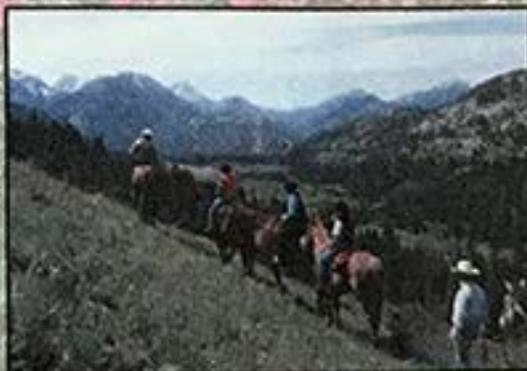


Montana State Trails Plan

April, 2001



State Trails Program
Montana Fish, Wildlife & Parks



PREFACE

Public participation has been an integral part of developing both the *Montana State Trails Plan* and the *Trails Programmatic Environmental Impact Statement (PEIS)*. Additionally, consultation has occurred with other trail managing agencies in Montana throughout the planning process. Without the active involvement of hundreds of members of the public, representatives from trail organizations and other non-profit organizations, and trail managers from a variety of agencies, the *Trails Plan* and *PEIS* would not have been possible.

The *Trails Plan* and *PEIS* were coordinated by Jeff Erickson and Bob Walker, out of the Helena Fish, Wildlife & Parks (FWP) Office. Considerable assistance was received from Jeff Copeland, who worked on the Plan and PEIS over several years in three different capacities—first as an intern, then a temporary employee, and finally as an independent consultant. Two other interns spent parts of their summers at FWP working on the *Trails Plan*—Bryan Smith and Kathleen Curd Rau.

In addition to the above, past and present members of the State Trails Advisory Committee (STAC), the *Trails Plan/PEIS* Technical Advisory Committee, and the FWP Internal Trails Advisory Committee played important review and comment roles. Members of the FWP Committee, in particular, spend many hours reviewing and discussing both the *PEIS* and *State Trails Plan*. Members of the FWP committee included:

- Lee Bastian: Regional Parks Manager, Missoula

- Ray Paige: Motorized Trail Program Coordinator, Helena
- Steve Gilbert: Non-Motorized Trail Program Coordinator, Helena
- John Ramsey: Enforcement Training Officer, Helena
- Heidi Youmans: Chief, Small Game Bureau, Helena
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- Dick Ellis: Regional Supervisor (retired), Billings
- Mark Lere: Fisheries Habitat Restoration Program, Helena
- Martha Williams: Legal Unit, Helena
- Rich Clough: Chief of Operations, Helena
- Jeff Erickson: Parks Program Planner, Helena
- Bob Walker: State Trails Program Coordinator, Helena

Many other FWP staff were involved in various phases of the planning process. Doug Monger, Parks Division Administrator, reviewed earlier drafts of both the *Trails Plan* and *PEIS*. Ken Soderberg, Jeffrey Tiberi, and many FWP regional staff members assisted with public involvement efforts. Chas Van Genderen offered good advice on process issues. Debbie Mcrae and Chine Strobel from the Helena Parks Office provided valuable editing and computer assistance.

Digital mapping for both the *Trails Plan* and *PEIS* were done by present and past members of FWP's Information Services Unit staff, including Janet Hess-Herbert, Angie Schmidt, Lydia Bailey, and Jeff Hutten. FWP's mapping efforts were assisted by





Kristina Gurrieri, Dave Highness, and Ed Madej from the Natural Resources Information System, part of the Montana State Library. Staff from the Institute for Tourism and Recreation Research (ITRR) at the University of Montana helped with some of the initial trails inventory and survey efforts.

Also, special thanks, in particular, to the following Technical Advisory Committee members for their comments and ideas: Jack Potter (National Park Service, Glacier National Park); Wendell Beardsley (U.S. Forest Service, Retired Region 1 Trails Coordinator); Gary Garthwait (U.S. Forest Service, Former Acting Region 1 Trails Coordinator); John Favro (U.S. Forest Service, Region 1 Trails Coordinator); Charlie McKenna (U.S. Forest Service, Helena National Forest); and Darrell McDaniel (BLM, Recreation Planner, Butte Office). Many other people from various branches of government and non-profit organizations made contributions during the

planning process, as did a large number of interested trail users.

Finally, Ross Campbell, Straight Arrow Designs, did the layout and design of both the Plan and PEIS, under a tight timeline. Jay Lightbody and Mel Vetsch from FWP's Print Shop arranged the printing with their usual helpfulness. Thanks to everyone listed (and anyone inadvertently omitted) for the help!

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NOTE: The maps depicting trails in this document are intended to be general representations only, and are not to be used as trail guides or for locating specific trails. While these maps are based on the best statewide digital trails coverage available, there are many routes marked that are not part of the managed trail system, in addition to designated trails that don’t show up on the maps. Additionally, the Montana trail system is changing constantly (especially in urban areas), and any map will be quickly outdated.



MONTANA STATE TRAIL PLAN: EXECUTIVE SUMMARY

Introduction

Montanans are passionate about trails, and for good reason. Montana's trails are a passport to some of the most beautiful places in the world, threads that link special places together, creating memories. Trails require effort, but they often reward it richly. They get people from one place to another, but on a more human scale than roads; trails are utilitarian, yet nearly synonymous in the minds of many with pleasure, joy, and adventure.

Residents and visitors alike place a high value on Montana's outdoor recreation, open space, natural areas, and historic sites. In Montana and throughout the country, trails are an increasingly important component of the public's enjoyment of outdoor resources and activities. Trails produce multiple benefits and significantly enhance quality of life by providing opportunities for outdoor recreation, protecting natural and cultural resources, and creating economic opportunities. Trails also provide alternative transportation routes that reduce pollution, as well as encourage participation in outdoor social, fitness, and educational activities.

Montana already has an impressive network of public trails, but it could be substantially improved. The *Montana State Trails Plan* is a first attempt to provide long-term, inter-agency direction for the statewide public trail system, including both motorized and non-motorized trails. The focus is on statewide, rather than local or trail-specific issues, with a primary emphasis on common values shared by most trail users, and areas of agreement within and between managing agencies and other interested parties.

The *Montana State Trails Plan* was coordinated by Montana Fish, Wildlife & Parks (FWP) because it is the agency with statewide recreation management responsibilities. The *Trails Plan* is

not intended to usurp the management plans and planning processes used by the various federal, state, and local agencies which manage the state's trails. Rather, the Plan is meant to provide trail managers with information about the trail system and the people who use them, and produce strategic recommendations on trail issues and needs. The *Trails Plan* aims to enhance Montana's trail network by improving cooperation among agencies, organizations, and individuals; increase availability of funds; and provide a foundation for better meeting the needs of trail users.

In addition to the *Trails Plan*, a separate but related *Programmatic Environmental Impact Statement (PEIS)* was also completed for FWP's Trails Program. The *Trails Program PEIS* was done concurrently with the *Trails Plan*, with the intent of drawing on its recommendations to help analyze and improve two trail grant programs administered by FWP. The programs include motorized and non-motorized trail funding available through the federal Recreational Trails Program (RTP), and the State Off-Highway Vehicle (OHV) Grant Program. Neither the *Trails Plan* nor the *Trails Program PEIS* address snowmobiling or the FWP Snowmobile Grant Program, as these were covered in a separate PEIS completed in 1993. Additionally, water-based trails are not addressed in the Plan or PEIS, as this form of recreation is distinct enough to be dealt with separately.

For the purposes of this executive summary, "trail" will be defined broadly, as a public path, right-of-way, or other linear corridor used for outdoor recreation or alternative transportation; a more detailed definition is included in the complete Plan. The types of uses examined in the Plan are also broad, but the user groups represented on the State Trails Advisory Committee (STAC) and listed below reflect the types of recreation that are currently in highest demand.

It is worth remembering that trail-based recreation is constantly changing, and uses that were virtually unknown twenty years ago have become extremely popular in some areas (e.g., in-line skating). Trail uses represented on the STAC are as follows:

- Hiking
- Off-highway motorcycling
- ATV riding
- Cross-country skiing
- Bicycling
- Back-country 4x4 driving
- Horseback riding
- Snowmobiling (not covered in this plan)

Many of the recommendations included in the *Trails Plan* were initially derived from comments received during the public scoping period. A total of 315 written comments were received, and more than 400 people attended one of the 18 public scoping meetings in Montana. A summary of the scoping period comments is included in the appendix of the full document.

In analyzing the information from the scoping period, an effort was made to capture all of the major issues and concerns that emerged. The scoping comments were condensed from an initial list of more than 90 issues to the fifteen issues included in the Plan. These issues were also used in helping develop the *Trails Program PEIS*.

Following the scoping meetings, a “workbook” was compiled for review by the STAC and a second technical advisory committee composed largely of staff from trail managing agencies. The workbook contained preliminary issues, goals, and strategies derived from the scoping sessions, with space for writing in comments and suggestions. The initial workbook was revised based on advisory committee comments, and released for public review. The recommendations which emerged from the public review workbook became the framework for the long-term direction included here.

The most recent step in the planning process was a public comment period on the draft Plan/PEIS,

which extended from August 1 to October 10, 2000, with informational open houses held in seven Montana cities. Additionally, there was a series of reviews by an interdisciplinary FWP Trails Advisory Committee, as well as representatives from other trail managing agencies. The drafts were revised based on the 325 public and agency comments received; a summary of the public review period is included in Appendix C, with a more complete overview of substantive comments and agency responses in the PEIS Appendix.

For questions about the Montana State Trails Plan/PEIS or the State Trails Grant Program, please contact the following:

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A Vision for Montana's Trail System

The long-term vision for future trail-based recreation in Montana is as follows:

Maintain and develop a trail system that is an integral component of outdoor recreation in Montana; that meets or exceeds user expectations; that provides a variety of readily accessible public trails, in a wide range of settings; and maximizes opportunities for a wide range of trail uses, while minimizing conflict and protecting natural and cultural resources.

More specific components of this vision (which is based on the primary concerns, issues, and goals derived from the public scoping process) are summarized as follows:

- * **DIVERSITY OF OPPORTUNITIES:** The trail system should offer sustainable recreation opportunities for a wide range of user types and abilities.
- * **VARIETY OF SETTINGS:** The Montana trail system should reflect the spectacular diversity of the state's natural and cultural environments, from urban to wilderness, forest to prairie, mountaintop to river valley, and ghost town to busy city center.
- * **MINIMAL CONFLICT:** The trail system should be managed in a way that reduces conflicts between users. Where there are conflicts, trail users and managers are encouraged to work together to solve them in an open and fair manner.
- * **INTERPRETATION AND EDUCATION:** The system should allow users to experience and learn more about a wide variety of the state's natural and cultural features. Trails can and should provide a means for interpreting Montana's natural and cultural heritage.

- * **NATURAL AND CULTURAL RESOURCE CONSERVATION:** The Montana trail system should be designed and managed in a way that conserves and enhances Montana's natural and cultural resources. Trails that are improperly placed or occur too frequently across the landscape can create both social and natural resource impacts. Montana's trail systems and the resources they affect must be managed and maintained in a sustainable manner.
- * **ECONOMIC DEVELOPMENT AND TOURISM:** The Montana trail system should enhance the economic vitality of Montana's communities.
- * **ACCESSIBILITY:** Montana trails must be readily accessible to users. The Montana trail network shall include enhanced trail recreation opportunities within a short distance of where most Montanans live. More disabled accessible trail opportunities are also a priority.
- * **INFORMATION:** Montana trail users (as well as potential users) need to have better information about trail opportunities in the state, as well as information about safety, ethics, conflict reduction, and minimizing environmental impacts.
- * **TRANSPORTATION LINKS:** The Montana trail system should be closely integrated with the primary transportation network in the state and—where appropriate—provide alternatives to vehicular transportation.
- * **COOPERATION:** Planning and management of Montana's trail system should be a cooperative endeavor between local governments, state agencies, the federal government, private landowners, and trail users and user groups. This Plan is intended to stimulate discussion between managers and the full spectrum of trail users, helping them to organize more effectively, find common ground, gain a joint sense of purpose, recognize and act upon new opportunities, and collectively work together to improve and maintain Montana's trails.

Overview of Trails Plan Issues and Goals

The issues listed below represent the major problems or opportunities identified by the public and agency staff, as well as through research and surveys. A more detailed discussion of the issues, goals, and strategies is included in the last chapter of the *Trails Plan*.

1) ACCESS.

Explanation: Loss of access to public trails and failure to secure key corridors across various types of land ownership was one of the most important issues to emerge from the scoping meetings. In order to address this issue, federal, state, and local governments need to cooperate in officially documenting public easements and rights-of-ways, and purchasing land or easements where necessary.

Goal: Improved access to public trails and lands.

2) URBAN TRAILS.

Explanation: Urban areas have the greatest need for new trails, because most Montanans live in and around cities and towns. There is a strong demand for convenient recreation opportunities which people can enjoy on short notice. An important related issue is integrating trails with land use and transportation planning in urban areas. Rail-trails, greenways, and creating connections to surrounding public lands are important needs related to urban trails. The largest demand is for more non-motorized trails in urban areas.

Goals(s): 1) More local trails, greenways, and trail connections for recreation and transportation in, around, and between Montana's populated urban areas; 2) Develop urban trail linkages between residences, parks and other recreational facilities,

schools, historic and cultural sites, open space, shopping areas, and other important community destinations.

3) RESOURCE PROTECTION.

Explanation: Direct and secondary impacts on natural and cultural resources from trails and trail-related activities is a primary concern of trail users, as well as resource managers. Many users are concerned about the integrity of wild areas, and how they are impacted by trail activities. Impacts on wildlife resources are a critical concern (particularly during hunting season), as are noxious weeds. Resource impacts resulting from motorized trail-related use is a growing concern, particularly cross-country travel, use in off-limits areas, and illegal trail construction. Finally, the roadless areas where many of Montana's trails are found have been dramatically reduced in size during the past fifty years.

Goal: Reduced trail-related impacts on natural and cultural resources through avoidance and mitigation.

4) TRAIL SUPPLY AND SYSTEM CONFIGURATION.

Explanation: The supply and configuration of Montana's trail system was an issue that came up in a variety of ways during the initial scoping process. Trail data suggests that while the demand for trails has been increasing, the total number of backcountry trail miles in Montana has been declining for decades due to abandonment of old fire trails, road building, and other factors; there must be no further net loss of these routes. Because most Montanans live in towns and cities, meeting growing urban trail demands is critical. Other needs identified included additional loop and connecting trails, ensuring interesting trail-related destinations, and more trails in eastern Montana. A major challenge will be to provide adequate and varied trail opportunities for both motorized

and non-motorized trail users throughout Montana, while minimizing environmental impacts and conflicts.

Goal: A diverse trail system, for a wide variety of uses, in all parts of Montana.

5) FUNDING.

Explanation: There is insufficient funding to meet current demands, which are growing. There is an especially great need for improved non-motorized funding due to the large and increasing amount of non-motorized trail use, especially in and around urban areas. Motorized users have successfully pursued dedicated OHV and snowmobile funding sources through the Legislature, but there is no equivalent non-motorized source.

Goal: Improved trail-related funding at all levels of government; the demand for enhanced non-motorized funding is especially great.

6) MAINTENANCE.

Explanation: There is a backlog of maintenance needs throughout Montana, an issue closely related to insufficient funding. The biggest need in the backcountry is maintenance and completing loops and key connections, rather than a significant number of new trails. In the last decade, there have been substantial new trail projects in Montana's towns and cities, and these facilities will need to be maintained on an on-going basis. Volunteers will likely play an increasingly important role in meeting maintenance needs.

Goal: A Montana trail system that is maintained in a safe, attractive, and environmentally sound manner, with no net loss of mileage due to lack of maintenance or other causes. Maintenance levels should be appropriate to the amount and type of use the site receives, and reflects the type of experience trail users desire.

7) MANAGEMENT AND ENFORCEMENT.

Explanation: Many trail users who attended scoping meetings or submitted written comments believe enforcement of trail regulations needs to be improved. Trail users also had a wide variety of concerns about how trails are managed, often centered around motorized trail restrictions (e.g., loss of motorized access, resource impacts, etc.). Information and signing are important in ensuring compliance with restrictions and regulations. Design, construction, and maintenance of trails should complement management goals and trail use restrictions.

Goal(s): 1) Trail management processes that consider all important issues, actively involve the public throughout the process, and entertain a range of management alternatives; 2) Improved enforcement of trail regulations, and a reduced need for enforcement by improving the behavior of all trail users.

8) USER CONFLICT AND COMPATIBILITY.

Explanation: Trail users have differing opinions on what trail uses are compatible. Conflicts generally result from feelings of incompatibility, but can also result from the perception that a trail user is unsafe or displaying poor etiquette. Most conflicts are between mechanized and non-mechanized trail uses. A key to reducing conflicts is ensuring that users have accurate information about what uses are permitted on particular trails.

Goal: Reduced user conflicts and increased compatibility between trail users.

9) SAFETY AND LIABILITY.

Explanation: The need to design trails to improve safety and reduce liability is increasing with the growing amount of recreation-related litigation. Safety and liability are of special concern for urban trails and other high use trails. Providing current informa-

tion on safety concerns and informing trail users of the risks inherent in trail use are key to addressing this issue.

Goal: A safe and diverse Montana trail system in which liability concerns among managing agencies and private landowners are reduced.

10) COMMUNICATION, COORDINATION, INFORMATION, AND EDUCATION.

Explanation: In an era of tight budgets, managers will increasingly need to work more collaboratively with both each other and their constituents. Trail users would like improvements in a variety of trail-related information and education materials. As types of trail use and use levels increases, the likelihood of conflict increases. Improving trail ethics is an important concern that can be addressed by improved information and education.

