</b>		
Big Game	8.4	17.9
<b>Driving for Pleasure &amp; Sightseeing</b>		
Sightseeing	50.6	107.8
Driving for Pleasure through Natural Scenery	50.3	107.2
Off-Road 4-Wheel Driving, ATV, or Motorcycle	17.4	37.1
<b>Traditional Social Activities</b>		
Picnicking	54.6	116.4
<i>Fishing</i>		
Freshwater	29.1	62.0
<b>Snow and Ice Activities</b>		
Downhill Skiing	8.5	18.1
Cross Country Skiing	3.8	8.1
Snowmobiling	5.5	11.7

Source: U.S.D.A. Forest Service 1999-2002 National Survey on Recreation and the Environment, USDA Forest Service and the Univ. of Tennessee, Knoxville, TN.  
<http://www.srs.fs.usda.gov/trends/Nsre/Rnd1t13weightrpt.pdf>

The Forest Service conducted national surveys from 1999 to 2004 which indicated a large jump in percentages of population participating at least once annually in off-road motorized driving or riding. Off road is defined as off of paved or graveled roads. Participating rates jumped from 17.6 percent in 1999 to 23.2 percent in 2004. Data in Table III-21 reflects these increases in OHV use. Use by people over 50 increased by 57 percent in that time period. This and other Forest Service recreation trend studies are available at:  
<http://www.srs.fs.fed.us/trends>.

**Table III-21A****Number of People (in millions) in the U.S. age 16 or older Participating at least once in the last 12 months in Off-Road Vehicle Use, 1999-2004**

Demographic	Fall 1999- Summer 2000	Fall 2003- Summer 2004
Total Participating	37.6	49.6
Age- Under 30	15.1	18.2
Age- 30-50	16.3	21.7
Age- 51 and older	6.1	9.6
Male	23.2	29.8
Female	14.6	20.0
Non-metropolitan	10.0	13.6
Metropolitan	27.3	34.2

In another assessment to determine participation rates and additional information, the Forest Service looked at a 1994-95 national survey of the American population participating in various outdoor activities as reported by Cordell, et al. (1999). Table III-22 focuses on participation rates for just the population in the Rocky Mountains region, including the state of Montana. (Note that the percentages of people participating do not add to 100%, because many people participate in more than one activity.)

**Table III-22 Percentage of Population Participating And Mean Trips and Days per Participant In the Rocky Mountains Region**

Activity	Percentage	Mean (i.e. Average)	
		Number of Trips	Number of Days
Big Game Hunting	10.3%	5.5	9.5
Camping at Developed Sites	27.0 %	4.4	9.8
Camping in Dispersed Areas	24.2 %	5.5	9.6
Hiking	33.4 %	9.7	17.7
Backpacking	11.8 %	4.3	8.2
Off-Road-Driving	20.4 %	11.3	18.9
Horseback Riding	11.2 %	9.5	28.9
Horseback Riding on trails	7.7%	Not available	Not available
Picnicking	54.6 %	5.5	8.8
Cross-Country Skiing	4.4 %	4.2	6.4
Snowmobiling	5.1 %	4.2	8.9
Wildlife Viewing	37%	10.0	35.9

Source: Outdoor Recreation in American Life, A National Assessment of Supply and Demand Trends, 1999, H. Ken Cordell, principal investigator, pgs. 274-277.

Data from the 1994-95 National Survey on Recreation and the Environment (NSRE) provides information as shown in Table III-23 for selected recreational activities nationally and on National Forest System lands in the Northern Region of the Forest Service (Montana, North Idaho, and parts of North and South Dakota).

**Table III-23.**

**National and Regional Participation And Mean Trips per Year for Selected Activities**

Type of Outdoor Activity	National		Region 1 – USFS	
	Mean Trips per year	Number People (millions)	Mean Trips per year	Number People (millions)
<b>Trail / Street / Road Activities</b>				
Bicycling	9.6	553.02	6.1	2.16
Horseback Riding	8.7	124.32	6.9	1.11
Hiking	9.1	434.23	8.6	2.96
<b>Backpacking &amp; Camping</b>				
Backpacking	4.5	68.47	5.2	0.59
Developed Camping	4.7	196.78	4.3	1.45
Primitive Camping	4.8	134.50	5.4	1.60
<b>Viewing &amp; Photographing Activities</b>				
Bird-Watching	7.1	385.51	4.3	1.34
Viewing Other Wildlife	10.7	670.74	10.3	5.17
<b>Hunting</b>				
Big Game	8.1	115.72	7.9	2.05
<b>Driving for Pleasure &amp; Sightseeing</b>				
Sightseeing	9.1	1036.9	7.2	4.56
Off-Road Driving	13.2	368.83	13.5	2.96
<b>Traditional Social Activities</b>				
Picnicking	5.3	518.74	5.5	3.29
<b>Fishing</b>				
Freshwater	12.4	606.17	14.2	6.06
<b>Snow and Ice Activities</b>				
Downhill Skiing	4.5	75.47	5.8	0.80
Cross Country Skiing	3.8	24.64	4.1	0.35
Snowmobiling	3.2	23.06	5	0.68

Source: Cordell, H. K., et al.1997. Outdoor Recreation in the United States: Results from the National Survey on Recreation and the Environment. [www.srs.fs.usda.gov/trends/fsallreg.pdf](http://www.srs.fs.usda.gov/trends/fsallreg.pdf)

This data allows a comparison between national and regional participation rates. They suggest that people are seeking and participating in a variety of outdoor activities, and that no single type of activity is the predominant choice. In the foreseeable future, outdoor recreation participation is expected to increase for most activities, placing greater demands on the natural settings available in national forests, particularly those in close proximity to urban areas (Betz, C., D. English, and H.K. Cordell, 1999).

Table III-24 shows Percent of U.S. Population, Rocky Mountain states, and Montana population 16 and over, participating in outdoor recreation activities, ranked highest to lowest by the Rocky Mountain Area participation rate. Data gathered is for years 2000-2001.