Goal(s): 1) Improved trail-related communication, coordination, and mutual understanding within and between trail managing agencies, trail users, local governments, private landowners, tourism agencies, and other organizations and groups; 2) Trail users have ready access to trail-related information, maps, and signs; 3) Improved trail-related training and education opportunities in order to diminish conflicts, reduce resource impacts, and improve ethics and safety.

11) NEW LINEAR CORRIDOR ALTERNATIVES.

Explanation: Abandoned/underused railroad lines and utility corridors are examples of linear land ownership patterns offering potential for trails. These patterns occur throughout Montana, including areas where few other trail opportunities exist. Across the country, there has been an explosion of interest in utilizing old rail grades for trails, with thousands of miles of old rail bed converted to trail use over the last ten years; the rails-to-trails movement has become one

of the most notable trail success stories in the country. Unfortunately, Montana has lagged behind the leading rail-to-trail states, and has lost some exceptional opportunities as key rail lines have reverted to private use.

Goal: More effective trail-related use of Montana's existing linear corridors (e.g., rail trails, utility corridors, etc), which were originally laid out for non-recreational purposes.

12) ALTERNATIVE TRANSPORTATION.

Explanation: Providing safe, accessible alternatives to automobiles benefits individuals, society, and the environment. Trails encourage exercise and non-motorized commuting. This in turn provides mental and physical health benefits, a social outlet that unites neighborhoods and communities, and reduces congestion and air pollution associated with automobile use.

Goal: More non-motorized transportation trails, especially in urban areas. Trails need to be regarded as essential to a community's infrastructure as roads and sewers, not a luxury to be addressed after everything else is completed.

13) DISABLED AND ELDERLY ACCESS.

Explanation: Montana has a need for more trails and trail access for the elderly and disabled, especially in and around urban areas. Providing this type of access not only fulfills federal and state mandates, but promotes the health, welfare, and happiness of a large group of Montanans and visitors. As the population continues to age, this issue will become increasingly important.

Goal: A Montana trail system which offers a diversity of trail options for elderly and disabled trail users, with good information available on the opportunities.

14) TRAILHEADS.

Explanation: Trailheads should be planned, designed, and maintained to reflect the type and amount of use, and as an integral part of management. Facilities, road access, parking, and educational information should reflect the management goals of the trail, as well as accommodate use, educate users, protect resources, and reduce costs.

Goal: A Montana trail system which is marked by a strategically located and well-designed trailhead network, in which development is appropriate to the type and volume of use.

15) RESEARCH, PLANNING, AND DESIGN.

Explanation: As trail use increases and activities become more varied, the need for timely and accurate information on use, user preferences, conflicts, environmental impacts, and other pertinent information becomes increasingly important, as does the need for sharing of information among key agencies and individuals. Improved research, planning, and design can help alleviate conflict, protect resources, and provide a wide range of educational and recreational opportunities, in a safe and accessible manner.

Goal(s): 1) Research and data collection systems which efficiently gather and provide pertinent, timely, and accurate facts about trail use, conflicts, user preferences, environmental conditions, and other important information to the people who can utilize it; 2) Trail networks which are planned and designed to be interesting to travel, integrated with each other, and offer access to a wide range of other trail-related outdoor recreation activities, in geographically varied settings. Where practicable, trails should be integrated with interpretive and educational opportunities, and made accessible to the elderly and disabled (see accessibility section for more details).

Montana's Trails and Public Lands

Federal agencies manage 29 percent of the land base in Montana and 99 percent of the State's trail miles (see Figure E-1). Montana's ten national forests contain approximately 16.8 million acres of land, while the seven BLM field offices in Montana manage over eight million acres of land, mainly in the eastern and southwestern parts of the State. The National Park Service (NPS) administers six sites in Montana, including Glacier National Park, and a portion of Yellowstone National Park, totaling over one million acres. The U.S. Fish and Wildlife Service manages ten National Wildlife Refuges in Montana, as well as the National Bison Range, totaling more than 1,330,000 acres. Federal agencies also manage the designated units of the National Trail System in Montana (e.g., the Continental Divide National Scenic Trail).

At the time of the 1994 trail inventory, Montana contained 2,294 public trails, totaling more than 14,633 linear miles (ITRR 1994a). The U.S. Forest Service (FS) managed 2,075 trails (90 percent of Montana's total) and 13,496 trail miles (92 percent of total), concentrated in western Montana (see Table E-1). The National Park Service (NPS) managed 148 trails (six percent of State total), totaling 826 miles (six percent of total). In the inventory, the Bureau of Land Management (BLM) accounted for only nine trails (less than one percent of total), totaling 167 miles (one percent of total miles); by 1999, the BLM reported 49 trails, totaling 397 miles. Finally, National Wildlife Refuges constitute an important part of Montana's federal lands, but offer relatively few formal trail opportunities (less than one percent of the trails and trail miles in Montana).

Although the majority of public lands and trails in Montana are managed by the federal government, Montana Fish, Wildlife and Parks (FWP) manages over 400,000 acres of land throughout Montana, consisting of Wildlife Management

Areas, State Parks, and Fishing Access Sites. Additionally, FWP has purchased conservation and recreational easements on thousands of acres of private land in Montana. Most of FWP's formal trail opportunities are located in state parks. Overall, FWP manages less than one percent of the trails and trail miles in Montana (ITRR 1994a).

The State of Montana also owns 5.1 million acres of School Trust land, managed by the Trust Land Management Division, in the Department of Natural Resources and Conservation (DNRC). School Trust land generally consists of Sections 16 and 36 per township; in other cases these sections have been consolidated into larger parcels. Recreational use of school trust land was established in 1991, although trail use is informal. DNRC also owns a variety of recreation sites around the state associated with dams and reservoirs, some of which are leased and managed by FWP. At the time of the trails inventory, DNRC reported managing no formally designated trails.

Cities and counties reported managing one percent of the trails and less than one percent of the trail miles in Montana. Although none of the non-federal trail managing agencies or organizations in the inventory accounted for more than one percent of the State's total of either total trails or trail miles, they represent an important component of Montana's trail system, particularly trails closest to the urban areas where most Montanans live (ITRR 1994a).

Other trail managing entities in the statewide trails inventory included Indian reservations, the University of Montana, and private entities. Each of these categories totaled less than one percent of Montana's trails and trail miles (ITRR 1994a).

Table E-1: Montana's Trail Inventory

<u>Agency</u>	<u>Number of Trails</u>	<u>%</u>	<u>Miles of Trails</u>	<u>%</u>
USFS	2,075	90	13,496	92
National Park Service	148	6	826	6
Local Park and Rec. Depts.	28	1	60	<1
FWP	15	<1	28	<1
BLM	9*	<1	167*	1
USFWS	6	<1	5	<1
Univ. of MT	6	<1	21	<1
Indian Reservations	5	<1	6	<1
<u>Private</u>	<u>2</u>	<u><1</u>	<u>24</u>	<u><1</u>
Total	2,294	100	14,633	100

** Note: Data compiled in 1994 (ITRR 1994a). Although the comparative values remain generally similar, actual numbers have changed since 1994; by 1999, for example, the BLM reported 49 trails, totaling 397 miles. The trails and trail miles in the local parks and recreation departments category have also likely increased substantially since 1994, but updated numbers have not been compiled. Indian reservations and private trails are significantly under-reported because of incomplete responses to the survey. Abbreviations are as follows: USFS is the U.S. Forest Service; FWP is Montana Fish, Wildlife & Parks; BLM is Bureau of Land Management; USFWS is U.S. Fish and Wildlife Service.*

MAPS

In the Montana State Trails Plan, pages S-9 through S-10 contain map figures. Due to a constantly changing trail system, most of these maps are already outdated. The maps are intended to be general representations only and are not to be used as trail guides.

Map Index:

Figure E-1 Montana Trails

Trail Settings and Use Restrictions

The majority of Montana’s trails occur in relatively natural and primitive settings, with a significant portion located on the roadless public lands that comprise 11 percent of the State. The framework used to evaluate trail settings included six categories, ranging on a continuum from urban to primitive. The categories are based on the recreational opportunities spectrum (ROS) classification system, which is widely used by recreation managers in the Forest Service and other federal land managing agencies. Trails in the primitive category are generally in roadless areas over 5,000 acres, with a high degree of naturalness and a low level of development (Zinser 1995). Trails listed in the urban category, on the other hand, comprise a very low percentage of the total, but they are extremely important because they tend to be among the most heavily used trails. A summary of the trail setting for Montana’s trail system is as follows, based on the 1994 trails inventory and the ROS classification system:

Primitive non-motorized setting	27%
Semi-primitive non-motorized	26%
Semi-primitive motorized	8%
Roaded natural	18%
Rural	< 1%
Urban	1%

(Source: ITRR 1994a)

The majority of use restrictions on Montana trails pertain to motorized trail activities. Of the trail miles included in the 1994 trails inventory, 53 percent were explicitly closed to motorized trail use, falling in either the primitive or semi-primitive, non-motorized categories. While many of the remaining trail miles are open to motorized use, this is not true in all cases (e.g., urban trails tend to be non-motorized). In addition, there are seasonal and case-by-case

closures in areas that are generally open to motorized trail use.

The zones where the majority of motorized trail recreation occurs—roaded natural and semi-primitive motorized—includes 46 percent of the total Montana trail miles in the inventory. The inventory data on use restrictions supports this figure, indicated that ATV and motorcycle use is unrestricted on 1,045 trails, 46 percent of all Montana trails (ITRR 1994a). It is important to note that there have been significant changes in the type of restrictions since the inventory was completed (e.g., a 50 inch maximum width limit is now more typical on Forest Service land, for example, than the 40 inch rule common at the time of the inventory).

Under current federal policy, cross-country OHV use is often allowed, even in areas where designated trails and roads may be closed to motorized use. As of 2000, a joint Forest Service/BLM draft EIS is examining a variety of OHV management alternatives for Montana, North Dakota, and portions of South Dakota (USDA/USDO 1999b).

Some of the other trail use restrictions which were derived from the 1994 trail inventory are as follows (ITRR 1994a):

- All motorized and mechanized (bicycles) vehicles are prohibited from 12 percent of trails (e.g., in designated wilderness areas).
- Bicycles are prohibited from 11 percent of statewide trails.
- Stock animals are restricted on 9 trails, less than one percent of the state total. It is possible that restrictions on stock animals and possibly bike use were under-represented in the inventory, for undetermined reasons.



Montana Trail Use Patterns

Two statewide studies were completed during the 1990s that were intended to obtain comparative information on the popularity of various types of trail-related activities among Montanans. The two studies summarized below were designed differently, which helps explain some of the differences in responses.

Trail-related Activities

Participation rates were obtained from *The Montana Trail User's Study* (ITRR 1994b), which surveyed adult Montanans about their involvement in pre-selected trail-related activities during a six-month period in 1994. The questions in the survey asked respondents whether they had engaged in the activity, but did not specify that it actually had to occur on a trail (e.g., walking could have occurred on a sidewalk, for example).

- 70.0 percent of adult Montanans went dayhiking or walking for pleasure, by far the most popular type of trail-related activity in Montana
- 20.2 percent bicycled (conventional)
- 19.6 percent went four-wheel driving
- 19.4 percent went jogging
- 17.5 percent went horseback riding
- 14.4 percent went backpacking
- 14.4 percent went cross-country skiing
- 14.4 percent went mountain biking
- 11.6 percent used ATVs
- 9.1 percent went off-road motorcycling

Another portion of this survey attempted to gauge what additional activities Montanans engaged in while on trail-related trips. According to the results, respondents said they did the following activities while on a recent, summer season (April 1-September 30) trail trip:

- 61.2 percent—wildlife viewing
- 44.1 percent—photography
- 40.8 percent—picnicking

- 24.0 percent—nature study
- 23.8 percent—fishing
- 23.8 percent—camping
- 14.5 percent—hunting
- 7.5 percent—swimming

Trail Use

Trail use rates were obtained from FWP's *Montanan's Assessment of Montana Fish, Wildlife and Parks Programs* (1998), which asked respondents if they had used a trail during the previous two year period, and if so, what activities they engaged in. Unlike the 1994 survey, the questions were linked specifically to trail use, although "trail" was not explicitly defined.

Survey results indicated that 56 percent of adult Montanans had used a trail during the two-year sample period (FWP 1998). Of those trail users, participation by activity was as follows:

- 90 percent went hiking
- 11 percent went horseback riding
- 6 percent went bicycling
- 4 percent went cross-country skiing
- 2 percent used ATVs
- 2 percent used 4X4s
- 2 percent used off-road motorcycles

User Days

Another way of examining resident participation in trail-related activities are user days, which are based on the average number of days spent engaging in a specific activity. The average number of days participants engaged in various activities during the six-month sample period varied widely (ITRR 1994b):

- Jogging—20 days
- Walking and hiking—19 days
- Off-road motorcycling—9.5 days
- Horseback riding—9 days
- Mountain biking—9 days
- Cross-country skiing—5.5 days
- ATV—5 days
- Backpacking—4 days

Trends in State and National Trail-related Participation

The limited amount of available trends data suggests that most trail-related recreation is increasing in popularity among Montanans: Non-motorized trail activities such as walking, hiking, and cross-country skiing increased substantially since the 1960s, although horseback riding declined during the 1970s and 1980s (FWP 1993).

Off-highway vehicle registration trends in Montana also affirm the growing popularity of motorized trail activities. Between 1990 and 1998, for example, ATV and motorcycle registrations increased by 156 percent, rising from 7,399 to 18,953 (DOA/DOI 2000b). A survey conducted by University of Montana researchers estimated that 100 percent of registered ATVs and nine percent of registered motorcycles are used in off-highway situations (Sylvester 1995).

Truck registrations in Montana also increased between 1990 and 1998, although not nearly as dramatically as OHVs. During that period, registrations climbed 13 percent, rising from 268,466 to 304,696 (DOA/DOI 2000b). According to the University of Montana, approximately nine percent of trucks registered in Montana are used off-highway (Sylvester 1995).

Non-resident visitation data also suggest increased participation in trail activities. Montana attracted two and a half million more visitors in 1995 than in 1983 (ITRR 1997). Between 1990 and 1994, nonresident visitors to Montana increased by 30 percent, an annual average increase of six percent. By 1998, over nine million tourists visited Montana, many of whom participated in trail-related outdoor recreation. The small amount of data available on non-resident participation rates confirms the popularity of day/nature hiking by visitors to Montana. Over 30 percent of nonresident visitors to Montana National Forests participated in day/nature

hiking, and 5 percent went backpacking or mountain biking (ITRR 1991).

Nationally, outdoor recreation is exploding in popularity, with trail use and trail-related activities among the fastest growing categories of use. In 1995 over 94 percent of Americans participated in some form of outdoor recreation at least once, up from 89 percent in 1982-83 (Cordell, Teasley, and Super 1997).

Hiking, among the most popular trail-related outdoor activities, is also among the fastest growing in the country, with over 47.5 million participants in 1994, a 94 percent increase since 1984 (Cordell, Teasley, and Super 1997). Off-highway driving grew by 44 percent, with over 24.5 million participants by 1994. Mountain bike use has also grown explosively at the national level, while cross-country skiing has grown at slower rates, and horseback riding has experienced declines in participation.

Other outdoor activities engaged in by millions of Americans that often involve trail use include hunting, fishing, and nature watching. Slight declines in the total number of hunting and fishing participants were more than made up for by the 54 million Americans engaged in bird watching by 1994, a 155 percent increase since 1982. Outdoor adventure sports such as rock climbing, ice climbing, back country skiing and snowboarding, are also experiencing rapid gains in participants, many of whom use trails as travel routes to desirable recreation sites.

Trail User Attitudes

The following section summarizes Montana trail user attitudes on a number of significant issues, including trail supply, access to trails, trail use and management, conflict and compatibility, and trail preference (ITRR 1994b and FWP 1998). It is worth noting that while the 1994 and 1998 surveys referenced here represent some of the best and most comprehensive information available about Montana trail user attitudes, the 1994 data, in particular, is increasingly dated. It



is impossible to say conclusively how some of the attitudes may have changed over time without doing another survey, but it would seem reasonable to assume that conflicts between different types of users have increased since then.

Attitudes About Montana's Trail Supply

Need For More Trails Statewide

- 20 percent of respondents in the *Montana Trail Users Study* (1994b) indicated that there were enough trails in the state.
- 43 percent of respondents felt there were not enough trails.
- 36 percent of respondents were either neutral or didn't know.

Need For More Trails Locally

- Nearly 50 percent of respondents agreed that more trails were needed in their communities, compared to 20 percent that disagreed. Strong support for urban trails, alternative transportation and commuter routes, and greenways was also expressed during the Plan public scoping period.
- Strong support was expressed for increasing trails near urban areas, including quiet, non-motorized trails.

Rail-Trails

- Nearly 69 percent of respondents supported using abandoned railroad grades as trails, with five percent opposed.

Access to Trails and Public Land

- Access to trails and public land was the most often identified statewide trail issue during the public scoping period, as well as the second most often identified local trail issue.

- Conversely, only 14 percent of Montana residents reported being dissatisfied with access to public land for recreation in the 1994 survey, while 79 percent indicated they were satisfied.

Attitudes About Trail Use and Management

In general, Montanans are satisfied with their most recent trail experiences, with 95 percent expressing satisfaction, four percent dissatisfied, and only one percent with no opinion. However, many trail users have strong opinions on trail use and management, as summarized below (ITRR 1994b and FWP 1998).

Crowding

Montana trail users have some sense of being crowded while using trails, but from a statewide perspective the situation does not yet appear to be at a crisis level. For example, 24 percent of the respondents in the 1994 survey agreed that too many people are using their favorite trails, 30 percent disagreed, with 46 percent either neutral or having no opinion. The survey was not designed to identify particular trails or locations where there may be severe localized crowding.

Trail Preference

- A majority of the respondents in most of the trail user categories expressed a preference for "backcountry" trails, including 60 percent of the largest group of trail users—walkers and dayhikers. (It is important to stress that while there is a high preference for backcountry trails, urban trails are more likely to get heavily used because of their close proximity to where people live. The need for more urban trails was mentioned frequently during the scoping period.)
- Approximately 62 percent of the cross-country skiers preferred groomed trails.
- During the Plan scoping period, preserving quiet, non-motorized trail opportunities was one of the most important issues, with 216 of

the 315 (69 percent) of the written comments addressing this perspective.

- Alternatively, strong support for keeping existing motorized trails open was expressed during the eighteen public scoping meetings held in cities throughout the state.

Trail Etiquette

- 51 percent of Montana trail users agreed that poor trail etiquette is a problem, 19 percent disagreed, and 30 percent were neutral or didn't know.

Trail Information

- 55 percent of respondents felt trail location information could be improved, 19 percent of the respondents disagreed, while 26 percent were neutral or didn't know.

Attitudes About Conflict and Compatibility

While conflicts between trail users do not appear to be especially severe when examined from a statewide perspective, the perceived lack of compatibility between motorized and non-motorized users, in particular, suggests a potential for much greater conflict in the future if use levels continue to increase, and trail supply and management remain relatively constant. In Montana, the expressed lack of compatibility between motorized and non-motorized trail users has likely not yet led to greater conflicts due to the state's numerous trail opportunities and low population.

Results from the 1994 and 1998 surveys are summarized below (ITRR 1994b and FWP 1998):

Conflict

In general, trail users expressed some concern about conflicts on trails, but there was not strong agreement on the severity of the problem.

- 35 percent of the respondents agreed that conflicts between users occurred on their local trails, 24 percent disagreed, and 41 percent were neutral or didn't know.
- 45 percent agreed that trail conflicts were relatively minor, 15 percent disagreed, 40 percent had no opinion or didn't know.
- Over 9 percent of the responding trail users reported experiencing some sort of conflict on their last trail trip.
- Of those reporting conflicts, nearly 80 percent said they involved mechanized forms of trail use (this includes motorized and non-motorized uses such as mountain bikes).

Compatibility

- In general, Montanans have relatively strong opinions about motorized trail use: 28 percent of Montanans strongly disapproved of legal motorized trail use, 13 percent disapproved, 22 percent strongly approved, 31 percent somewhat approved, and 6 percent had no opinion.
- Survey results indicate that non-motorized users do not find motorized uses to be compatible with their type of trail activities. The percentage of non-motorized users who felt motorized use was compatible with their activity never climbed above 25 percent.
- Only 12 percent of backpackers felt motorcycles or four-wheel vehicles were compatible with their types of trail activity.
- In a break from the overall trend, 25 percent of the cross-country skiers felt snowmobiling was a compatible activity. Interestingly, fewer than 13 percent of snowmobilers said cross-country skiing was compatible with snowmobiling.
- Motorized users who felt non-motorized uses were compatible, ranged between 25 percent and 60 percent, depending on type of motorized use.
- Horseback riders generally feel non-mechanized trail use is more compatible with their sport than mechanized uses. For example, 72 percent of respondents rated walking as compatible, but only 33 percent felt similarly about mountain biking.
- Motorized vehicles were judged to be even less compatible; only 16 to 18 percent of



horseback riders felt motorized uses were compatible.

Trail Funding

Funding for new trail maintenance and construction is a critical Montana trail issue. Trends during the 1990s indicated decreasing federal funding for trail construction and maintenance in Montana, with a growing backlog of maintenance needs. Forest Service estimates show that maintenance funding decreased approximately twenty percent from fiscal year (FY) 1995 to FY 1997, for example, with construction funds decreasing by approximately forty percent during the same period. Limited federal funding is the primary factor preventing agencies from reaching their trail-related goals.

A number of federal, state, local, and private sources of funding and assistance are available to governments and private organizations. Private sources of trail funds include non-profit organizations, as well as corporate and business sponsors. Federal programs constitute the largest funding source for trails in Montana; some are specifically dedicated to trails, while others are primarily aimed at reducing pollution, promoting alternative transportation, preserving open space, or protecting natural resources. The most important programs were created by the Transportation Equity Act for the 21st Century (TEA 21); these include the Surface Transportation Program, the National Recreational Trails Program, and the Congestion Mitigation and Air Quality Improvement Program (CMAQ). Other programs include Community Development Block Grants, the Entitlement Program, and the Small Cities Program.

The Parks Division of FWP administers three trail grant programs: The federally-funded Recreational Trails Program (RTP), which funds both motorized and non-motorized projects; the state-funded Off-Highway Vehicle (OHV) Program; and the Snowmobile Grant Program. A much more detailed description and analysis of

the State RTP and OHV Grant Programs is found in the later in the *Trails Plan*, and especially in the *Trails Program PEIS*.

Montana Trail Supply and Demand

Montana's trail supply has not kept pace with increased use. Additionally, growth in population and tourism, combined with expanding participation in outdoor recreation, is putting pressure on the current trail system and increasing the demand for more trail opportunities.

Amidst this growing demand, Montana's overall supply of trails has declined, with trail creation eclipsed by the loss of existing trails. This decline has occurred mainly in the backcountry, due road building, logging, abandonment, lack of maintenance and other factors. Between 1945 and the late 1990s, at least 9,000 miles of trails disappeared in the national forests of Montana, as forest system road miles climbed from an estimated 8,600 miles to approximately 32,900 miles (Madej 1988 and USFS 1997). While some of these trails were not originally built specifically for recreational purposes, they still represent a net loss of recreational opportunity. In addition to this trend, there has also been a loss of opportunities for motorized trail users during the past decade, as trails and roads are closed to these types of uses to protect resources and reduce social conflicts.

During the past ten years, there has been growing interest in providing more trails in Montana's urban areas, where a significant portion of the State's residents reside. Changes in land ownership and land use have often resulted in subdivisions, suburban sprawl, different attitudes, and a changing sense of community. One consequence of this has been a loss of unofficial (often privately owned) trails and access to adjacent public lands, especially in the rapidly growing counties concentrated in western Montana. Conversely, funding for and interest in urban trails has

increased during the last decade, and there have been some spectacular success stories throughout Montana.

Although Montana trail users generally prefer more primitive settings when they have time to get away from home, they tend to use urban trails on an every-day basis, which results in heavy, regular use. An ideal situation—and one that is emerging in a number of Montana cities—is a well-developed urban trail system, with good connecting links to more primitive trail systems on surrounding federal lands. In both urban and rural parts of Montana, the majority of the demand is for non-motorized trails, although motorized use has been increasing rapidly as well, with motorized users facing a diminished range of opportunities due to environmental concerns and social conflicts.

Geographically, eastern Montana has comparatively few trail opportunities. In addition to providing recreational opportunities for local residents, more trails in eastern Montana would help support efforts by some communities in this part of the state to increase tourism.

View from the End of the Trail

There is a considerable amount of information to digest in the *State Trails Plan*, and many recommendations that form a general map for Montana's trails future. It is up to trail users, organizations, and managers to sort through what is presented, and apply recommendations they feel will be helpful. From the perspective of FWP's involvement in trails, the main implementation vehicle for the Plan is the State Trails Grant Program; based on what is in this Plan,

recommended changes to the Program are detailed in the Trails Program PEIS.

As with many other things that generate passion, Montana's trails also produce disagreement, sometimes leading to conflict and controversy. It is worth reminding ourselves that disagreement is natural, entirely American, very Montanan, and even healthy—if done respectfully with an ear toward listening and learning. That is the spirit we hope this Plan approaches its subject. It is unlikely many people will agree with everything in this document, but there should be a fair amount that is common ground. So, in your tour through Montana's trail system, please *do* disagree and debate, but don't forget all that is shared and how lucky we are to share it, in the context of a political system that allows for and even encourages differences in perspective.

When all is said and done, there are a number of philosophical themes woven through the Plan that are worth stating explicitly:

- In spite of their differences, trail users will accomplish far more working together than separately.
- With a growing and increasingly diverse number of people using trails, the need for respect toward resources and other users is even greater than in the past.
- All trail users have a place somewhere on the system. We must accept that every use won't necessarily be allowed everywhere, but that all the uses covered by this plan are legitimate trail-related activities.
- There are a growing number of trails success stories throughout Montana; be inspired by what others have accomplished, and build on their good work in your area.
- Finally, don't ever forget that trails are supposed to be fun, and that trail users of all types, sizes, and shapes are generally fun people to be around, and are on the trail for many of the same reasons you are. Go out and enjoy Montana's great trails!



CHAPTER 1. INTRODUCTION

Rationale For Montana State Trails Plan

Montana's impressive system of trails is a destination for trail enthusiasts from throughout the country, but the network could be even better. Most of the trails are concentrated in western Montana and are managed by the U.S. Forest Service, with comparatively few opportunities in the eastern portion of the State.

The majority of the trails are in rural areas, away from Montana's principal urban centers. Logging and road building have resulted in a decrease in total trail miles since the 1940s. Rapid development in and around fast-growing urban areas is cutting off access to areas traditionally used for outdoor recreation. While many states have built impressive networks of railtrails, Montana has lagged behind, failing to capitalize on some spectacular opportunities for utilizing abandoned rail corridors as trails. At the same time, trail use is increasing significantly. Along with this, as in many other states, conflicts occur between trail users about what types of uses should be permitted in various areas.

This Plan is the first attempt to examine Montana's trail system from an inter-agency, statewide perspective. If there is a single, key reason for doing the Plan, it is to help squeeze the most value out of limited trail resources by avoiding duplication of effort, and establishing and focusing on high priority needs. The Plan will help provide direction to trail managers about where they should devote scarce resources to better serve trail users, by identifying who the users are, what they are doing, what they prefer, and where they are going.

An important goal of this Plan is to improve trail-related communication in Montana. Enhanced communication between trail managing agencies will help them meet public trail needs more

effectively. Improved communication between trail user groups will make them a more effective force in lobbying for an improved trail system. More contact between user groups and managing agencies will result in the latter receiving more and better information about trail conditions, needs, and conflicts, while users will learn more about the challenges facing trail managers.

The Montana State Trails Plan is not intended to usurp the management plans and planning processes used by the various federal, state, and local agencies which manage the state's trails. Rather, the Plan is meant to provide trail managers with information about the trail system and the people who use them, and to produce general, statewide recommendations on trail issues and needs. The primary focus of the Plan is on trails owned and managed by the federal, state, or local levels of government. Privately owned trails were included as part of the trails inventory and are part of this Plan, but they are a minor part of the overall state trails network.

The Montana Department of Fish, Wildlife and Parks (FWP) is the appropriate coordinating agency for public trails in Montana due to its unique position as the statewide outdoor recreation managing agency and as administrating agency for a number of federal outdoor recreation and trails grants. FWP was given the authority by the Montana Legislature "to plan and develop outdoor recreational resources in the state," including the receiving and dispensing of funds for this purpose (Montana Codes Annotated [MCA] 1997, 23-2-101).

FWP's efforts to provide for and manage outdoor recreation must always be carefully balanced against its resource stewardship responsibilities, as laid out in Goal C of the agency's *Vision for the Future* statement: FWP will "maintain and enhance the health of Montana's natural environment and the vitality of our fish, wildlife, cultural, and historic resources through the 21st century" (FWP 1998d).

In order to comply with funding requirements of the federal Land and Water Conservation Fund Act (LWCF) of 1965, the FWP is required to periodically prepare a “comprehensive outdoor recreational plan” (SCORP), which evaluates the demand and supply of outdoor recreation resources and facilities (23-2-103, FWP 1993). The SCORP must include: A) an evaluation of the demand for and supply of outdoor recreation resources and facilities in the State; and B) a program for implementation of the plan (FWP 1993). The FWP is required to coordinate with, and represent the interests of, all agencies responsible for outdoor recreation, in order to implement the resulting SCORP recommendation

The 1993 Montana SCORP identifies a statewide trails plan as perhaps the most significant of the three key components of the next SCORP. This Plan is intended, at least in part, to fulfill SCORP requirements. The National Park Service, in a 1991 report, also strongly encouraged the development of a comprehensive state trails plan as integral to the future National Trails System Plan. A state trails plan is also required in order for a state to qualify for funding by the National Recreation Trails Fund Act.

Under the Montana Environmental Policy Act (MEPA), FWP is required to prepare a detailed statement on environmental impacts of programs significantly affecting the environment (Administrative Rules of Montana [ARM] 1997). According to FWP rules, an “action” includes a program directly undertaken by an agency, and project or activities supported through a grant. The Department must conduct a “programmatic review” to analyze the impacts of a series of actions, programs, or policies. In order to comply, FWP is developing a programmatic environmental impact statement (PEIS) that addresses social, economic, and environmental impacts of the trails grant program; the document is not intended to be an all-purpose environmental analysis for individual trail projects. The managers of individual trail projects would still be responsible for complying with both MEPA and the federal National Environmental Policy Act (NEPA) for specific projects.

Overview of Planning Process

Traditionally, trails planning in Montana is undertaken by the agency managing the trail, in cooperation with trail users and the organizations they belong to. Until now, there has never been a comprehensive effort to examine how the trails managed by each agency fit together. The planning process for the Trails Plan/PEIS began in 1994 with the establishment of a Trails Plan Advisory Committee (TPAC).

The TPAC was intended to be a technical group composed mainly of agency representatives, with the mission of assisting FWP with the planning initiative. Representatives from the following groups and perspectives were invited to participate:

- U.S. Bureau of Land Management (BLM)
- U.S. Forest Service (USFS)
- National Park Service (NPS)
- Montana Recreation and Parks Association (MRPA)
- Montana Department of Transportation (MDOT)
- Montana State Trails Advisory Committee (Non-motorized representative)
- Montana State Trails Advisory Committee (Motorized representative)
- Montana League of Cities and Towns
- Montana Association of Counties
- Montana Institute for Tourism and Recreation, University of Montana
- Montana Department of Fish, Wildlife and Parks (FWP)
- Travel Montana, Montana Department of Commerce
- Disabled Access Issues
- Montana Office of Indian Affairs
- Montana Historical Society (MHS)

The majority of the groups listed above were active participants through the initial stages of the planning process. Two members of the Plan Committee listed above were appointed by the existing State Trails Advisory Committee

(STAC), one each to represent motorized and non-motorized users.

The STAC is a statewide committee composed of representatives from various trail user groups which makes recommendations on trails funding and other trails related issues (see Appendix A for list of members). In addition to having representation on the Plan Committee, the STAC members were periodically updated on progress, and played a significant role in developing and reviewing the Plan. Trail uses represented on the STAC include the following:

- Hiking
- Horseback Riding
- Off-highway Motorcycling
- ATV
- Cross-country Skiing
- Snowmobiling (not covered in this Plan)
- Bicycling
- Off-highway 4x4 driving

A number of sources were utilized to complete this plan. The Institute for Tourism and Recreation Research at the University of Montana in Missoula was contracted to undertake two major research projects. Beginning during the fall of 1993, the Institute surveyed trail users about their trail use during the previous six months (capturing summer use). The second phase of the survey was initiated during April, 1994, and was designed to capture data on winter trail use. More details about the trail user survey are discussed later in the Plan.

The Institute also completed an inventory of designated trails in Montana. Trail managing entities were contacted to supply trail data including location, length, elevation range, prohibited uses, and other information. Key themes that emerged from the inventory are discussed later in the Plan.

A considerable amount of information in the Plan was derived from the public involvement phase of the planning process. Early in the plan development process, a series of eighteen public scoping meetings were held around the state to gather information on what trail-related issues

were most significant. In total, more than 400 people attended the meetings. In addition to information gathered at the meetings, more than 315 written comments were received during the scoping period. Two reports containing prioritized lists of issues were compiled from both the meetings and written comments, and were made available to both advisory committee members and the public (FWP 1995a, 1995b).

Following the scoping period, a consultant was hired to assist with research for the Plan and PEIS, and assemble a draft version of the PEIS. While the research formed the core of the PEIS, much of it was also useful in putting together the Plan. Both the Plan and PEIS relied on the same public involvement process.

The information from the scoping period was consolidated into an interactive plan “workbook” containing draft issues, goals, and strategies for people to review and comment on. The workbook was intended to be an intermediate phase of public involvement, in between the public scoping period and the draft Plan/PEIS review period. An initial draft of the workbook was circulated among both technical and user group advisory committee members for review, and then revised and made available to the public and large numbers of staff in the managing agencies.

Finally, the information which came out of the Plan/PEIS research, scoping phase, and workbook was consolidated into a draft plan. As with the workbook, the draft Plan was first reviewed by advisory committee members and agency staff, before being made available for public review.

Key dates and process steps in the Trails Plan/PEIS development process are as follows:

- * **October, 1993:** Summer use trail attitude survey mailed to random sample of Montanans.
- * **April, 1994:** Winter use trail user survey mailed to random sample of Montanans. Trails Plan proposal presented at Montana State Trails Conference.

- * **June, 1994:** Initial meeting of Montana State Trails Plan Advisory Committee; additional members added for second meeting. The STAC Committee also was periodically appraised of Plan/PEIS progress.
- * **September, 1994:** University of Montana completes final reports on state trail inventory and trail user surveys.
- * **October, 1994:** Draft scoping document completed.
- * **November, 1994:** January, 1995: Eighteen public scoping meetings held around the state, in nine locations.
- * **February, 1995:** Report summarizing results from scoping meetings completed.
- * **July, 1995:** Report summarizing written public scoping comments completed.
- * **September, 1995:** Consultants hired to assist with Plan/PEIS research.
- * **November, 1995—January, 1996:** Interactive “workbook” completed for advisory committee review. Workbook contains draft issues, goals, and strategies, with space for writing in changes or comments.
- * **January, 1996—May, 1998 (general):** Work proceeds on Plan/EIS research, writing, and mapping. Advisory Committees continue to meet to discuss Plan/EIS development.
- * **February, 1996:** Second draft of workbook made available for public and additional agency review. Public workbook is designed to be an intermediate public involvement step, in between the scoping meetings and draft Plan/PEIS public review.
- * **1997-1998:** Interns and staff work on plan, as time allows.
- * **January 1999:** New consultant hired to help complete Draft Trails Plan and Programmatic EIS.