**Table III-24. Percent of U.S. Population, 16 and Older, Participating One or More Times in the Last 12 Months in Selected Outdoor Activities (2000-2001)**

Type of Outdoor Activity	Percent in United States Participating In Activity (16 years+)	Percent in Rocky Mtn Area Participating In Activity	Percent of Montanan's Participating In Activity
Walking for pleasure	83	81	86
Viewing/Photographing Natural Scenery	60	67	78
Viewing/Photographing Other Wildlife	45	53	74
Picnicking	54	61	64
Driving for Pleasure	51	57	61
Visiting Primitive area or Wilderness	33	44	60
Sightseeing	52	55	59
Day Hiking	33	47	56
Fishing (Coldwater)	14	29	50
Gathering mushrooms/berries	29	30	48
Camping (developed)	27	35	44
Camping (Primitive)	17	30	41
Hunting (Big Game)	8	12	33
Mountain Biking	21	25	32
Off Road Driving	18	27	32
Backpacking	11	18	26
Downhill Skiing	9	14	22
Snowmobiling	6	8	20
Hunting (Small Game)	7	8	20
Horseback Riding Trails	8	11	17
Mountain climbing	6	13	16
Cross-country Skiing	4	5	13
Snowshoeing	2	4	6

Tables 2.1, 13.1, 13.2, 13.3, 13.11 Cordell, K.; et al. 2004. *Outdoor Recreation for 21<sup>st</sup> Century America, A Report to the Nation: The National Survey on Recreation and the Environment*. State College, PA: Venture Publishing, Inc.

This table's figures enable a good comparison between national, Rocky Mountain, and Montana percent of participation rates in various recreation activities. Activity participation rates in Montana are higher in every activity category than those rates for the nation and the Rocky Mountain area. This indicates the widespread popularity of these outdoor activities, and their ready availability.

**The Forest Service conducted national surveys from 1999 to 2004 which indicated a large jump in percentages of population participating at least once annually in off-highway vehicle driving. Off-highway vehicles(OHV's) are popularly defined as 1) 4-wheel drive jeeps, automobiles, or sport utility vehicles; 2) motorcycles designed for off-highway use; 3) all-terrain vehicles, better known as ATVs and other specially designed off road motor vehicles used for recreation activities. National participation rates jumped from 16.8% in 1999 to 23.8% in 2004. This percentage is the percentage of the population 16 and older, and includes anyone 16 or older who has participated at**

least once in the last year in the recreational off-highway use of an OHV. Data in Table III-25A reflects these increases in OHV nationally (Cordell; Betz; Green; and Owens, 2005). The Cordell study of 2005 said that OHV sales have tripled between 1995 and 2003, and that ATV's account for 70% of the OHV market. This and other Forest Service recreation trend studies are available at <http://www.srs.fs.fed.us/trends>.

**Table III-25**

**Percentage of People in the U.S. age 16 or older Participating at least once in the last 12 months in Off-Highway Vehicle Use, 1999-2004**

Demographic	Fall 1999- Summer 2000	Fall 2003- Fall 2004
Total Participating(All ages)	16.8	23.8
Age- Under 30	26.9	34.8
Age- 30-50	17.6	26.5
Age- 51 and older	8.1	12.8
Male	21.3	30.1
Female	12.8	18.2
Non-metropolitan	23.3	32.5
Metropolitan	15.4	21.0

This same study reported for the first time in 2005 specific OHV uses by state. Montana participation rates are shown in Table III-25A, and are based on 619 respondents between 1999 and 2004. Montana has the sixth highest percentage of population of residents using OHV's for recreation. The western region of the nation (AZ; CO; ID; MT; NV; UT; WY) had an average of 24.1 days spent annually in the activity.

**Table III-25A**

**Percentage of People in Montana age 16 or older Participating at least once in the last 12 months in Off-Highway Vehicle Use, 1999-2004**

Demographic	1999-2004
Total Participating(All ages)	29.1
Age- Under 30	54
Age- 30-50	29.9
Age- 51 and older	11.8
Male	37.6
Female	20.7
Non-metropolitan	30.9
Metropolitan	25.5

In a National Visitor Use Monitoring recreation use survey conducted on the Forest in 2000 and 2001, those visiting the forest were asked what activities they participated in. (Kocis, S. and others, *National Visitor Use Monitoring Results: Lewis and Clark National Forest*, 2002). Table III-26 shows those results. **This study and an updated data base of the 2000-2001 survey is available for review at the Lewis and Clark National Forest Supervisors Office. A follow-up survey for the Forest is being conducted 2006-2007.**

**TABLE III-26.**  
**Lewis and Clark NF Recreation Activity Participation and Primary Activity,**  
**sorted by order of Percent Participation**

Recreation Activity	Percent Participation	Percent who said it was their primary activity
Viewing wildlife, birds, fish on NFS	77.4	1.5
Viewing natural features such as scenery, flowers, etc. on NFS lands	71.1	4.4
General/other-relaxing, hanging out, escaping noise and heat etc.	54.3	12.3
Hiking or walking	43.3	7.1
Driving for pleasure on roads	46.7	8.5
Hunting-all types	28.6	27.3
Fishing-all types	16.7	4.7
Backpacking, camping in unroaded areas	11.9	2.4
Picnicking and family day gatherings in developed sites (family or group)	12.8	0.8
Camping in developed sites (family or group)	10.4	3.6
Downhill skiing or snowboarding	11.1	10.7
Nature Study	6.8	.9
Gathering mushrooms, berries, firewood, or other natural products	6.0	2.2
Primitive camping	7.8	2.3
Other non-motorized activities (swimming, games and sports)	2.6	0.0
Horseback riding	5.3	2.8
Non-motorized water travel (canoe, raft)	3.3	1.2
Off-highway vehicle travel (ATV, motorcycle)	7.4	1.4
Bicycling, including mountain bikes	5.0	0.9
Resorts, cabins & other accommodations	4.1	0.7
Viewing history and prehistoric sites/area	2.6	0.3
Snowmobile Travel	1.6	0.5
Cross-country skiing or snow shoeing	1.3	0.9
Visiting a nature center or nature trail	0.8	0
Motorized water travel (boats, ski sleds etc.)	0	0
Other motorized land/air activities (plane, other)	0	0

Source: Kocis, et. al., August 2002, "National Forest Visitor Use Monitoring Results".