- * **May 1999:** First internal review Draft Trails Plan/PEIS completed.
- * **August-October, 2000:** Public review of draft Plan/PEIS. Open houses held in Kalispell, Missoula, Great Falls, Helena, Bozeman, Billings, and Miles City. Approximately 325 comments were received on the drafts from the public, organizations, and agencies. (An overview of the public comment period is included in Appendix C of the Plan, with a more complete description of substantive comments and FWP responses in the PEIS Appendix.)
- * **November, 2000:** FWP Trails Advisory Committee meets to review public comments and suggest agency response to substantive issues.
- * **April, 2001:** Trails Plan/PEIS released, after being revised based on public and agency comment.

Definition of “Trail”

For the purposes of this Plan, “trail” will be defined very generally as a path, right-of-way, or other linear corridor used by the public for outdoor recreation (including both motorized and non-motorized modes), or alternative (non-motorized) transportation. The broad definition of trail used in this Plan is designed to ensure that the research in the document is comprehensive and—to the greatest extent possible—accurately reflects (but not necessarily endorses) what’s occurring on the ground.

In addition to what is stated above, the definition used in the federal program guidelines for the Recreational Trail Program (RTP) is also applicable to the main scope of discussion in the Plan and PEIS. In the guidelines, recreational trail is defined as follows:

A thoroughfare or track across land or snow, used for recreational purposes including but not limited to, such uses as bicycling, Nordic (cross-country) skiing, day hiking, equestrian activities, jogging or similar fitness activities,

trail biking, overnight and long-distance backpacking, roller skating, in-line skating, dog-sledding, running, snowmobiling, aquatic or water activity, and vehicular travel by motorcycle, four-wheel drive, or all-terrain off-road vehicles. The term “thoroughfare or track” excludes roads generally accessible by low-clearance passenger vehicles (unless those roads are specifically designated for trail use by the managing agencies), but includes high-clearance primitive roads.

A point worth stressing is that the definition used in this Plan is descriptive, rather than legally prescriptive. Managing agencies use a variety of ways for defining and/or describing what a trail is, and the definition used here must be broad enough to encompass all of them.

Primitive roads such as those managed by the Forest Service and BLM are included because the federal guidelines for the RTP Program allow the use of grant money for these types of routes. Also, these roads often function as access routes to trails. According to Forest Service classifications, a road is a route that is more than 50 inches wide. However, other managing agencies maintain routes they call trails that are wider than 50 inches, so a specific width as part of any trail definition won't work for the purposes of this Plan.

One major type of trail use not covered in the Plan is snowmobiling, as that was covered in an earlier document (i.e., Snowmobile PEIS, 1993). Water-based trails are another type of use not addressed in this Plan. Because of the growing interest in and use of Montana's waterways, there is a need for more water recreation planning, but it is beyond the scope of this Plan.

A more specific definition of trail was used to compile the *Montana State Trails Inventory*, completed as part of the planning process. In part, the greater specificity was required because in order to count trails, the managing agencies had to know they existed, their length, and where they were located, information that is not available for informal trails, for example. The criteria

used to define trails in the inventory was as follows (ITRR 1994a):

- * Limited to vehicles less than 50 inches wide (i.e., this would exclude four-wheel drive vehicles such as SUVs and trucks, but not ATVs and off-road motorcycles).
- * Must be officially classified as a trail by the agencies which manage it (i.e., informal trails or game paths were not included).
- * Trail must be periodically maintained.

Because of the complexity of trail issues in the state, the discussion in the Plan will not be strictly limited by the criteria used in the inventory. A number of important trail issues identified during the public scoping meetings fall outside the boundaries of the trails inventory, including the following:

- * Primitive roads and undesignated routes are heavily used for a number of trail related recreation activities, especially motorized uses. At the same time, such roads are potential sources of trails, and are discussed to varying degrees in the Plan and PEIS.
- * Some undesignated and/or unmaintained routes on public land may be heavily used by trail users. In some cases, new trails are being illegally constructed on public land, while others are created through use over time.
- * Some corridors which are not currently under public ownership may have the long-term potential to eventually become designated trails.
- * Some roads which are closed to vehicular use in winter are used for snowmobilers, cross-country skiers, and other users.
- * Bike lanes and wide shoulders are often used as trails, but were not classified as such in the inventory. While these types of facilities are not the main focus of the Trails Plan, they will be discussed. The Montana Department of Transportation is undertaking a bicycle/

pedestrian plan in the next few years which will address these facilities in more detail.

- * Paved bike trails can easily be wider than the 50 inch limit used in the inventory.

Overview of Trail Managing Agencies

Montana contains over 14,600 miles of trails, managed by a number of federal, state, and local agencies. Although federal agencies, especially the Forest Service, manage by far the majority of trails and trail miles, other agencies play a key role in providing trail opportunities not served by the big players, such as trails near urban areas. More details on agency policy, management and planning—as well as specific contacts—is found in the Appendix.

Federal

The U.S. Forest Service

Montana's national forests, containing approximately 16.8 million acres of land and 92 percent of the state's trail miles, fall under the jurisdiction of the Northern Region (or Region One) of the Forest Service, based in Missoula, Montana (ITRR 1994a). This land is divided into ten National Forests, including the Beaverhead, the Bitterroot, the Custer, the Deerlodge, the Flathead, the Gallatin, the Helena, the Kootenai, the Lewis and Clark, and the Lolo, which are further broken down into 43 ranger districts. The Beaverhead and Deerlodge National Forests have combined management.

The National Trails System Act established a National Trail System consisting of trails of national significance, including those designated for recreation, scenic, and historic reasons. Presently, three national trails occur in Montana: the Continental Divide Scenic Trail, the Lewis and Clark Historic Trail and the Nez Perce (Nee-Me-Poo) Historic Trail. Although a large portion

of the trail miles that occur in Montana are on Forest Service (as well as private) land, the National Park Service administers the trails.

Additionally, the Forest Service is currently undertaking a feasibility study for the Great Western Trail, a candidate for National Trail System status running from Canada to Mexico through the Intermountain West. In Montana, three potential corridors running from Glacier National Park to Yellowstone National Park have been identified.

The National Park Service

The National Park Service (NPS) administers six sites in Montana, including Glacier National Park, a portion of Yellowstone National Park, Bear Paw National Battlefield, Big Hole National Battlefield, Bighorn Canyon National Recreation Area, and the Grant-Kohrs Ranch National Historic Site. Collectively, these sites include six percent of Montana's trail miles (ITRR). Most NPS trails in Montana are in Glacier and—to a lesser extent—Yellowstone National Parks. A number of the trails in Glacier and Yellowstone connect with adjacent Forest Service trails, and some Glacier trails link with those in Waterton Lakes National Park in Canada.

The Bureau of Land Management

There are seven Bureau of Land Management (BLM) field offices in Montana: Billings, Butte, Dillon, Lewistown (with field stations in Great Falls and Havre), Malta (with a Field Station in Glasgow), Miles City, and Missoula, manage over eight million acres of land. BLM lands are concentrated in eastern and southwestern Montana. Most BLM trails in Montana tend to be informal; the agency lacks the vast system of designated trails found on Forest Service and National Park Service Lands. At the time of the trail inventory, the BLM managed one percent of Montana's trail miles (ITRR).

The U.S. Fish and Wildlife Service

Montana has ten U.S. Fish and Wildlife Service (FWS) National Wildlife Refuges (NWR) in Montana that offer opportunities for outdoor recreation, including Benton Lake, Blackfoot Coulee, Bowdoin, Charles M. Russell, Hailstone, Halfbreed, Lee Metcalf, Medicine Lake, Ninepipe, Red Rock Lakes, as well as the National Bison Range. These units total over 1,333,400 acres of land, including three Wilderness Areas totaling over 64,000 acres. Most trail opportunities on FWS land are informal; the agency manages less than one percent of the state's designated trail miles (ITRR).

State

FWP

The Montana Department of Fish, Wildlife, and Parks (FWP) manages State Parks, Fishing Access Sites (FASs), and Wildlife Management Areas (WMAs) around the state. Many state parks have (generally short) designated trails within their boundaries, while FASs and WMAs provide opportunities for informal trail-related activities. FWP manages less than one percent of the designated trail miles in the state, although some of these are very heavily used due to their proximity to major urban areas (ITRR).

The Parks Division has administrative responsibility for the Division's recreation programs, including three trail grant programs, as follows: (1) the Montana Snowmobile Grant Program; (2) the Off-Highway Vehicle (OHV) Program; and (3) the Recreational Trails Program. More information on the FWP grant programs is provided later in the Plan, as well as in the Trails Program PEIS.

State School Trust Lands

State School Trust Lands are managed by the Trust Land Management Division, in the Department of Natural Resources and Conservation

(DNRC). The primary purpose of School Trust Land is to generate revenue for Montana public education, although conditional recreation is allowed. A recreational use permit must be purchased to recreate on School Trust Lands. Trail use on School Trust Lands is informal, with no formally designated system of trails.

University of Montana/Lubrecht Experimental Forest

The Lubrecht Experimental Forest was created in 1937 by a gift of land from the Anaconda Copper Mining Company to the Montana Forest and Conservation Experiment Station (MFCES), part of the University of Montana, Missoula. The property contained a primitive road network, narrow gauge railroad grades, and old wagon and horseback trails, some dating back to early settlement of the surrounding valleys in the late 1800s. The MFCES began its formal trail program in the early 1970s with a series of cross-country ski trails. Overall, the University manages less than one percent of the state's trail miles (ITRR).

The Director of Field Stations for the MFCES oversees and guides trail management. Goals include providing public recreation and education. The forest plans to expand its system of cross-country ski trails, as well as allowing other non-motorized uses in the future. The forest will be developing these trails in conjunction with local educators, and other state and federal agencies.

Local Governments

Urban trail systems are typically managed by city and county governments. Although comprising less than one percent of the total number of trail miles in the state, these routes are disproportionately significant because of their location in and around population centers, and their subsequent high amount of use. Altogether, nine cities and one county reported managing trails in the 1994 Montana Statewide Trail Inventory (ITRR),



although this number has likely expanded since then. These and other urban areas also have parks and open space utilized for informal trails.

Preserving open space has become a big issue in many cities and towns. For example, Helena and Missoula have passed open space initiatives, which fund the acquisition of land to preserve open space. A number of city/county agencies and local citizen groups have developed strategies that consider and encourage greenway preservation in new developments. Access to existing public lands has also become an issue in some areas, with local governments and citizen groups utilizing a number of strategies to maintain and create public access. For example, a number of Forest Service trail heads have been created by local planning agencies from the dedication of parkland required of new subdivisions by the Montana Subdivision and Platting Act (MCA 1997).

An overview of Missoula's trail system—which serves as an excellent case study for urban trails in Montana, is included in the Appendix—while later sections of the Plan contain more detailed information on Montana's urban trail systems.

Benefits of Trails

Trails produce multiple benefits and significantly improve a community's quality of life by providing opportunities for outdoor recreation, protecting natural and cultural resources, and creating economic opportunities. Trails provide alternative transportation routes that reduce pollution as well as encourage participation in outdoor social, fitness, and educational activities. The benefits accrued by a strong trail system are consistent with FWP's mandate to manage outdoor recreation, and the Montana State Park System's mission of

conserving the scenic, historic, archaeological, scientific, and recreational resources of the state and providing for their use and enjoyment, thereby contributing to the cultural, recreational, and

economic life of the people and their health (Montana Codes Annotated 1997, 23-1-101).

Montanans and visitors alike highly value outdoor recreation, open space, and natural areas; trails are an increasingly important component in the public enjoying these resources and activities.

Outdoor Recreation

Trail-related activities are among the most popular and fastest growing outdoor recreational activities in the Nation. Trails are also an important component of outdoor recreation in Montana and are used by over 55 percent of all Montanans (FWP 1998). Trails are often utilized for other very popular outdoor activities, including picnicking, sightseeing, wildlife and nature viewing, photography, fishing, and hunting. Enjoying nature, physical fitness, stress release, adventure, and affiliating with others interested in the same activity are all important motivations to resident trail users (ITRR 1994b). In general, "trails provide all the myriad personal and social benefits generated by participation in outdoor recreation, such as improved health and fitness, relaxation, challenge and adventure, family togetherness, and an increased awareness of nature (Moore and Ross 1998)." Montanans agree that more trails are needed, especially near their communities.

Trails can provide safe and enjoyable transportation links between parks and recreation areas, as well as schools and other public facilities that encourage participation in outdoor recreation and education.

Social/Community Benefits

Trails provide low-cost recreational and leisure opportunities for a wide spectrum of the population. In urban areas, in particular, trails have become a kind of modern common space, one of the few places where people from all ethnic backgrounds and socio-economic classes can mingle together in a pleasant, non-threatening

atmosphere (Macdonald 1998, Moore and Ross 1998). In rural areas trails are the common ground for many types of recreation and groups of people, contributing to a community's cohesiveness. Trails can foster a community's sense of place and continuity with history by preserving important landscape features. Trails can foster community pride, which is especially important in rapidly changing urban and suburban areas; trails often become a rallying point for civic minded individuals and organizations providing community space for a variety of activities and organizations.

Perhaps the most important role trails can play in society is strengthening the family. Family bonds are strengthened by sharing of leisure time: "Leisure is the single most important force developing cohesive, healthy relationships between husbands and wives and between parents and their children" (Canadian Parks/ Recreation Association 1997). Children develop discipline, cooperative behavior, and an understanding of group dynamics by participating in outdoor activities, while participation in such activities with family members helps develop a strong and stable family bond, which in turn benefits the larger community.

Organized recreational and conservation activities in general also contribute many social benefits to the community, including reducing crime and anti-social behavior by providing alternatives, reducing alienation and loneliness, increasing understanding between cultures and groups, and providing a purpose in life: "Recreation is preventative medicine for social ills caused by youth and young adults having nothing to do" (National Association of State Park Directors 1997). Organized outdoor recreation opportunities for youth helps relieve boredom, curb social problems, develop career and leadership skills, and encourages healthy living (Canadian Parks/Recreation Association 1997). A strong trail system, especially in urban areas, is an integral component for providing these opportunities

In rapidly growing urban areas, public trails can preserve traditional recreation areas as they are

threatened by development, abandonment, and closure, which helps mediate the affects of urban sprawl on the quality of life. The creation of trails in formerly abandoned areas can reduce existing public nuisances and hazards, and discourage garbage dumping. For example, urban trail systems in Helena, Butte, and Great Falls are important components of urban revitalization efforts.

Alternative Transportation

Non-motorized trails offer safer and more enjoyable alternatives to motorized transportation. Public trails, especially in urban areas, promote a number of public benefits by offering alternatives to motorized transportation that reduce overall pollution, energy consumption, and traffic congestion, which in turn saves society money and improves the overall quality of life.

Nationally, annual costs of traffic congestion have been estimated at \$100 billion. A Minnesota study estimated that between five and 22 cents would be saved by the public for every automobile mile replaced by walking or biking, just in reduced pollution and traffic congestion (The National Bicycling and Walking Study [NBAWS] 1994). Although Montana generally has low levels of congestion, a growing population, and expanding residential areas are contributing to increased traffic and pollution in the larger urban areas.

Alternative transportation routes encourage non-motorized transportation, which in turn helps alleviate traffic congestion and pollution. Lack of safe routes is a significant deterrent to many who would walk or bike instead of drive, with a 1991 Harris Poll showing that of the 46 percent of adult Americans who had ridden a bicycle in the previous year, 53 percent would sometimes ride to work if they had safe, separate paths to ride on, and 20 percent of Americans in general would commute by bicycle if there were enough bike trails and safe lanes on roadways (NBAWS 1994, Macdonald 1998).

Billings and Missoula, with the worst air quality in the state, foresee existing and proposed foot and bike routes improving air quality, which in turn will help these community's meet air quality standards (Yellowstone County 1994, City of Missoula 1994).

Just under eight percent of Montanans walked to work everyday in 1990, almost twice the national average, with walking a traditional form of transportation in small towns across the state and in the older large urban areas (Montana Department of Transportation 1994). Presently, just under one percent of all journeys to work use bicycles, which is also almost twice the national average.

Many of Montana's bigger cities were built as pedestrian cities with greater densities of people than seen currently, keeping distances from home to work within walking or bicycling distance. However, as urban sprawl and development increase commuting distances and traffic, alternative transportation becomes more problematic. Trails that preserved or replaced these traditional pedestrian and bicycle routes would encourage non-motorized commuting.

Conservation and Resource Protection

Linear corridors of land for trails and greenways (linear shaped nature parks) can play an important role in conserving and providing access to natural resources. Urban trails which preserve greenways help control pollution. Through the process of oxygenation and the removal of carbon dioxide, for example, plants in these corridors help increase air quality. Plants also reduce particulate matter in the air, including sulfur dioxide and heavy metals, as well as provide temperature moderation by the evapotranspiration of groundwater and providing shade. Greenways reduce air, noise, and heat pollution, and provide a healthier environment than roads. By preserving land, trail corridors help provide areas for groundwater infiltration, which cleans water and controls flooding. Riparian areas, floodplains, and buffers along

streams that are protected from development are ideal for urban trails. Greenways in riparian areas provide flood control and filter pollutants from surface water and help replenish groundwater supplies.

Vegetation along trail corridors can provide important wildlife habitat and corridors for wildlife movement. In developed or agricultural areas, trail corridors offer a conduit for populations of plants and animals to mix, increasing genetic variability. It is worth noting that it is the habitat in the trail corridor—rather than the actual trail—that produces many of these environmental benefits. In some cases, the trail is one of the major justifications for acquiring the corridor and keeping it in a natural state. Environmental benefits produced by the physical trail are related to its capacity for providing alternative transportation options (e.g., people may be biking or walking to work, rather than driving).