Participants in the same National Visitor Use Monitoring survey were asked about their perceptions of whether or not they felt crowded in the settings they recreated in. Data in the table below indicate **little** perception of overcrowding by participants in the survey. The question of overcrowding related to dispersed recreation areas on the Lewis and Clark National Forest (called General Forest Areas in the survey). This is important to note when compared with projected changes in participation in recreation activities, and whether there may be feelings of overcrowding then.

**TABLE III-27.**  
**Perception of Crowding by Recreation Visitors in General Forest Areas**  
**(i.e. areas away from designated wilderness or developed recreation sites)**

<b>Perception Of Crowding</b>	<b>General Forest Areas (% of participants responding)</b>
10 = Overcrowded	0 %
9	0 %
8	0 %
7	5.6 %
6	11.4 %
5	11.8 %
4	7.9 %
3	14.2 %
2	19.2 %
1 = Hardly anyone there	29.9%

Source: Kocis, et. al., August 2002, "National Forest Visitor Use Monitoring Results".

**TABLE III-27A.**  
**Trends in Estimated Percentages and Numbers of Person age 12 and older who Participated 1 or more times in the last 12 months by Activity, 1982-1983 and 2000-2001**

<b>Activity</b>	<b>% Participating 1982-1983</b>	<b>Millions Participating 1982-1983</b>	<b>% Participating 2000-2001</b>	<b>Millions Participating 2000-2001</b>	<b>% Change in numbers participating 1982-1983 to 2000-2001</b>
Viewing / Photographing birds	12	22	31.8	72.9	231.4
Day hiking	14	26	33.3	76.3	193.5
Backpacking	5	9	11.1	25.4	182.2
Snowmobiling	3	6	5.9	13.5	125.0
Primitive camping	10	18	16.6	38.0	111.1
Driving off road	11	20	18.3	41.9	109.5
Walking for pleasure	53	100	83.1	190.5	90.5
Developed camping	17	33	26.8	61.5	86.4
Cross-country skiing	3	6	3.9	9	50.0
Picnicking	48	90	53.9	123.6	37.3
Horseback Riding	9	17	10.2	23.3	37.1
Sightseeing	46	86	51.4	117.7	36.9
Driving for pleasure	48	90	51.0	116.8	29.8
Hunting	12	22	11.6	26.6	20.9

Source: Tables 2-1, Cordell, K. 2004. Outdoor Recreation for 21<sup>st</sup> Century America, A Report to the Nation: The National Survey on Recreation and the Environment, State College, PA. Venture Publishing, Inc.

## **b. Future Trends**

**Recreation Activity Projections.** Table III-27A above reflects national changes in participation rates in various outdoor activities. National trends, however, can not be directly extrapolated to a particular National Forest. According to researchers (Cordell et al, 1999, *Outdoor Recreation In American Life*, chapter entitled “Projections of Outdoor Recreation Participation to 2050”, p. 324) the two factors most generally affecting projections of the number of people involved in a particular form of recreation are 1) population growth and 2) real income growth (after accounting for inflation). Each factor is expected to grow significantly over time. Population growth by 2025 in the Rocky Mountain/Great Plains area (i.e. those states in which the Rocky Mountains are located) is expected to increase by 32% from 1995.

In a personal discussion on December 1, 2004 between LCNF Recreation Planner Ron Yates and researcher Ken Cordell, Cordell said that these population projections were done in 1999, a year before the national census was taken. **Post-census projections were not available.** Recognizing that population growth projections for the counties served by the Rocky Mountain Ranger District are different than his projections for the Rocky Mountain area, Cordell felt it very reasonable to prorate out his projections for future recreation activities based on the most accurate population projections available to the Lewis and Clark National Forest.

Using county population projections from the Montana State Department of Commerce (2004) and data from the recreation use survey on the Lewis and Clark National Forest (Kocis, S. and others, 2002), population projections were prorated across counties according to their relative contribution of recreation visitors to the entire Lewis and Clark National Forest. **(See Table 7 of this survey for zip code distribution.)** It is estimated that the populations of counties providing visitors to the LCNF (prorated according to relative numbers of visitors from each county) will be about 7% higher in 2025 than they were in 1995. This is considerably less than the 35% increase in population predicted by Cordell for the Rocky Mountain region. The projected 7% increase in local population reflects the very slow population growth for most of the counties using the Lewis and Clark National Forest for recreation. These projections were then used to adjust Cordell’s projections of participation and number of days spent on a particular recreation activity.

Real income nationally is expected to increase by approximately 44% during the same time period (1995 to 2025). (Cordell, et al, 1999, *Outdoor Recreation In American Life*, p. 324.) Age and gender and population demographics are other factors expected to change over time.

Increases in minority populations, and declines in percentage of white populations will also have some smaller effect. These factors were utilized by Cordell in developing projections for future recreation activity. In this analysis, we took Cordell’s projections and modified them using best available population projections for the area served by the Lewis and Clark National Forest.

Table III-28 was used by Cordell to develop use projections for specific recreation activities for the nation and the Rocky Mountain area. Variables shown are indexed from a starting point of 1995 (index value of 1). Projections in the variables of national age, real income, etc. are made from that starting date.

**Table III-28.**

**Indexed Explanatory Variable Projections for Regional RPA Forecasts**

<b>Variable</b>	<b>1995</b>	<b>2000</b>	<b>2010</b>	<b>2020</b>	<b>2030</b>	<b>2040</b>	<b>2050</b>
Age (Nationally)	1	1.02	1.056	1.089	1.114	1.126	1.126
Real Income (Nationally)	1	1.067	1.209	1.357	1.515	1.691	1.888
Population Growth Rocky Mtn. Area	1	1.064	1.17	1.272	1.369	1.457	1.530
Population Growth Nationally	1	1.042	1.126	1.217	1.299	1.4	1.439

Source: Cordell, et al, 1999, *Outdoor Recreation In American Life*, p. 324.

In the above table Cordell projects that in 2030 average age nationally will increase by over 11% and that real income will increase about 52% in that same time period. Population growth in the Rocky Mountain area is projected to increase 37%.

Again, our calculations for the Lewis and Clark National Forest using local population projections indicate that populations of local counties recreating on the Rocky Mountain Ranger District would increase by only about 7% in 2030 from 1995, compared with Cordell's regional increase in population of about 37%.

Ken Cordell and others (Cordell, et al, 1999, *Outdoor Recreation In American Life*, pp. 323-324 ) developed two types of models to estimate both the probability that an individual will participate in a given recreation activity, and the days an individual will spend in a given projected year. Data was based on surveys taken across the nation in 1995, and split into geographical regions.

The following table takes the projection information for days participated in particular recreation activities for the Rocky Mountain/Great Plains region (as projected by Cordell), and modifies it to reflect population projection estimates for areas served by the Rocky Mountain Ranger District. The table can be used to show estimates of increase or decrease in days spent on that particular type of outdoor recreation. For example, cross-country skiing is expected to increase far more than any other activity by 2030, i.e. a 74% increase in days spent doing that activity. On the other hand, a 15% decrease in days spent snowmobiling is projected.

This information is an estimate of changes in recreation days comparing 1995 to 2025. Projections from a later year, such as 2000, are not available. Additionally, the existing number of visitor days spent on the district by recreation activity is not available.

**Projected low increases in OHV activity days of just 2% reflects projections that activity days will not increase as much as population, ie. 1.25 vs 1.32 in the above table. This is a long term projection for the local area only, and does not reflect the short term large national increase in OHV users shown in Table III-21A for the time period 1999-2004. Locally, Cascade County contributes the majority of users on the Lewis and Clark National Forest. Registered OHVs not registered for highway use in the county have increased just 2% annually from 1994 to 2002 (Montana Dept. of Justice Motor Vehicle Division data provided 13April 2005 to the Forest.)**

**Snowmobile use projections show a projected local decline of 15% by 2025. Montana Dept. of Justice Motor Vehicle Division data provided the Forest shows that Cascade County had a 38% drop in registered snowmobiles from 1994 to 2002, or a 4-5% annual drop in registrations.**

**TABLE III-29.**  
**Projected Changes in Recreation Activity Days between 1995 and 2025 in**  
**Rocky Mountain Region and on Lewis and Clark National Forest**

Recreation Activity	Projected Population Increase expected in Rocky Mtn. Area from 1995 to 2025	Projected Change in Activity Days expected in Rocky Mtn. Area from 1995 to 2025	Projected Change in Activity Days Divided by Projected Population Increase	Projected Population Increase In Area Served by Lewis and Clark N.F. in 2025	Estimated Change in Recreation Activity Days on Lewis & Clark N.F. in 2025 (Product of adjacent 2 cols. on left)	Estimated % Change in Recreation Activity Days on Lewis & Clark N.F. between 1995 and 2025
Cross-Country Skiing	1.32	2.15	1.63	1.07	1.74	74%
Down-Hill Skiing	1.32	1.25	0.95	1.07	1.01	1%
Snowmobiling	1.32	1.05	0.80	1.07	0.85	-15%
Canoeing	1.32	1.3	0.98	1.07	1.05	6%
Motorboating	1.32	1.42	1.08	1.07	1.15	17%
Rafting/Floating	1.32	1.22	0.92	1.07	0.99	-1%
Fishing	1.32	1.34	1.02	1.07	1.08	8%
Hunting	1.32	1.13	0.86	1.07	0.91	-9%
NonConsumptive Wildlife Activities	1.32	1.58	1.20	1.07	1.28	28%
Backpacking	1.32	1.09	0.83	1.07	0.88	-12%
Hiking	1.32	1.24	0.94	1.07	1.00	0%
Horseback Riding	1.32	1.18	0.89	1.07	0.95	-5%
Off-road Driving	1.32	1.25	0.95	1.07	1.02	2%
Primitive Camping	1.32	1.19	0.90	1.07	0.96	-4%
Rock Climbing	1.32	1.08	0.82	1.07	0.87	-13%
Bicycling (all types)	1.32	1.25	0.95	1.07	1.01	1%
Developed Camping	1.32	1.3	0.98	1.07	1.05	5%
Picnicking	1.32	1.35	1.02	1.07	1.09	9%
Sightseeing	1.32	1.5	1.14	1.07	1.21	21%
Visiting Historic Places	1.32	1.49	1.13	1.07	1.21	21%
Walking	1.32	1.28	0.97	1.07	1.04	4%

The above data are projection estimates only. They are based on a combination of population growth, age of population, income, available recreation, race, sex, and other factors. The factors changing the most are population and income. Those recreation activities with less than a 7% increase in days are not keeping up with population growth.

Estimated large increases in a particular activity are estimated only in those activities causing minimal to no physical impacts to the environment. They include cross-country skiing, motorboating, non-consumptive wildlife activities, sightseeing, and visiting historical places. Projections for motorized recreation show a significant decline in snowmobiling (-15%), while Off-Road driving (OHV use ) increases just 2%. Horseback riding declines 5%. Since OHV and horseback use are the most physically impacting to trails, the projected changes for those activities are not expected to have a significant impact on the trail system.