Trails and trail corridors can also preserve remnants of the past that remain integral to a sense of community and place. Remnant landscapes and landscape features in Montana are mainly agricultural, although in some cases (e.g., Butte, Helena) trails can preserve mining landscape features or industrial and transportation areas. Access to natural areas and recreational opportunities tend to decrease as land traditionally used by the public is developed, especially in faster growing urban areas. These historical trail systems are important recreation and alternative transportation routes for communities and should be protected.

Finally, trails can also play an important role in resource protection in that they help manage where recreational activity occurs. Properly designed and located trails can keep people (and their pets) away from sensitive cultural and natural resources. A trail that winds through important cultural resources, for example, may allow people to view and experience features that are less vulnerable to human presence (or vandalism), while steering users away from highly critical resources which could be threatened by too many people. Directing human activity to

well-located trails can also help reduce disturbances to wildlife because human encounters become much more predictable—they are largely confined to routes where animals expect them to occur. Concentrating people along corridors—as opposed to recreation which occurs all over the landscape—can also help reduce the spread of noxious weeds. Of course, there are some areas which are so sensitive that *no* recreational activity should occur, on trails or otherwise.

Health Benefits

Trails encourage and provide opportunities for fitness activities, helping reduce health costs. Increased fitness lowers mental and physical health care costs, and improves work performance (Canadian Parks/Recreation Association 1997; National Association of State Park Directors 1997). The most successful exercises are moderate intensity activities that can be easily incorporated into daily activities, including walking, biking, or roller blading (NBAWS). Bicycling or walking for transportation is a more sustainable, time-efficient, and inexpensive means of maintaining a healthy level of fitness than other more organized fitness activities. However, one of the most frequently cited reasons for not biking is concern over safety and traffic. Trails provide a safer and more appealing alternative than roads, therefore encouraging participation.

Although the health benefits of regular physical activity are widely known, most American get too little exercise, with forty percent of adults considered sedentary (The National Bicycling and Walking Study 1994). A number of studies have concluded that moderate exercise will extend the average life span of adults by over two years. Physical recreation is also the most influential factor in reduced mortality rates among Americans, and has an inverse affect on coronary heart disease, hypertension, and diabetes.

Cardiovascular diseases affects approximately six million Americans, causes 500,000 deaths a year, and costs upwards of \$135 billion annually

(Canadian Parks/Recreation Association 1997). The leading cause of heart disease is lack of physical exercise, with over 20 percent of deaths from heart disease caused by lack of exercise. Physical activity also benefits older people's long-term health, resulting in increased mobility, reduced mortality, and an overall increase in the quality of life.

Physical activity also benefits mental health by reducing levels of depression, stress, and anxiety, while increasing self-esteem, emotional stability, and self-control. Natural areas and trails not only encourage participation in outdoor activities, they provide psychological benefits to individuals as well, including exposure to beauty, solitude, and new experiences, thereby providing relaxation and stress reduction. Especially in urban settings, trails help provide a refuge and escape from the human environment and daily routines.

Environmental, Historical and Cultural Education

Trails provide significant opportunities for environmental, historical, and cultural education. Trail systems offer inexpensive and interesting hands-on educational experiences, which in turn elicit a greater appreciation of neighbors and community, local and statewide history, and natural resources and the environment. By preserving cultural, historical, and natural areas, trails present the opportunity for interpretive education in unique outdoor settings, which in turn can foster interest in further learning.

Educational outdoor recreation activities, including visiting historic sites and utilizing interpretive trails, are increasingly popular among visitors and residents alike. When vacationers were asked why they visited Montana in the summer of 1996, thirteen percent said viewing historic sites, eleven percent said Montana history, and eleven percent said Native American history (ITRR 1997). When they were asked what their primary reason for visiting the state was, six percent said Montana history. Education and interpretation, including interpretive trails, are integral to the mission of the Parks Division.

Interpretive trails also play an important role in the educational programs offered by the National Park Service, Forest Service, and the BLM, as well as local trail managing agencies.

Economic

Numerous studies using various economic measures conclude that public trails benefit local economies in a number of ways (Moore and Barthlow 1998, New Hampshire Office of State Planning 1997 et al.). Outdoor recreation, and trails in particular, are significant economic generators that attract businesses, draw tourism, create jobs, and increase property values. A strong trail system both helps preserve these natural amenities and provides greater opportunities for enjoying them. Public trails generate money that is circulated through the community, increasing property values and raising tax revenues.

Statewide, trail related activities contribute significantly to the economy. Design and construction of trails creates jobs, while trail users contribute to the economy significantly. According to *The Montana Trail User Study* (1994b), the average spring or summer trail trip in Montana involves \$42 worth of expenditures, with grocery and restaurant expenses accounting for nearly half the total, and fuel being about a third (see Figure I-1). Winter trips generate more economic activity, the typical excursion generating \$50 in expenditures, with nearly one-third spent on retail purchases. Retail was nearly three times as important in the winter, representing nearly a third of the total winter expenditures (see Figure I-2). In some Montana locations (e.g., West Yellowstone and Cooke City) winter trail use represents a substantial amount of the local economy.

A 1990 study by the University of South Dakota found that a rail-trail from Edgemont to Deadwood in the Black Hill of South Dakota generated direct expenditures of \$650,000 annually, while a 1989 study by the University of Wisconsin estimated that a 32-mile rail-trail linking two small communities in central Wisconsin added

over \$1.25 million to the local economy annually (Nebraska Department of Economic Development 1994).

Trails attract visitors and help rural communities diversify their economic base by increasing recreation opportunities that draw tourists (Rivers and Trails Conservation Assistance 1990). Trails are sustainable development in that they help preserve scenery, the most important reason given by tourists for visiting Montana. Scenic beauty and open space, with opportunities for outdoor recreation, are among the most popular reason given for choosing Montana as a home.

By improving the overall quality of life and providing outdoor recreation opportunities, trails are an important pull factor for businesses (Moore and Ross 1998). Quality of life for employees is a primary factor in determining location, especially for high-tech businesses not tied to customer location, and outdoor recreational opportunities, including parks and trails, are considered a prime component.

Trails also raise the value of adjacent property (Moore and Barthlow 1998). In Boulder Colorado, property values declined between \$4 and \$10 dollars for each foot of distance from a green way, while the aggregate property value of one neighborhood was increased \$5.4 million by a green way (Hanson and Lemanski 1998). In Montana, the Bozeman area Gallagator trail has also increased the value of adjacent property and homes, and is used as a positive selling point by local real estate agents (Gallatin Valley Land Trust 1992). A survey of adjacent homeowners revealed a number of associated benefits, including an overall increase in the quality of life.

Trails also have an indirect but significant impact on the economy by promoting physical activities. Increased participation in physical activity raises labor productivity, and reduces medical costs (Canadian Parks and Recreation Association 1997). Physical activity is also linked to reduced absenteeism, improved moral, and greater job satisfaction.

Figure I-1. Average Expenditures of Spring-Summer Trail Trip

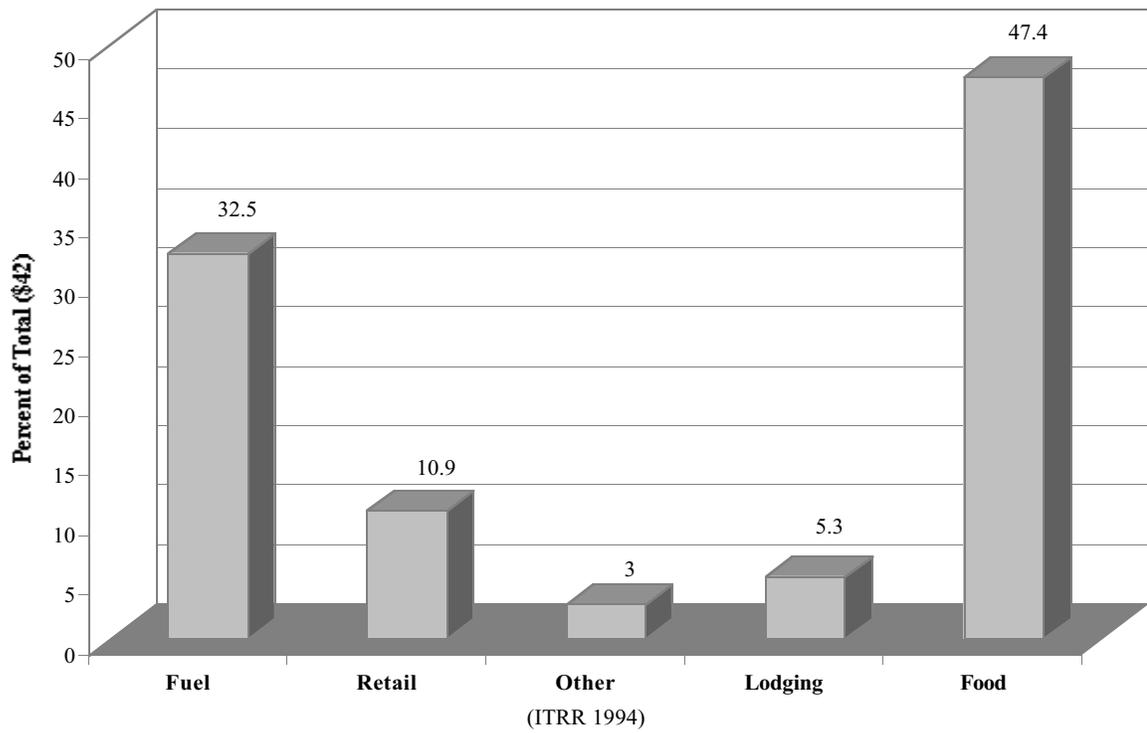
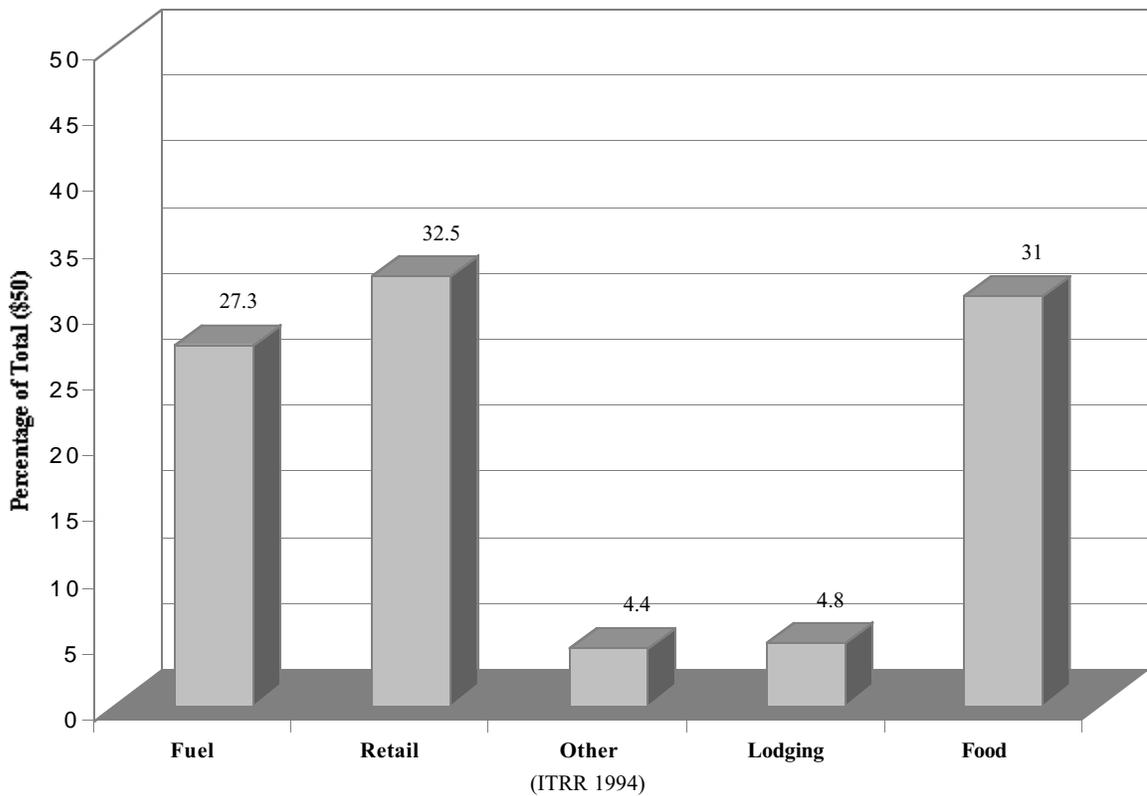


Figure I-2. Average Expenditures of Fall-Winter Trail Trip



Preserving land for trails and green ways also creates less ongoing public expenses than other types of development, especially in areas with added public costs to development, such as flood-prone areas, steep and unstable slopes, and environmentally important or sensitive areas.

Negative Impacts

It would be erroneous to imply that trails are inherently and necessarily beneficial, or that the supply of trails in Montana should expand indefinitely. There are limits to how many trails Montana's wild country can support and still sustain critical resources. Potential negative impacts of trails are discussed in the *Trails PEIS*, but it is worth briefly noting here some of the negative impacts that can result from trails.

Poorly located and/or designed trails, in particular, can contribute to soil erosion, sedimentation of watersheds, loss of vegetation, and wildlife impacts. Like roads, trails can provide an impervious surface, and hasten runoff into surrounding water bodies. Additionally, trails can be important conduits for the spread of noxious weeds. All of these adverse environmental impacts can lead to economic costs incurred by managing agencies, adjacent private landowners, and ultimately the public.

In addition, there are trail management issues that can lead to adverse social impacts. Trails with high levels of conflict between users can create tension and anger between user groups, leading to polarization. Conflicts have become especially acute in some parts of Montana during hunting season, where there are disagreements about what role ATVs and other motorized vehicles should play in the hunt. Social conflicts can result in economic impacts, as some types of users can be displaced from favorite locales by other users.

Trail Plan Components

A number of the most important thematic elements addressed in the Montana State Trails Plan are as follows:

- * **MONTANA TRAIL SYSTEM:** Chapter II discusses the existing trail system, including the number of trails, what agency manages them, their geographic distribution, their attributes, and what uses are permitted on them.
- * **MONTANA TRAIL USER ATTITUDES/ DEMAND/TRENDS:** Chapter III discusses trail use and user attitudes, as well as national and statewide trends affecting the use of Montana's trails. A series of surveys were utilized to determine trail preferences, use patterns, user conflicts, and other trail use and user attitude data.
- * **TRAIL ACCESS AND LINEAR CORRIDOR ALTERNATIVES:** Chapter IV discusses access issues, and identifies land use and land ownership patterns with potential for new trails and linkages, including abandoned rail grades, utility rights-of-ways, and other linear corridors.
- * **FUNDING OF TRAILS:** Chapter V summarizes funding sources for trails and trail-related projects, as well as potential future sources of funding, and public attitudes towards funding.
- * **KEY ISSUES AFFECTING MONTANA TRAILS AND TRAIL USERS:** Chapter VI identifies the most important issues affecting Montana's trails and the people who use them, as ascertained from public input and research. This story also identifies goals, specific objectives, and strategies for addressing the principal issues and unmet needs identified during the planning process, as well as recommendations about the future development and management of the Montana trail system.

CHAPTER II. INVENTORY OF MONTANA'S TRAIL SYSTEM

Introduction

This chapter provides a summary of Montana's trail system, including the location, number and miles of trails managed by various federal, state, and local agencies, as well as trail elevations, elevation changes, lengths, types of recreation opportunities, and restrictions on types of use.

Montana is a vast and geographically diverse state, containing a total area of over 145,300 square miles (380,850 square kilometers, 94,109,400 acres). The state is over 500 miles wide from east to west, and up to 320 miles from north to south. Elevation ranges from 1,820 feet above sea level in Lincoln County in the north-west corner of the state, to 12,799 feet at the summit of Granite Peak, in the Beartooth Mountains in south-central Montana. The mean elevation is 3,400 feet. Physiography generally consists of the Rocky Mountains in Western Montana, and the Great Plains to the east.

Over 29 percent of the land base in Montana is federal, with almost eighteen percent (16,752,700 acres) of the land in the state managed by the USFS (see Figure II-1). Approximately six percent of the land area is owned by the state, with less than one tenth of one percent owned by cities and municipalities.

According to the 1994 inventory, Montana contains 2,294 public trails, totaling more than 14,633 miles; the trails are located throughout the state, but are concentrated in the western mountainous areas. The Forest Service is by far the largest provider of trails in Montana, managing 2,075 trails (90 percent of state total) and 13,496 trail miles (92 percent of the state total)—see Figures II-2 and II-3. The National Park Service is a distant second, managing 148 trails (6 percent), totaling 826 miles (6 percent), with the BLM accounting for only nine trails (one per-

cent), totaling 167 miles (one percent). It is worth noting that since 1994, the number of trails managed by the BLM, in particular, has increased; by 1999 the agency reported 49 designated trails, totaling 397 miles (BLM 1999). These federal agencies account for more than 96 percent of the total trails, and 99 percent of total trail miles (ITRR, 1994a).

None of the other trail managing agencies or organizations in the inventory account for more than one percent of the state's total trails or trail miles. Nonetheless, trails managed by the other agencies represent a very important part of Montana's trail system, particularly trails closest to the urban areas where most Montanans live.

The majority of the information summarized here was obtained from *The Montana Trail Inventory*, a comprehensive inventory of Montana's trails undertaken by the University of Montana's Institute for Tourism and Recreation Research (ITRR 1994a).