**Population Demographics.** In a study *2020 Vision for Montana State Parks* (Mont. Dept. Fish, Wildlife, & Parks, 1998) several significant national trends potentially affecting the desired future condition for outdoor recreation were noted:

- 1) Increased demand for recreation, especially close-to-home and near urban centers
  - Time has become a more limiting factor than money for many recreationists.
  - More working mothers with children.
  - More single-parent families.
  - More home-based employment, part-time work, and flexible hours.
  - More interest in physical fitness and exercise.
  - More short vacations (75% of all overnight vacation trips are 3 days or less.) Between 1980 and 1996 the number of weekend trips taken by Americans jumped by 70%.
  - More interest in recreation and leisure for mental and physical health.
- 2) Increased proportions of older Americans
  - Disproportionate growth of older families recreating.
  - Intensified pressure on high-amenity resources, particularly close to urban areas, as Baby Boomers look for retirement sites.
  - Healthier and more physically active older people than in the past, who will recreate longer. Conversely, the growing number of older people will also result in more recreationists who are not in good physical condition.
  - Accessibility of facilities will become a growing need.
  - More demand for relatively less active recreation pursuits (e.g., golf, walking paths, gardening, etc.)
- 3) Increased recreation demands by women, ethnic minorities, and the disabled population. Conversely, participation rates among low-income groups have declined.
- 4) Growth in new recreation-related technology and business activity.

**Expanding technology** will enable recreationists to be places they've never been able to go to before, doing things they heretofore couldn't do because of the lack of equipment allowing such participation. For example, GPS units allow people to navigate to places they would have previously needed map and compass skills to get to. Inflatable kayaks enable novices and intermediate level people to float difficult waters they previously could not have handled with less technologically advanced equipment. Similarly, in unroaded areas the use of the cell phone promotes a feeling of safety previously not obtainable. As a result of this development of high tech recreation equipment, Alan Ewert (1995) anticipates the following to occur nationally.

- People will become less self-sufficient and rely on this equipment more and more as it extends their "bubble of safety" and feeling of security.
- Remote places will become less so as they are entered by people relying on this technology.
- It will become more difficult for the individual to stand apart and be independent from the overwhelming forces of society.
- There will be a loss of solitude and chances to exert true self-sufficiency as backcountry and other areas are more easily entered.

In Region 1 and elsewhere, snowmobiles and OHV's have become increasingly powerful and more and more capable of going places they could not previously access, including steep high altitude alpine areas. This has resulted in more incursions onto terrain that previously was not physically accessible to them. Jet skis enable people to access streams previously not accessible by boats. Their lower costs enable more people to use motorized watercraft. ATVs and "swamp craft" with low pressure tires enable people to go places previously inaccessible. Already, technology is being developed to enable users to "fly" into remote places utilizing various alternatives to airplanes.

Idaho Parks Department has a website describing upcoming "future" kinds of recreation activities ([http://www.idahoparks.org/Data\\_Center/recreation\\_next.htm](http://www.idahoparks.org/Data_Center/recreation_next.htm)). Motorized and/or mechanized activities described on the site include:

- Helibiking—Helicopter takes mountain bikers to a mountain top trail and they coast down.
- Extreme Mountain Biking—Mountain bikers use trails typically thought too rough for bikes. There is the potential for cross-country trail development from such activities.
- Mountain boarding—Skateboarding on mountain trails using specially adapted skateboards.
- Rough terrain vehicles—4x4 vehicles of assorted widths ridden like cars but with tubular steel bodies and the potential for increasingly narrow widths.
- Segways—Not yet on the market, these are 4-wheeled battery powered lightweight (150 lbs.) with widths approximately 36" that could negotiate some trails of adequate width and travel up to 20 mph.

### **c. Desired Condition**

This issue reflects concerns for potential resource impacts as numbers of recreationists grow. Also of concern is the ability of different recreationists to get along with each other, including public attitudes towards "crowding", as influenced by encounters with other recreationists. It also includes public preferences relating to motorized and non-motorized recreation.

Research by Michael Tarrant and others (1999) suggests that feelings of overcrowding are influenced by several factors:

- **Number of encounters.** The number of perceived encounters had a significantly higher correlation to perceptions of crowding perceptions than did use levels, i.e. meeting other groups was more influential on whether one felt crowded than did amount of recreation use.
- **Location of encounters.** Encounter locations in or near higher use areas, such as trailheads and campgrounds and boat launches, rather than wilderness or on the trail or away from developed sites, are more tolerated by people than encounters in more remote areas. Encountering others in areas that one expects to be un-crowded raises the perception of being crowded.
- **Type of Group or Recreation Activity Encountered.** Encountering one large group in an outdoor area results in more feelings of being crowded than meeting several smaller parties separately. Groups pursuing the same recreation activity have greater tolerance for each other than when meeting groups perceived as having different goals, values, or skill levels. Means of transportation (motorized or non-motorized; stock or hiker) and group size are the most visible means of assessing similarity or dissimilarity between groups. Additionally, the more "obtrusive" an activity is (e.g. motorized use versus hikers), the lower the tolerance for encountering people engaged in that activity.

In research on visitor preferences and satisfaction with site attributes, a national study called CUSTOMER interviewed 11,000 people across the nation recreating on National Forests, BLM, and Tennessee Valley Authority lands (Tarrant, M., E. Smith and K. Cordell, 1999). Surveyed members of the public were asked to rank site attributes by their level of importance to them. In dispersed recreation settings (trail dominated and away from roads) the third most important attribute of 16 possible choices was “separation of motorized and non-motorized uses.” The first and second attributes of most importance were “naturalness of the setting” and “presence and evidence of wildlife”. In winter settings dominated by ice and/or snow, “separation of motorized and non-motorized uses” was rated fifth in importance out of 24 factors. Ahead of it were the desire for 1)plowed roads; 2)Short lift lines; 3)uncrowded areas; and 4)challenging trails.

**Desired Future Condition.** The following desired future condition reflects the Forest Plan, research cited, and changing population demographics described.

- The physical capacity of the district trail system to accommodate motorized and non-motorized recreation would not be exceeded.
- Recreationists would continue to not feel crowded.
- Recreationists would know where to go to obtain satisfying experiences and where not to go in order to avoid conflicts with other groups, e.g. they would know locations of motorized and non-motorized trails.
- **Cooperative use of trails by various kinds of users would occur where feasible,** and conflicts between recreationists, whether participating in the same or an entirely different activity, would be minimal.
- Non-motorized and non-motorized trail users would have more physical separation from each other.
- Recreationists would have a variety of trail opportunities to enjoy without long driving times on roads or travel time on trails.
- Trails would be available to accommodate an aging population, minority and low income users and the disabled.
- Substantial areas of the district would be maintained so as to not be impacted by use of new technological products making backcountry more easily accessible and crowded, threatening solitude and risking the loss of traditional wildland recreation values.
- **New transportation technologies would not be permitted until assessments of their potential impacts on resources are made and a decision made on their acceptability on the Forest.**
- Additional light on the land/leave no trace educational opportunities would be provided if it becomes apparent that new users of technology are less skilled and experienced in wild land stewardship, including light on the land techniques.

## **2. ENVIRONMENTAL CONSEQUENCES**

### **a. Alternative 1 - No Action Alternative**

#### ***1. Direct and Indirect Effects***

**Physical Capacity/Crowding.** The physical capacity of the district to accommodate recreation is not exceeded in this alternative. Public feelings of being overcrowded are minimal to non-existent, according to the 2000-2001 survey of the forest described above. Projected increases in recreation activity days by recreation activity are fairly low. Declines in the numbers of motorized users and stock users and backpackers will require less physical space to accommodate. Cross-country skiers may eventually need more places to ski, but expanding a groomed ski system is doable with this and other alternatives. Alternative 1 spreads motorized use across the district, providing more capacity than the other alternatives. **Feelings of crowding because of numbers of encounters with different user groups may be the lowest in this alternative, especially amongst motorized users, because motorized use is the most dispersed in this alternative. However, locations of encounters are the most widely dispersed of alternatives across the district, making motorized/non-motorized encounters more widespread than those alternatives that concentrate motorized use into fewer areas. These less expected encounters will be more widespread and potentially more impactful to non-motorized users when they occur in remote areas, making this alternative likely the one with the most feelings of crowding amongst non-motorized users.**

**Potential for Conflict.** This alternative has the highest potential for conflict between motorized and non-motorized users. This is because motorized use is allowed on more trails in this alternative than in any other. The alternative has the least physical separation of motorized and non-motorized activities.

**Access to Recreation.** This alternative does the poorest job of allowing recreationists to readily access either motorized or non-motorized trails from trailheads. Most trails that are outside of wilderness and near roads are open to motorized use, making it necessary to travel further to reach non-motorized settings more remote from trailheads or located inside wilderness. This is more difficult with the trend towards shorter vacations. This alternative does provide the easiest access for motorized users on short vacations looking for motorized trails on which to recreate.

**Access for Disabled and Aging Populations.** This alternative has no walking or wheelchair trails that are accessible to the disabled. Such trails are an important component of trails that accommodate an aging population, as well as the disabled. This alternative has more stock trails and trails open to motorized use than other alternatives. As a result, this alternative ranks highest in its ability to serve aging or disabled people wishing to access more remote areas on stock or ATVs.

**Technology Threats to Solitude.** Threats to solitude if technology develops new means of getting into remote country is greatest in this alternative, which has the most motorized trails accessing adjacent forest wilderness and non-motorized areas. The widespread distribution of motorized trails in this alternative also increases the likelihood of easier public access using new or not yet developed motorized technology to access presently remote areas. For example, a motorized vehicle that can use single track trails and requires less skill than motorcycles will allow more access into remote areas presently accessed by non-motorized means or motorcycles.

## 2. Cumulative Effects

Increasing attention to the district because of oil and gas leasing and drilling issues has raised public awareness of the area regionally, and even nationally. There is increasing pressure to eliminate or significantly reduce motorized use on the district because of its special attributes of wilderness, spectacular scenery, wildlife, Blackfoot Indian tribal concerns, etc. This alternative responds the least to those growing feelings amongst many members of the public. It does the least to accommodate desires of some to make the district either partially or entirely non-motorized.

At the same time, this alternative maintains a mix of motorized and non-motorized use that accommodates motorized recreationists. As a group many motorized recreationists feel the effects of previous reductions in trails available to them. The 2001 decision by the Northern Region of the Forest Service eliminated opportunities for off-trail riding by OHV's, including ATVs and motorcycles. (USDA Forest Service, 2001).

The combined cumulative effects of proposed oil and gas drilling activities for Fina/Longwell and Chevron/Devon will have very limited impacts on recreationists on the district. The same can be said for the small timber sale program on the district, which harvest a small amount of timber annually. The recent Northwest pipeline expansion did temporarily cut off future winter access of snowmobiles to the snowmobile trail system, but that was corrected temporarily, and will be permanently corrected in a separate action outside of this analysis. Undetermined trails and roads are left in their current status in this alternative, accommodating existing needs and uses.

### **b. Action Alternatives 2-5**

#### ***1. Direct and Indirect Effects***

**Physical capacity/Crowding** varies by alternative and projected use levels. Table III-30 shows available trail miles by activity type by alternative. Alternative 2 provides more motorized trail opportunities than all action alternatives, but not as much as the No Action Alternative 1, except for 4x4 Jeep trails. **Its reduced miles of available motorized trail, compared to Alternative 1, may make motorized users feel more crowded, because they are limited to fewer miles of motorized trails, ie: they're concentrated onto a smaller trail system. Non-motorized users using motorized trails will likely encounter more motorized use, because it is less spread out than in Alternative 1. This will likely result in more meeting of motorized and non-motorized recreationists on these motorized trails, increasing perceptions of crowding. At the same time, Alternative 2 has more miles of non-motorized trails than Alternative 1, reducing perceived crowding on those miles of trail where motorized use is restricted.** Alternative 3 eliminates entirely the opportunity for motorized trail recreation on the district, as well as all snowmobiling. **Perceptions of crowding will be lowest here for non-motorized users because they will not confront motorized use. Alternative 4 has less motorcycle and ATV opportunities than Alternatives 1 and 2, but much more than Alternatives 3 and 5. Motorized users will feel more crowded in the Badger-Two Medicine than in Alternatives 1 and 2 because of the reduced miles of motorized trail available to them. Non-motorized users will feel less crowding with Alternative 4 than with Alternative 1 and 2, but more than in Alternatives 3 and 5. Alternative 4 and 5 are essentially the same from Birch Creek south in terms of potential crowding between motorized users and between motorized**