Trail Inventory Methods and Definitions

The trails inventory study was the first (and to date, only) systematic review of the entire public trails system in Montana. While the trail system has inevitably changed since the inventory was completed, it still provides a good overall picture of the state's trail system. Data for the 1994 trails inventory was compiled from the following sources:

- * Maps and data bases produced by the U.S. Geological Survey, the U.S. Forest Service (USFS), the Federal Bureau of Land Management (BLM), and the National Park Service (NPS).

Figure II-1. Montana Land Ownership Patterns

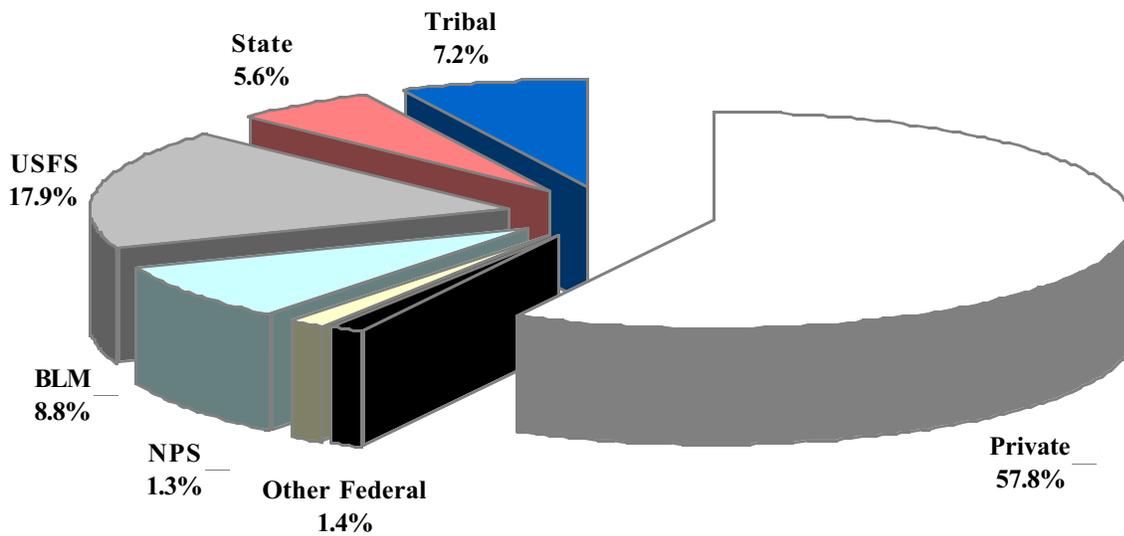


Figure II-2. Number of Trails in Montana By Managing Agency

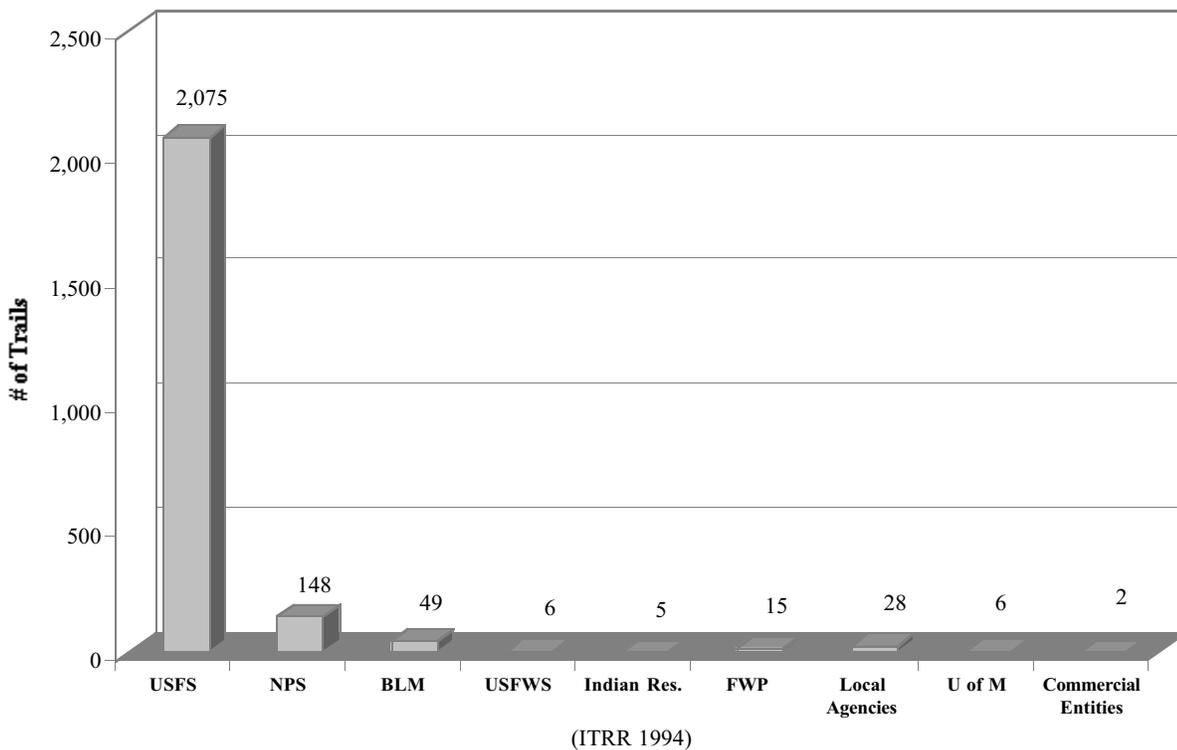
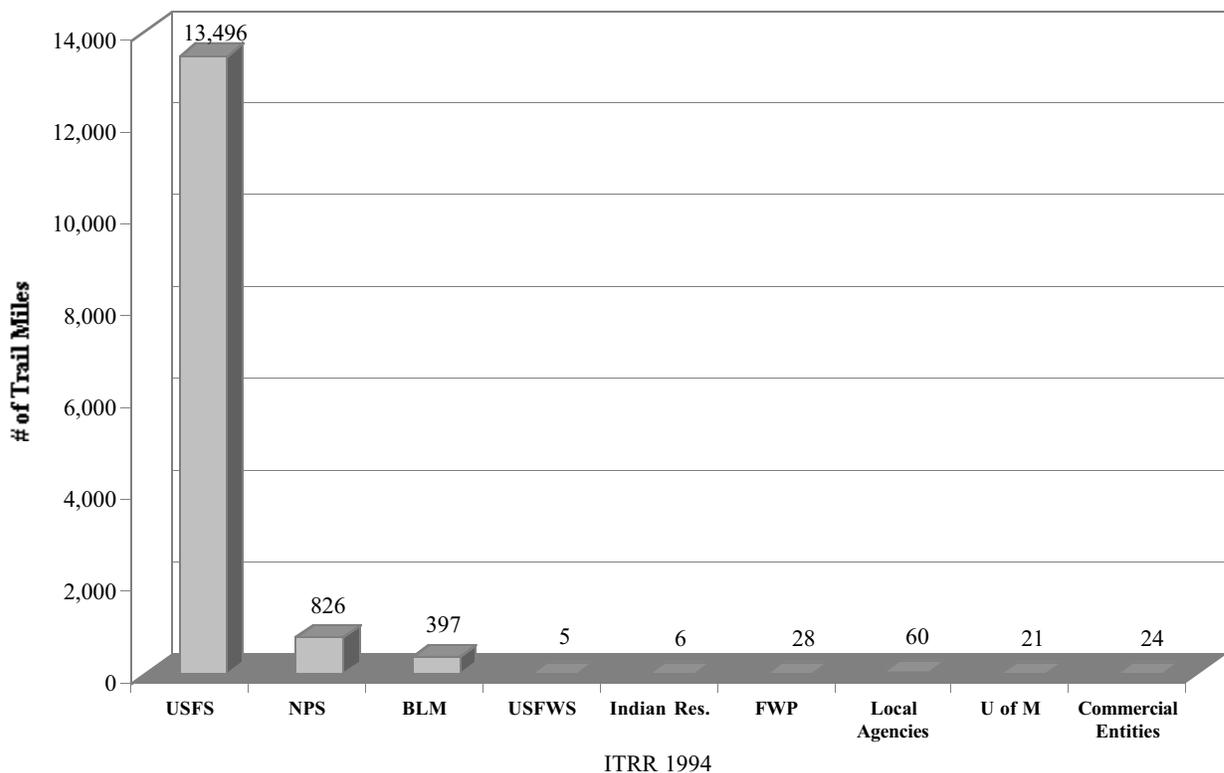


Figure II-3. Miles of Trails in Montana By Managing Agency



* Interviews and survey information from city, county, state, tribal, and federal officials, as well as private recreation providers.

A fairly specific definition of “trail,” (similar to the one formerly used by the USFS, the major provider of trails in the state) was used to focus the parameters of the inventory. In order to be included in the inventory, a route had to have the following characteristics:

- * The trail had to be a regularly maintained recreation or transportation pathway.
- * The trail had to be typically used by hikers, cross-country skiers, equestrians, bicyclists, or motor vehicles less than 50 inches wide; this would include motorcycles and all-terrain vehicles (ATVs), but not 4x4s.
- * The trail had to be purposefully planned and constructed for trail use (rather than being a game trail or informal fisherman’s path, for example).

Overview of the Montana Trail System

The Evolution of Montana's Recreational Trail System

The Montana recreational trails seen on the ground today do not represent a comprehensively planned system as much as a network that has evolved over time. Many trails in Montana began as game trails or Indian paths; as Europeans settled Montana, many of these routes continued to be used because, in many cases, they were the best routes over the terrain (see chapter 4 of the Trails Plan for more details on historic trails).

While most of today’s trails are used mainly for recreational purposes, pre-twentieth century trails mainly served economic, political, or social ends. Some of the most critical early trails—especially those following major river valleys—eventually

became wagon roads, highways, and/or rail lines (Wyss 1992).

In addition to trails that gradually evolved from earlier, pre-European routes, others were deliberately planned and constructed. Earlier in the twentieth century, many trails were cut as fire suppression routes. Others were built to service lookouts, access guard stations, get to hunting camps, and for other purposes. These early trails were mainly designed to accommodate foot traffic and/or pack stock. During the Great Depression of the 1930s, 25,000 young men between the ages of 18 and 23 were employed in Montana, working on trails, roads, and other infrastructure and natural resource projects (Wyss 1992). Over time, many of these routes became part of Montana's present-day managed recreational trail system.

As the twentieth century progressed, increasing leisure time, financial well being, and mass adoption of the automobile provided Montana residents and non-residents alike with the means to participate in trail-related recreational activities. Promotion of the national parks by railroads helped create an image in the minds of many Americans that Montana was a prime recreation destination, helping to stimulate interest in trail-related recreation.

One of the biggest trail-related changes that has occurred during the past fifty years has been a substantial loss of mileage in Montana's extensive backcountry trail system. Fire suppression trails that were no longer needed often reverted back to a natural state, or became informal routes no longer managed or maintained. Other trails were lost to road building, logging, or other activities.

During the past twenty-five years, a major change on Montana's trail system has been growing mechanized use (e.g., bicycles, motorcycles, ATVs, and snowmobiles) on federally-managed trails, which in some cases has resulted in wider trails, as well as conflicts between various types of users. In many cases, mechanized use grew gradually over time, and was

eventually recognized as a legal, managed use on the affected trail(s) through travel management planning processes. In other cases, these and other processes determined that mechanized uses were not an appropriate activity (e.g., in federally-designated wilderness areas). Like other types of decisions made on federal lands, trail planning processes must comply with the National Environmental Policy Act (NEPA). Because of NEPA and other federal rules and regulations; trails are no longer looked at in isolation, but things which are closely connected to and influence the larger natural, cultural, and social environment.

In recent years, there has been growing concern about cross-country motorized use, as well as the illegal construction of routes by users. In addition to illegally constructed routes, many non-system routes have taken shape gradually over time through use, with no conscious efforts at construction. One of the major debates among various users today is the extent to which user-created trails should become part of the designated trail system, on the one hand, or closed and returned to a natural condition, on the other.

Increasingly, planning and public involvement are critical determinants of Montana's future trail configuration. Recreation has become a major industry, and a significant component of the mission of federal land management agencies. Urban trails, in particular, have been the big growth area in the trail system, and there is increasing interest in assuring that these routes are connected to trails on surrounding federal lands. In Montana's backcountry, on the other hand, there is recognition by some users and managers that there are a limit to the number of designated and informal trails a particular area can support before adverse impacts become intolerable.

Federal Trail Managing Agencies

United States Forest Service

Montana's ten national forests contain 2,075 trails, totaling 13,496 miles, accounting for 90 percent of the total trails in Montana (see Table II-1, ITRR 1994a). Lolo National Forest contains 348 (17 percent) of the trails managed by the USFS in Montana, while the Flathead National Forest manages 327, sixteen percent of the total; these are the Montana national forests with the largest number of trails. Custer National

Forest manages 48 trails, the least number of trails among Montana national forests, with the remainder of the forests lying somewhere in between (see Figures II-4 through II-12).

Of the 13,496 total miles of trails within Montana's national forests, Flathead manages 2,223 miles (16 percent), while Custer National Forest, the only national forest in eastern Montana, manages only 300 miles, less than two percent of total. The rank of forests by miles of trails is generally consistent with their rank based on the number of trails.

Table II-1. Number and Total Miles of Trails in Montana's National Forests (ITRR 1994a).

<u>National Forest</u>	<u>Number of Trails</u>	<u>%</u>	<u>Miles of Trails</u>	<u>%</u>
Lolo	348	17	2,066	15
Flathead	327	16	2,223	16
Lewis and Clark	301	15	2,119	16
Gallatin	272	13	2,128	16
Kootenai	227	11	1,148	9
Beaverhead	175	8	1,089	8
Bitterroot	145	7	812	6
Deerlodge	119	6	750	6
Helena	113	5	861	6
<u>Custer</u>	<u>48</u>	<u>2</u>	<u>300</u>	<u>2</u>
Total	2,075		13,496	

Figure II-4. Lolo National Forest

MAPS

In the Montana State Trails Plan, pages 21 through 38 contain map figures. Due to a constantly changing trail system, most of these maps are already outdated. The maps are intended to be general representations only and are not to be used as trail guides.

Map Index:

- Fig 11-4
- Fig 11-5
- Fig 11-6
- Fig 11-7
- Fig 11-8
- Fig 11-9
- Fig 11-10
- Fig 11-11
- Fig 11-12



National Park Service

The National Park Service manages 148 trails (6 percent of inventoried trails), totaling 826 miles, in Montana. Glacier has 121 trails totaling over 700 miles of trails, Yellowstone (the Montana portion) has 16 trails totaling 110 miles, while the other park units manage less than five miles of trails (see Table II-2, Figures II-13 and II-14).

The majority of the National Park Service's trails are located in wilderness settings. Of Glacier's 1,013,595 acres, 96 percent are managed as wilderness, the same percentage as Yellowstone's 2.2 million acres (including most of the portion

within Montana). In addition to trails located within administrative units, the NPS also administers the Nee-Me-Poo National Historic Trail (a.k.a. the Nez Perce National Historic Trail) and the Continental Divide National Scenic Trail.

Bureau of Land Management

Although only five of the seven BLM field offices in Montana reported having trails, all of the offices offer opportunities for informal hiking and other trail-related activities (see Table II-3, Figures II-15 through II-22).

Table II-2. Number and Miles of Trails in National Park Service Administrative Units (ITRR 1994a).

<u>Administrative Unit</u>	<u>Number of Trails</u>	<u>%</u>	<u>Miles of Trails</u>	<u>%</u>
Glacier N.P.	121	82	704	85
Yellowstone N.P. ¹	16	11	110	13
Bear's Paw Battleground	5	3	2	<1
Big Hole National Battlefield	3	2	4	<1
Bighorn Canyon N.R.A.	1	1	4	<1
Grant-Kohrs Ranch N.H.S.	1	1	1	<1
Little Bighorn Battlefield N.M.	1	1	1	<1
Total	148		826	

¹Refers only to the Montana portion of the Park.

Table II-3. Number and Miles of Trails on Bureau of Land Management Field Offices, 1999.

<u>Field Office</u>	<u>Number of Trails</u>	<u>%</u>	<u>Miles of Trails</u>	<u>%</u>
Billings	-	-	-	-
Butte	11	22	249	63
Dillon	32	66	125	31
Lewistown	1	2	4	1
Malta	-	-	-	-
Miles City	2	4	12	3
Missoula	3	6	7	2
Total	49		397	

Note: These numbers have been updated from the 1994 statewide trails inventory.

Figure II-13. Glacier National Park

MAPS

In the Montana State Trails Plan, pages 41 through 61 contain map figures. Due to a constantly changing trail system, most of these maps are already outdated. The maps are intended to be general representations only and are not to be used as trail guides.

Map Index:

- Fig 11-13
- Fig 11-14
- Fig 11-15
- Fig 11-16
- Fig 11-17
- Fig 11-18
- Fig 11-19
- Fig 11-20
- Fig 11-21

United State Fish and Wildlife Service (USFWS)

The 1994 trails inventory found only six trails totaling five miles in length, located on three of the five USFWS management units included in the survey (see Table II-4). However, six other USFWS units, including the million-plus acre Charles M. Russell National Wildlife Refuge (NWR) and the 31,457 acre Medicine Lake NWR were not represented in the survey. It is likely that the number and miles of trails on FWS land is much more than indicated. In addition to designated trails, there are many informal trail opportunities on USFWS land.

State Trail Managing Agencies

Although FWP and the University of Montana were the only state entities that reported managing trails in the trails inventory, the state owns thousands of acres of additional land with the potential for trail opportunities, particularly school trust lands, which are managed by the Department of Natural Resources and Conservation.

Montana Fish, Wildlife & Parks

The seven regions of Montana Fish, Wildlife & Parks (FWP) manage over 400,000 acres of land throughout Montana, consisting of State Parks, Wildlife Management Areas, and Fishing Access Sites (see Table II-5 and Figure II-23).

In the 1994 trails inventory, five of the seven FWP regions reported managing fifteen trails, totaling 28 miles in length, mostly in state parks. Region Three in southwestern Montana had the most trails, with six trails totaling over seven miles in length. Statewide, the number of state park trail opportunities is growing, a significant planned expansion of the trail system at Lewis and Clark Caverns State Park being just one example.

Although FWP-managed trails represent a small component of the overall state system, the agency manages thousands of acres with numerous informal trail-related opportunities throughout the state, often in areas with few public trails. Additionally, a number of the state park trails, particularly in urban areas, are very heavily used.

As discussed elsewhere in this document, FWP's three trail grant programs play a major role in the development and maintenance of trails managed by other agencies.

Table II-4. Number and Miles of Trail on USFWS Administrative Units (ITRR 1994).

<u>Administrative Unit</u>	<u>Number of Trails</u>	<u>%</u>	<u>Miles of Trails</u>	<u>%</u>
Lee Metcalf N.W.R	4	67	4	80
National Bison Range	1	17	.5	10
Ninepipe N.W.R.	1	17	.5	10
Bowdoin National N.W.R.	—	—	—	—
Red Rock Lakes N.W.R.	—	—	—	—
Total	6		5	

Table II-5. Number and Miles of Trails on FWP Managed Property by Region (ITRR 1994a).

<u>Region</u>	<u>Number of Trails</u>	<u>%</u>	<u>Miles of Trails</u>	<u>%</u>
One	2	13	2	7
Two	3	20	4	15
Three	6	40	7	25
Four	2	13	1	4
Five	-	-	-	-
Six	-	-	-	-
Seven	2	13	1	4
Total	15		28	

State School Trust Land

Montana owns 5.1 million acres of State School Trust Land, generally consisting of sections 16 and 36 per township, although these sections have sometimes been consolidated into larger parcels. Managed through the Department of Natural Resources and Conservation, State School Trust Land managers reported no designated trails in the 1994 Trails Inventory (ITRR 1994a). However, these lands support a tremendous amount of recreational use, as authorized by House Bill 778 during the 1991 State Legislative Session: School Trust Lands are accessible to public recreational use with the purchase of a Recreational Land Use Permit (MCA 1997). In many cases, State School Trust Land contains roads and trails that are closed to motorized use, but utilized for trail-related activities. Motorized use is generally prohibited off designated roads.

University of Montana

In the 1994 inventory, the University of Montana in Missoula reported managing a one mile trail that is connected to the larger city and county trail system. Even though this is a small fraction of the state's total, it is likely among the most heavily used trails in the state, with a nearly constant stream of students and others during nice weather.

The University also manages a trails system located on the Lubrecht Experimental Forest. Lubrecht consists of 28,000 acres situated on the divide between the Potomac and Ninemile Valleys, in the Big Blackfoot River drainage of western Montana.

Lubrecht has approximately 20 miles in its formal trail system and well over 100 miles of old logging roads on the remainder of the forest. Non-motorized use is available on the trails and roads most of the year; the predominate use of the designated trail system is cross-country skiing. Motorized use of the trail system is not permitted, although two roads may be used by snowmobiles as part of the BLM's Garnet Range snowmobile trail network. The designated Lubrecht trail system has approximately 1000 feet of elevation difference (3800 to 4800).

Local Trail Managing Agencies

Local governments, nine cities and Flathead County, reported 28 trails totaling 60 miles in length, but since the trail inventory was completed in 1994, a number of new trails have been completed (see Table II-6). Many of the local trail systems listed below, while predominantly city trails, include county, state, and federal land.

Figure II-23. Montana Fish, Wildlife and Parks, State Parks

MAPS

In the Montana State Trails Plan, pages 63 through 64 contain map figures. Due to a constantly changing trail system, most of these maps are already outdated. The maps are intended to be general representations only and are not to be used as trail guides.

Map Index:

Fig 11-23



Table II-6. Number and Miles of Trails Managed by City/County Departments (ITRR 1994a)

<u>Departments</u>	<u>Number of Trails</u>	<u>Miles of Trails</u>
Helena	7	9
Missoula	5	12
Bozeman	4	10
Kalispell	3	10
Butte	5	8
Colstrip	2	2
Great Falls	1	7
Havre	2	2
Billings	1	4
Total	30	67

Note: Butte numbers updated in 2000.

Billings

Although Billings reported only one trail in the 1994 survey, since then a number of new trails, including a three and a half mile railtrail, have added to Billings’s park and trail system, consisting of over 2,500 acres of land (see Figure II-24). In addition to locally-managed trails, Lake Elmo State Park provides trail opportunities for Billings residents.

Bozeman

Trails include Burke Park (a.k.a. Pete’s Hill), the Gallagator Trail, and the new Hyalite View Trail (see Figure II-25). Ultimately, the city, Montana State University, and the Gallatin Valley Land Trust (GVLT) would like to complete the “Main Street to the Mountains” trails project linking the city of Bozeman to the mountain ranges that surround it.

Butte/Silverbow

Butte/Silverbow’s trail system includes the Blacktail Creek Restoration Project (see Figure II-26). In partnership, Butte and Anaconda are working together to develop the 26-mile Silver Bow Creek Greenway Corridor for recreational use. This is one of a number of adaptive reuse projects occurring in areas that were impacted by years of mining.

Additional trails in Butte include the Alice Park Trail (.3 miles); Mineyard Trail (1.6 miles); Blacktail Creek Trail (3.0 miles); Maude S. Canyon Trail (2.0 miles); and the Continental Trail (1.8 miles), which is a dedicated pedestrian/bike lane. Butte has an aggressive vision for its trail future, with many more miles of routes planned.

Colstrip

Formal trails-related recreational opportunities are offered primarily at the Castle Rock Recreation Area, including a trail along the perimeter of Castle Rock Lake. The trail has three separate access points, and is approximately three miles in length. It is paved and accessible to disabled users. Mileage markers are placed at 1/2 mile intervals around the lake, and are color coded to each access point. Trail maps, promotional brochures, and park guides are available to assist users.

Great Falls

The primary trail in Great Falls is the River’s Edge Trail, which follows the Missouri River (see Figure II-27). The trail is a multiple-use, non-motorized route which is mostly paved and accessible to wheelchairs.

The River’s Edge Trail passes through or skirts a number of parks (including Giant Springs State

Park), a municipal pool, tennis courts, playgrounds, and a series of dams and falls. In the process, it crosses a number of bridges and moves from open areas into narrow corridors between the river and rocky overlooks above. The trail's variety of environments, views, and recreational opportunities, not to mention solitude, make it one of Great Falls most attractive recreational amenities.

In the future, Great Falls hopes to build additional trails (including an equestrian loop) along the Sun River dikes west of town, as well as extensions of the River's Edge Trail further east along the Missouri.

Havre

The Havre Parks and Recreation Department manage two park areas that include approximately one and one-half miles of trails, and are otherwise undeveloped. In addition, Beaver Creek County Park (one of the largest county parks in the country) is located south of town, offering a range of recreational opportunities, including opportunities for cross-country hiking.

Helena

The first trail in the Helena parks system came about when the expansive Mount Helena City Park was established in 1902. Much of the present Helena trail system (including numerous hiking and mountain biking trails) is concentrated around this park (see Figure II-28).

The Mount Helena trail system is also connected to the Mount Helena National Recreation Trail, which is located outside the city limits on forest service land. Additional informal trail opportunities exist in the Scotch Gravel Hills, which are managed by the BLM on the outskirts of town.

Spring Meadow Lake State Park, which is managed by FWP, provides another popular trail opportunity for Helena residents, with a trail that circles the lake. There is also a short rail trail near the lake.

An Open Space Bond was passed by Helena voters in November of 1996. Although the Open Space Bond did not specifically propose new trails, it provides funding which can be used for the acquisition of open space and potential trail routes, as has already happened in the South Hills/Mount Ascension area above town. The Prickly Pear Land Trust has also been active in securing open space in the Helena area.

Kalispell and Flathead County

Flathead County Parks and Recreation began trail development in 1991 (see Figure II-29). Ultimately, the county would like to provide a network of trails throughout the valley.

The Rails-to-Trails of Northwestern Montana is a major partner with the local governments in this area. The group provides assistance, funds, and ideas for county rail-to-trails projects.

On the outskirts of Kalispell, FWP's Lone Pine State Park provides trail opportunities for local residents.

Missoula

Missoula's trail system consists of approximately seven miles of developed trails, two miles of informal foot paths, and two miles of undeveloped greenway corridor in the Rattlesnake Valley (see Figure II-30). Included are paved and unpaved trails, multiple and single use trails, bike lines and routes, and portions of the sidewalk system. A large portion of the trail system follows the Clark Fork River corridor through downtown Missoula, continuing east through Hellgate Canyon as the Kim Williams Trail.

In the 1990s, Missoula voters passed an open space initiative, which enabled a cooperative, inter-governmental purchase of Mount Jumbo, which provides trail opportunities and important wildlife habitat.

Figure II-24. Billings Urban Trails

MAPS

In the Montana State Trails Plan, pages 67 through 80 contain map figures. Due to a constantly changing trail system, most of these maps are already outdated. The maps are intended to be general representations only and are not to be used as trail guides.

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- Fig 11-30



Other Trail Providers

In addition to the agencies mentioned above, there are a number of other trail providers in Montana. The seven Indian reservations in Montana account for over seven percent of the state's land area, but only the Blackfeet Indian Reservation reported managing trails in the 1994 inventory (five trails totaling approximately six miles in length). However, a number of reservations are expanding outdoor recreation opportunities such as trails, and there are clearly some major trail systems that didn't show up in the inventory (e.g., trails in the Salish-Kootenai portion of the Mission Mountains). It is safe to say there are a large number of tribal trails in Montana, but no comprehensive inventory of how many or where they are located.

Private sector trail providers were also under-represented in the inventory, but in some areas provide significant trail opportunities. Private sector cross-country ski opportunities are especially important in some areas; some of the better known places include the Lone Mountain Ranch at Big Sky, the Bohart Ranch near Bozeman, the Izaak Walton Inn at Essex, and Alice Creek near Lincoln.

In addition to formal private trail opportunities, a significant amount of informal trail use occurs on private land at the edge of urban areas. In many cases, trail users aren't even aware the paths they are using are privately owned. This issue will be discussed in more detail later in the Plan.

Selected Land and Recreation Management Classifications

The types of experiences offered by a particular trail are intrinsically related to the character and management of the land surrounding it. In fact, many people select the trail they want to use based on the way the landscape is managed. A

Montana trail user seeking a completely non-motorized trail experience, for example, might choose to hike in Yellowstone National Park, or the Bob Marshall Wilderness. Conversely, a motorized trail user will be looking for areas that are managed to allow motorized use on trails. In inventorying Montana's trail system, it is useful to examine two different classification schemes: One involves the way certain lands are managed (e.g., roadless and/or wilderness areas), while a second scheme used by recreation managers (known as the Recreation Opportunity Spectrum, or ROS) categorizes areas according to the kinds of experiences they offer recreationists. The classification schemes are related; an area managed as wilderness, for example, would fall under the primitive, non-motorized ROS category. The primary focus of this section is federally-managed lands.

Wilderness Areas and other Roadless Lands

Designated wilderness areas and other roadless lands have a significant impact on the overall nature of Montana's trail system, in part because this is where many trails are located, and where many (non-motorized) trail users prefer to go when they recreate. In designated wilderness areas, *mechanized travel* (this includes motor vehicles, as well as non-motorized mechanical devices such as mountain bikes) is prohibited. To understand Montana trails and the experiences they offer, it is important to understand where wilderness areas and other roadless lands fit into the overall land management picture in the state.

This topic is inherently confusing because Congressionally-designated wilderness areas are only one subset of the overall roadless area picture in Montana. In addition to Montana's sixteen federally-designated wilderness areas (see Table II-7), some lands are designated wilderness study areas, and may be recommended for wilderness status by the managing agency. Other lands that are neither designated wilderness or wilderness study areas may be managed as "roadless" by the agency. Additionally, there are

Table II-7. Wilderness Areas in Montana

<u>USFS Wildernesses Areas</u>	<u>Size (acres)</u>	<u>Managing Entity</u>
Absaroka-Beartooth	920,000	Custer/Gallatin
Anaconda-Pintler	158,000	Beaverhead-Deerlodge/Bitterroot
Bob Marshall	1,009,000	Flathead/Lewis & Clark
Cabinet Mountains	94,000	Kootenai/Kaniksu (Idaho)
Gates of the Mountains	29,000	Helena
Great Bear	287,000	Flathead
Lee Metcalf	259,000	Beaverhead-Deerlodge/Gallatin
Mission Mountains	74,000	Flathead
Rattlesnake	33,000	Lolo
Scapegoat	240,000	Helena/Lolo/Lewis & Clark
Selway-Bitterroot	251,000	Bitterroot/Lolo
Welcome Creek	28,000	Lolo
BLM Wilderness Areas		
Bear Trap Canyon	6,000	Dillon Field Office
USFWS Wilderness Areas		
Medicine Lake	11,000	Medicine Lake W.R.
Red Rock Lakes	32,000	Red Rock Lakes W.R.
<u>UL Bend</u>	<u>21,000</u>	<u>Charles M. Russell W.R.</u>
TOTAL	3,452,000	

Note: Individual figures rounded to nearest 1,000.

lands that remain roadless, but are open to future roadbuilding, logging, and other activities based on current management. Overlaying all this, there have been various pieces of federal legislation introduced to Congress over the years—as well as proposals generated by public interest groups—that identify various configurations of Montana’s federal lands as future wilderness, the maps of which aren’t necessarily congruent with the classifications mentioned above.

At this writing, the Forest Service is taking public comment on a *Draft Roadless Area Conservation Environmental Impact Statement* that lays out several alternatives for future management of Forest Service inventoried roadless lands throughout the country. According to the draft EIS, an inventoried roadless area is defined as follows:

Undeveloped areas typically exceeding 5,000 acres that met the minimum criteria for wilderness consideration

under the Wilderness Act, and that were inventoried during the Forest Service’s Roadless Area Review and Evaluation (RARE II) process, or subsequent broad scale assessments, or forest planning (USFS 2000b).

In the draft EIS, the Forest Service utilizes five classifications in depicting its roadless area inventory information (USFS 2000b):

- Inventoried roadless areas identified in forest plans or other completed assessments adopted by the agency, and allocated to a prescription that allows road construction or reconstruction.
- Inventoried roadless areas identified in forest plans or other completed assessments adopted by the agency, and allocated to a prescription that does not allow road construction or reconstruction.

- Inventoried roadless area identified in forest plans or other completed assessments adopted by the agency, and allocated to a prescription that does not allow road construction or reconstruction, and the forest plan recommends future wilderness designation.
- Designated areas such as wilderness, wilderness study areas, wild and scenic rivers, and national monuments.
- National Forest System lands outside of inventoried roadless areas.

Nationwide, the Forest Service estimates that 22 percent of all its lands are in special designation categories (e.g., wilderness areas, national monuments, wild and scenic rivers, etc.) that restricts or prohibits roads. Another 28 percent (2 percent of the total land area in the U.S.) encompasses inventoried roadless areas that are the focus of the EIS, while the remaining 50 percent of National Forest lands are managed for a wide range of uses and activities (USFS 2000b).

According to the draft EIS, the preferred alternative proposes the following:

To conserve roadless areas, the...Forest Service is proposing to prohibit road construction and reconstruction in inventoried roadless areas within the NFS, unless they are needed for public health and safety, for reserved or outstanding rights, or for other specified reasons. No roads or trails would be closed because of these prohibitions (USFS 2000b).

Wilderness areas and the management of remaining roadless lands are controversial topics, sparking many different and strongly held opinions. Whatever one's opinions may be, it is important that they be based on accurate information; the following information helps place wilderness and other roadless areas within the

larger context of Montana's overall land management patterns (USFS 2000b; MWA 2000):

- Montana's total land area encompasses 94,100,000 acres, 29 percent (27,400,000 acres) of which is federal public land.
- Approximately 38 percent of Montana's federal land consists of roadless lands (including designated wilderness, wilderness study areas, and inventoried roadless areas).
- Roadless lands (including designated wilderness, wilderness study areas, and inventoried roadless areas) comprise 11 percent (10,400,000 acres) of Montana's total land area.
- Less than 4 percent (3,452,000 acres) of Montana's total land area is designated wilderness, 98 percent of which is managed by the Forest Service.
- A majority of Montana's trails are located within designated wilderness and other roadless areas, although the percentage has been declining due to road construction and other factors. Currently, approximately 44 percent (6,000 of the 13,500 miles) of the trail miles in Montana's national forests are located in undesignated (e.g., non-wilderness) roadless lands (Madej 1999).

Remaining roadless lands in Montana can be further broken out as follows (USFS 2000b; MWA 2000):

- Forest Service: Montana has 3,400,000 acres of designated Forest Service wilderness, and an additional 5,800,000 acres of inventoried roadless areas, out of a total of 16,900,000 acres of Forest Service land in the state. Based on the above acreage, approximately 20 percent of Montana's National Forest land is designated wilderness, with close to 35 percent in the inventoried roadless category. Montana ranks third in the Nation in the amount of inventoried roadless areas, after Alaska and Idaho. Forest Service inventoried roadless areas in Montana represent nearly 11 percent of the national total.

- BLM: There are 6,000 acres of designated BLM wilderness, and 470,000 acres of wilderness study area in Montana.
- National Park Service: There are 1,037,000 acres of roadless backcountry in Glacier and Yellowstone National Park (Montana's portion only).
- U.S. Fish and Wildlife Service (USFWS): There are 65,000 acres of designated wilderness managed by the USFWS in Montana.