and non-motorized users because motorized trail mileages are essentially the same. Alternative 5, like Alternative 3, eliminates motorized trail recreation and snowmobiling in the Badger-Two Medicine, and duplicates Alternative 4 in the remainder of the district. Feelings of crowding for Alternative 5 in the Badger-Two Medicine will be like Alternative 3. Lack of motorized opportunities in Alternative 5 in the Badger-Two Medicine will likely increase motorized use from Birch Creek south, likely causing more feelings of crowding than Alternative 4 in the same area. ATV miles are reduced down to 40% of their existing availability. Motorcyclists typically desire long loops and may feel that this reduction in trail miles does not provide them adequate opportunity for long trail rides. All action alternatives provide roughly the same amounts of non-motorized trail recreation. Only Alternatives 4 and 5 provide trails that are accessible to the disabled.

**Table III-30. Miles of Trail\* Available by Trail Activity by Alternative**

Trail Activity	Map Zone <sup>x</sup>	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5
<b>Hiker Only</b>	<b>BTM</b>	--	0.2	0.0	0	0
	<b>BCS</b>	4.5	5.4	7.0	7.4	7.4
	<b>Total</b>	4.5	5.6	7.0	7.4	7.4
<b>Accessible to disabled</b> (ie. Wheelchair accessible)	<b>BTM</b>	--	--	--	--	--
	<b>BCS</b>	--	--	--	Approx. 3.5 mi.	Approx. 3.5 mi.
<b>Pack &amp; Saddle</b> ** (hikers and stock)	<b>BTM</b>	197	176	175	175	176
	<b>BCS</b>	790	780	775	777	776
	<b>Total</b>	987 total	956 total	950 total	952 total	952 total
<b>Motorcycle</b>	<b>BTM</b>	180	127	0	50	0
	<b>BCS</b>	198	143	0	67	65
	<b>Total</b>	378 total	270 total	0 total	117 total	65 total
<b>ATV</b> ***	<b>BTM</b>	90	59	0	43	0
	<b>BCS</b>	55	25	0	23	22
	<b>Total</b>	145 total	84 total	0 total	67 total	22 total
<b>4x4 Jeep Road</b>	<b>BTM</b>	0	0	0	0	0
	<b>BCS</b>	0	12	0	0	0
	<b>Total</b>	0 total	12 total	0 total	0 total	0 total
<b>Bicycle</b>	<b>BTM</b>	197	175	174	175	176
	<b>BCS</b>	328	299	297	298	298
	<b>Total</b>	525 total	474 total	471 total	473 total	474 total
<b>Snowmobile</b>	<b>BTM</b>	28	28	4	28	0
	<b>BCS</b>	3	3	0	3	3
	<b>Total</b>	31 total	31 total	4 total	31 total	3 total

\* Does not contain trails without perfected public easements; decommissioned trails; special use trails; snow trails (except for snowmobile trail mileages); undetermined; or roads.

\*\* Pack and Saddle mileage includes 463 miles of trail within designated Wilderness.

\*\*\* ATV trails require two tracks or a trail width of about 5' minimum.

<sup>x</sup> BTM refers to Badger-Two Medicine area; BCS refers to Birch Creek South area.

Please note that the above motorized trails are also open to non-motorized use.

***Potential for Conflicts between users*** are likely the highest in Alternative 2 and the least in Alternative 3. Alternative 3 completely eliminates the motorized user group from the district. This exclusion of one recreation group from a district will likely create off-district conflicts, including litigation, and more pressure in ongoing travel planning on the Jefferson Division of the Forest to keep or expand existing motorized recreation opportunities there.

Alternative 5 eliminates motorized use in the Badger-Two Medicine area, eliminating conflicts between motorized and non-motorized users in that area. The remainder of the alternative is the same as Alternative 4, which is a compromise between the existing situation

and Alternative 3 and 5 and reduces motorized trail miles down to 33 to 40% of their original existing condition. Alternative 4 will likely have more conflicts between users than Alternatives 3 and 5, and less than Alternative 2.

**Limiting motorized use to smaller areas and clearly identifying those areas with signing and maps will reduce conflicts between motorized and non-motorized users, but will increase perceptions of crowding for all users of those fewer motorized trails.**

***Undue driving time*** to motorized activities is most exacerbated by Alternatives 3, which greatly impacts motorized recreationists, forcing them to drive to the National Forest east of Great Falls or to the Flathead National Forest further west of the Badger-Two Medicine area. Alternative 5 has the second highest impact on driving time for motorized recreationists. Alternative 2 has the least of the action alternative impacts to motorized recreationists, and the second highest impact on non-motorized recreationists seeking nearby quiet settings near trailheads. Elimination of motorized use in Alternatives 3 makes it easier for non-motorized recreationists to travel to trailheads offering only non-motorized opportunities. Alternative 4 provides something in between the highly motorized Alternatives 2, and the non-motorized Alternative 3, and the partly non-motorized Alternative 5. For Alternative 4 both motorized and non-motorized settings are available from roads as they access the Forest. This alternative does the best job at providing a mix of settings readily available from existing trailheads.

***Undue time on trails*** to get to desired recreation settings is longest in Alternative 2 for non-motorized recreationists, and shortest in Alternative 3, and then Alternative 5. Motorized users have the least time on trails to reach motorized settings in Alternative 2, followed by Alternative 4, and then Alternatives 5 and 3. Alternative 4 is a compromise in time needed by both user groups to get to desired trail settings.

***Access for aging and disabled. populations.*** Aging populations benefit from trails that are accessible to the disabled. Both Alternatives 4 and 5 would provide the most walking and wheelchair accessible trails. Aging and disabled populations that can ride stock or ATV's or road vehicles (automobiles, pickups) to access desired settings at some distance from trailheads have various choices by alternative. ATV users have the most opportunities in Alternative 2., and the least in alternatives 3 and 5. Stock users have essentially the same opportunity in all action alternatives. ATV users have greatest opportunities in Alternatives 1 and 2, respectively, and least opportunities in Alternatives 3 and 5. Alternative 4 is in between, serving a mix of motorized and non-motorized recreationists. Since the majority of the population neither ride OHVs nor stock, Alternative 4 and 5 provide the greatest opportunity for trail access.

***Technology Threats to Solitude.*** Motorized technology developments that make it easier for recreationists to travel down a trail long distances provides a potential threat to areas providing solitude at present. Such was the case when ATVs were developed in the 1980's and 1990's, when people with little physical riding skills were able to access areas previously unavailable to them. Those alternatives with the most motorized trails would provide the greatest potential threat to solitude from these potential new motorized technology developments. Non-motorized technological developments making it easier to travel on a trail may become an additional threat. All alternatives would be equally susceptible to such **non-motorized** developments.

## 2. Cumulative Effects

**The Bob Marshall Wilderness Complex and Glacier Park are** not available to motorized trail use or snowmobiling. Past closure of many snowmobiling opportunities on the Flathead National Forest, together with elimination of snowmobiling in Alternative 3, and most snowmobiling in Alternative 5, may create an unacceptable loss of snowmobile recreation settings relied upon by the snowmobiling community. This is combined with the total loss of motorized trail recreation in Alternative 3, and the loss in Alternative 5 of all Badger-Two Medicine motorized trails and associated snowmobiling. This is especially impacting to highline communities such as Browning, Shelby and Cutbank, which rely on adjacent National Forests for motorized recreation opportunities.

Their alternative motorized options on this Forest are primarily in the Little Belt Mountains, requiring a 3 to 4 hour drive to reach a place to recreate. This becomes increasingly problematic in light of increased fuel cost, shorter vacations, and perceptions of fairness by the motorized recreation community.

### **c. Effects Common To All Alternatives**

#### 1. Direct and Indirect Effects

**Physical Impacts.** Projected recreation activity days by 2025 shown in Table III-29 indicate that no increases are expected to occur in amount of activities most potentially impacting to the physical environment. Stock use, bicycling, hunting (and associated transportation requirements), OHV use, backpacking, and hiking are expected to either decline or remain stable in comparison with 1995 use. An expected decline of snowmobiling by 15% may reduce other resource impacts, such as impacts to wildlife.

Those activities with projected significant increases in user days (cross-country skiing, motorboating, fishing, non-consumptive wildlife activities, picnicking, sightseeing, and visiting historic sights) are the types of low-impact activities having little physical impact on the land. Several of those activities are more road than trail related. Motorboating would be limited to Gibson Reservoir. Fishing is relatively low impact and projected to increase just 8% in 2025.

Physical capacity of the district trail system to accommodate use varies by alternative in proportion to miles of trail open to motorized and non-motorized use. **Fewer miles of motorized trail opportunity will concentrate motorized users more, creating feelings of crowding amongst that population in proportion to motorized trails available. Since crowding is typically largest when frequent encounters occur between different kinds of users, non-motorized users will feel less crowding with alternatives with fewer amounts of motorized trail opportunities, except when they use those motorized trails where motorized use has become more concentrated.**

**User Knowledge of Travel Plan and “Light on the Land” techniques.** Regardless of alternative, availability and readability of new travel plan maps and on-site signing will need to be improved. This will help users know where to go to find their preferred recreation setting and to avoid conflicts with other users. Improved travel plan maps that are simpler to understand and easier to obtain will help, as would possible portal signing along major roads will also help users better understand travel plan requirements. These options are all equally possible to accomplish regardless of the selected alternative. Light on the land/ Leave no Trace educational programs will continue to be offered and increased when necessary if new

technology improves accessibility for new users to the backcountry, or if projections underestimate numbers of users. This will help in reducing potential impacts between user groups, and impacts to ground, vegetation, and water.

**Recreationist Feelings of Crowding.** Regardless of alternative, projected use levels for many recreation activities are flat to declining, indicating that the current existing condition of “little or no feeling of crowding” will largely continue for those alternatives. Exceptions are for those alternatives that reduce opportunities for motorized trail use by concentrating them on fewer miles of trail. Additionally, those activities with large projected increases in use, may find more competition for places to cross-country ski or enjoy wildlife, picnic, fish, or sightsee. Those opportunities will vary by alternative.

**Undue Driving Time to Recreation Places.** The physical location of the Rocky Mountain Ranger District makes it a relatively long (2 hour or more) drive from major population centers, regardless of alternative selected.

**Minority and low-income recreationists.** Effects on these groups are the same as on other recreational groups. Access to trails by low-income recreationists is made more difficult because of distance from major population centers.

## ***2. Cumulative Effects***

The combined cumulative effects of proposed oil and gas drilling activities for Fina/Longwell and Chevron/Devon will have very limited impacts on recreationists on the district. The same can be said for the small timber sale program on the district, which harvest a small amount of timber annually. The recent Northwest pipeline expansion did temporarily cut off future winter access of snowmobiles to the snowmobile trail system, but that was corrected temporarily, and will be permanently corrected in a separate action outside of this analysis. Undetermined trails and roads are left in their current status in Alternative 1 and either become system roads and trails or are decommissioned or closed in the action alternatives.

There is no anticipated effect from the reconstruction of the Wood Lake campground and picnic areas.

### **d. Effects Common To All Action Alternatives**

#### ***1. Direct, Indirect, and Cumulative Effects***

**Any alternative that concentrates motorized use onto fewer miles of trails will increase the physical impacts of that use on those trails, themselves.**