In spite of the designation of official wilderness areas, the amount of roadless land in Montana has declined significantly during the last fifty years. Closely related to that decline has been a long-term loss of backcountry trails. Between 1945 and the present, for example, an estimated 9,000 miles of trails disappeared from Montana's national forests as a result of logging, road building, abandonment, and lack of maintenance (Madej 1988, 1999). Some of these vanishing trails were originally built as fire suppression routes, supply paths, and for other purposes, but they still represent a significant net loss of backcountry recreational opportunities.

During the same post-war period, Montana's national forest system road miles climbed from an estimated 8,600 miles in 1945 to 32,900 miles in the late 1990s (Madej 1988; USFS 1997). Forest road construction in Montana averaged 800 miles of new roads every year between 1962 and 1982 (Aderhold 1982). Nationwide, the Forest Service transportation system now includes 386,000 miles of roads (plus an additional 60,000 miles of unauthorized roads), with an estimated maintenance backlog of \$8.4 billion; annual budget allocations are less than 20 percent of what is needed for annual maintenance on the Forest Service road system (USFS 2000b).

National forests in northwestern Montana illustrate the trends that have occurred on a larger scale throughout the West. The amount of roadless areas in the Kootenai, Flathead, and Lolo National Forests decreased by 3.6 million acres from 1945 to 1994 (with 2 million acres lost since 1975), leaving 3.3 million roadless

acres, 1.3 million of which is already protected in wilderness areas. The remaining 2.0 million acres of roadless lands are fragmented into 106 parcels, with similar patterns occurring on Forest Service and BLM lands throughout Montana (MWA 2000). Roads are essential to access trails and other recreational opportunities, but when road networks reach certain densities, they can have an adverse impact on trail systems, the experience of many trail users, and natural resources.

In recent years, environmental concerns (e.g., impacts on endangered species such as grizzly bears) has prompted the Forest Service, in particular, to close or obliterate roads in some areas, one impact being reduced motorized access. Additionally, declines in timber harvesting on Forest Service land during the last decade has reduced the demand for new roads. Nationwide, road construction in the National Forest system declined by 85 percent during the last decade, from a high of 1,315 miles a year in 1991 to 192 miles in 1999. During the same period, approximately 2,660 miles of Forest Service road were decommissioned across the country (USFS 2000b). It is important to realize, however, that these relatively recent developments have emerged in the shadow of longer-term trends that have significantly changing the character of Montana's public land base since the Second World War. Additionally, increased OHV use has had varying impacts on many of Montana's remaining roadless areas, penetrating areas which were previously inaccessible to motorized traffic, and in some cases making them less desirable places to visit for non-motorized users.

In addition to the roadless area EIS, the Forest Service is working with the BLM on an EIS on cross-country motorized use in Montana, North Dakota, and portions of South Dakota (U.S. Departments of Agriculture and Interior 1999b). The study was prompted by concern about increasing cross-country motorized travel on federal lands. There are currently large tracts of federal land where particular roads or trails may be closed to motorized traffic either seasonally or permanently, but the surrounding landscape is

subject to no such closure. With the advent of increasingly powerful ATVs, cross-country motorized travel is now possible in areas that would have been physically off-limits twenty years ago. The preferred alternative in the draft EIS would prohibit motorized cross-country travel in the study area, but allow for some limited exceptions for particular activities (e.g., game retrieval, camping, disabled access).

The issues of cross-country motorized travel, roadless land management, and wilderness area designation are germane to this plan but transcend its jurisdiction, which is largely advisory. However, the results of the pending decisions made by the federal land managing agencies will likely have an important long-term impact on Montana's trail system. For close to two decades, Congress has been unable to resolve the controversial question of whether additional wilderness should be designation in Montana. At the same time, federal agencies have encountered mounting concerns about cross-country motorized use. At this writing, it is unclear what decisions will emerge from the roadless lands/OHV EIS processes, or the degree of resolution they will bring to these important Montana issues.

Recreation Opportunity Spectrum (ROS) Classifications

As part of the Montana Trails Inventory, managers were asked to evaluate the general character of the area traversed by trails under their respective jurisdictions. The Recreation Opportunity Spectrum (ROS) classification system (a tool widely employed by recreation resource agencies, including the Forest Service) was used to

categorize the responses (1991a). The intent of this evaluation was to get a general sense of the kinds of opportunities that are available in the Montana trail system. The ROS spectrum includes six classifications, ranging on a continuum from urban to primitive (see Table II-8). If a trail passed through more than one ROS zone, the predominate category along the route was used.

Trails in the primitive non-motorized category are characterized as occurring in remote roadless areas, generally over 5,000 acres in size, with a high degree of naturalness, and a low amount of development (Zinser 1995). On the other end of the spectrum, trails in the urban category generally have easy access, high development levels, and low naturalness. The other categories are aligned between these two extremes.

The ROS classification information indicates that the majority of Montana's trails fall at the wilder, more remote end of the spectrum, with 27 percent primitive non-motorized, 26 percent semi-primitive non-motorized, and 28 percent semi-primitive motorized. Comparatively few opportunities in more developed, urban-like settings occur, with only one percent of trails in urban settings, and less than one percent rural, although these percentages have likely increased since the inventory was completed. At the time of the study, only five miles of trail in the entire state fit the rural classification, suggesting a relative lack of trail connections between urban areas and the large tracts of federally-managed public land where most of Montana's trails are located.

Of the trail miles included in the 1994 inventory, 53 percent were explicitly closed to motorized trail use, falling in either the primitive or semi-

Table II-8. Recreational Opportunity Classification (ROS) Spectrum (ITRR 1994a)

Classification	Percent of Montana's Trails
Primitive non-motorized	27%
Semi-primitive non-motorized	26%
Semi-primitive motorized	28%
Roaded natural	18%
Rural	<1%
Urban	1%

primitive, non-motorized categories. While many of the remaining trail miles are open to motorized use, this is not true in all cases (e.g., urban trails tend to be non-motorized). In addition, there may be case-by-case closures in areas generally open to motorized trail use. The zones where the majority of motorized trail recreation occurs—roaded natural and semi-primitive motorized—includes 46 percent of the total Montana trail miles in the inventory.

The Forest Service, National Park Service, and BLM are the primary providers of trail-based recreation at the more primitive end of the spectrum, while local park and recreation departments, along with FWP, manage the majority of trails in more urban settings. The comparative lack of trails and trail miles in and around urban settings, where the majority of the population lives, is a major weakness in Montana's trail system that is addressed in the following chapters. Alternatively, although a large percentage of trails are in the primitive end of the continuum, the supply of these trails has declined significantly in the last five decades; this issue will be discussed in more detail later.

Use Restrictions

An important goal of the trails inventory was to gather information on the many types of use restrictions utilized throughout the state. Restrictions on various types of trail use are implemented for a variety of reasons, including federal regulations (e.g., designated wilderness areas), resource and wildlife protection, and user conflicts.

The inventory consolidated and tallied related restrictions in order to help determine the statewide prevalence of certain types of broad restrictions. Because some of the responses to the prohibited use portion of the inventory were vague, only broad trail use restriction patterns can be discerned.

The most commonly mentioned restrictions pertained to motorized vehicles. The specific

restriction mentioned most frequently was a prohibition on vehicles over 40 inches wide, a rule which bans vehicles such as cars, trucks, jeeps, and dune buggies, and ATVs, but allows bicycles, motorcycles, snowmobiles (unless otherwise restricted).

Since the inventory was completed, it is important to note that Forest Service policy on trail and vehicle widths has changed, and that a 50 inch maximum width is now more the standard than the 40 inch maximum used at the time the inventory was completed. The Forest Service has summarized their current policy as follows:

The current Forest Service Manual Direction for what determines a Forest System Road is anything greater than 50 inches wide. This is not a prohibition, only a definition. Forest Supervisors have been delegated authority to manage OHV use on trails up to 50 inches wide. Some Forest Supervisors have closed trails of varying width; however, a 40 inch closure is not a universal Forest Service closure (USFS, 2000a).

It is worth noting that the 50 inch limit only applies to designated Forest Service system trails, not cross-country travel. The change to a 50 inch limit made it possible for most ATVs to use trails where the limit is in place, but still precludes larger vehicles such as trucks and jeeps.

Trails inventory restrictions data—which includes responses from all trail managing agencies in Montana—is summarized below (ITRR, 1994a):

Motorized

- Vehicles greater than 40 inches wide are prohibited from 33% of trails (because of the new Forest Service rules mentioned above, this percentage is now probably less).
- All motorized vehicles including snowmobiles are prohibited from 30% of trails
- All motorized and mechanized (bicycles) vehicles are prohibited from 12% of trails (e.g., in designated wilderness areas, national parks, etc.).

- Motorized vehicles less than 40 inches wide (motorcycles and most ATVs, but not 4X4s) are unrestricted on over 60% of trails for at least a portion of the year, and all year on over 40%.

Nonmotorized

- Bicycles are prohibited during the (May-September) primary use season, on 256 Montana trails, constituting eleven percent of the statewide total.
- Stock animals are restricted on nine trails, less than one percent of the state total. It is possible that restrictions on stock animals and possibly bike use were under-represented in the inventory, for undetermined reasons.
- Urban trails are generally closed to motorized vehicles

In respect to the non-motorized list, it is possible that restrictions on stock animals and possibly bike use were under-represented in the inventory, for undetermined reasons. Looked at more generally, however, it is clear that the use of bikes and stock animals are permitted on the majority of Montana trails.

The inventory data indicated that ATV and motorcycle use is unrestricted on 1,045 trails, 46 percent of all Montana trails. The general validity of this statistic is supported by the ROS classification data, which indicates that 46 percent of inventoried trails are located in ROS zones where motorized uses are typically permitted, mainly semi-primitive motorized areas and roaded natural areas. According to a recent study completed by the Sierra Club, 42 percent of the trails managed by the National Forest Service in Montana, Wyoming, Oregon, Washington, Idaho, Nebraska, and North and South Dakota are open to OHV traffic. A spokesperson for the Forest Service, however, said he believed this number was too high (Helena IR 2000a).

It is worth noting that under current federal policy, cross-country OHV use is often allowed, even in areas where designated trails and roads may be closed to motorized use. As of 2000, a

joint Forest Service/BLM draft EIS is examining a variety of OHV management alternatives for Montana, North Dakota, and portions of South Dakota (USDA/USDOJ 1999b). Cross-country motorized travel management in the study area can be broken out as follows:

Open Yearlong: 11.2 million acres
(Areas open all year to cross-country motorized use, with no restrictions.)

Designated Intensive Use: 3,710 acres
(Intensive use areas include special OHV areas, which in Montana include sites located near Billings, Glendive, Terry, Glasgow, and Havre.)

Limited/Restricted Seasonally: 4.7 million acres
(These areas have seasonal closures to motorized cross-country travel.)

Limited/Restricted Yearlong: 5.6 million acres
(These areas are closed to cross-country motorized travel, but contain open roads and trails within them.)

Closed Yearlong: 5.0 million acres
(These areas are closed in their entirety to motorized travel. Designated wilderness areas are an example of this type of management.)

Of the 26.6 million acres of Forest Service and BLM land in the study area, approximately 16 million acres are open at least seasonally to motorized cross-country travel, with less than half (10.6 million acres) closed to all cross-country motorized travel. The draft EIS addresses a variety of concerns related to the growing impacts of cross-country motorized travel on federal lands (USDA/USDOJ 1999b).

Trail Elevations and Elevation Range

Most of Montana's trails are located at mid to high elevations, with the highest trail in the state reaching 11,489 feet in the Beartooth range. The elevation data reflects the fact that most Montana trails are concentrated in mountainous terrain in the western portion of the state.

Approximately 90 percent of the state's trails are located at elevations above 5,000 feet, while only two percent of the trails are located at less than 3,500 feet. Only eight percent of the trails occur between 3,500 and 4,900 feet, while 27 percent occur between 5,000 and 6,499 feet, and 63 percent at greater than 6,500 feet. Since the majority of the population lives below 5,000 feet, accessing these trails requires traveling outside the communities where most people live.

The elevation range of a trail refers to the difference between the highest and lowest points along the route. The percentage of trails in various elevation ranges includes the following:

- range of zero—one percent
- range between one and 1,000 feet—36 percent
- range between 1,001 and 2,000 feet—34 percent
- range between 2,001 and 3,000 feet—22 percent
- range greater than 3,000 feet—eight percent.

The trail with the greatest elevation range — 5,000 feet— is the Hellroaring Trail, located in the Gallatin National Forest.

Not surprisingly, the Forest Service and—to a lesser extent—the NPS, are the major players in both high elevation trails and trails with large elevation ranges. The elevation range data indicates that there is a considerable array of opportunities, although there may be a relative

lack of very easy trails with little or no elevation change.

Trail Lengths

Information on trail length was also gathered during the inventory. The usefulness of the trail length data is limited because it doesn't indicate whether a particular trail is part of a larger system. A trail that appears to be very short, for example, might be connected to a much larger network, but this connection wouldn't be indicated in the inventory. In addition, some agencies provided information on systems rather than individual trails, but there is no way to distinguish between these.

The inventory created four trail length to summarize the data:

- three miles or less—34 percent
- between three and five 5 miles—26 percent
- between five and ten miles—28 percent
- more than ten miles—thirteen percent.

The majority of Montana's trails fall in the middle range, with 54 percent ranging between three and ten.

In spite of the limitations in the trail length data, the information highlights a comparative lack of longer trails managed by local governments, which are the principal trail managers in the urban areas where most Montanans live. At the time of the inventory, for example, only five trails managed by local governments were longer than three miles, with no trails longer than ten miles being reported. While these numbers have most likely changed since the inventory was completed, they suggest a need for additional longer urban trail opportunities.

Conclusions from Inventory Information

Several major themes emerged from the inventory information. First, the Forest Service dominates the Montana trail picture, managing 92 percent of the state's trails. When the NPS trail mileage is added 98 percent of the state's trail mileage is managed by two federal agencies. This leaves the majority of the state's system vulnerable to the budgetary, political, and institutional trends in these agencies. As a result, it is important to develop and utilize potential trail resources on lands managed by other agencies, and with the help of other funding sources, including non-profit organizations, and the private sector.

Secondly, the majority of Montana's trails are not located in or directly adjacent to urban areas, where most Montanans live. At the time of the inventory, for example, local park and recreation departments in Montana managed just 60 miles of trails, less than one percent of state total. While other agencies manage trails in and around urban areas, the inventory reveals very few trails, especially longer trails, in the lower elevation areas where most Montanans reside. Only ten percent of Montana's trails are located at an elevation below 5,000 feet, where the majority of Montana's cities are located.

A third theme that emerged was that most of the designated trails in Montana are located in the mountainous, western portion of the state. Because most USFS land is located in western Montana, and because the USFS is the dominant trail manager, there is a comparative lack of designated trails in eastern Montana. Custer National Forest contains just two percent of the trails and trail miles in Montana. A considerable amount of federal BLM and USFWS land, as well as Montana Department of State Lands, occurs in eastern Montana, but the designated trail system on these lands is relatively undeveloped. In order to take full advantage of

Montana's diverse natural and cultural environments, especially in the eastern portion of the state, more trail opportunities need to be provided in many parts of the state.

Fourth, there has been a long-term decline in backcountry trails in Montana. Although the greatest need for new trails is in and around urban areas, Montana's system of backcountry routes represents a nationally significant trail resource, an important part of the state's heritage that should be sustained and enhanced.

Finally, only eight of Montana's trails were reported to be disabled accessible at the time of the trails inventory. While this number has grown since 1994 (recent Forest Service information places that agency's total at 30—USFS, 2000a), there is still a need for more accessible trails and other recreational facilities. More detailed information on Forest Service accessible trails in Montana is available in the publication, *Outdoors for Everyone* (USFS 1996).



CHAPTER III. TRAIL USE, USER ATTITUDES, AND TRENDS

Introduction

Understanding trail use patterns is a key element in improving Montana's trail system. Exploring trail use patterns requires a comprehensive overview of current trail demand, including participation rates in various trail-related activities; trail and trail setting preferences; demographic characteristics of users; and trail user's attitudes on supply, conflict, compatibility of uses, new trails, and funding. Another important component in identifying state trail trends are national rates of participation in trail-related activities, as well as other pertinent cultural, economic, political, and technological variables.

The *Montana Trail Users Study* (1994b) and a Montana resident survey undertaken by the FWP (1998) are the primary sources of information on trail use and user attitudes at the state level. Other sources include recent editions of the *Montana Statewide Comprehensive Outdoor Recreation Plan* (SCORP), and USDA Forest Service visitation and outdoor recreation reports.

The *Montana Trail Users Study* was the result of a survey conducted by The University of Montana's Institute for Tourism and Recreation Research (ITRR), under contract with Montana Fish Wildlife and Parks (FWP). The intent was to learn more about trail use and Montanans' attitudes towards a variety of trail issues. The ITRR's survey was divided into two parts, each with a sample size of 1,100. An initial summer use phase was mailed out in October 1993, inquiring about trail-related activities during the previous six months. A second phase was mailed out in April 1994 that dealt with winter trail activities. Both summer and winter surveys followed recommended social science survey procedures for reminders and follow up. For each phase, an additional telephone interview

was conducted with a sample of non-respondents to adjust for non-response bias. The full report on survey results was completed in August 1994, and is available through the Institute or FWP's Parks Division upon request.

The ITRR survey determined participation rates for *trail-related activities*, which only indirectly correlates with rates of trail use. This was done by asking survey responders if they had engaged in these specific activities, not if they had engaged in these activities *on trails*. The survey then asks the responder what kind of ground surface and setting they prefer for their activity, which can be used to more specifically determine actual trail use.

FWP's *Montanan's Assessment of Montana Fish, Wildlife & Parks Programs* (1998), on the other hand, utilizes an approach to estimating trail use that allowed the survey responder to decide themselves what constituted trails. This survey asked respondents if they had used a trail in a six month period, and if so, what activity they engaged in while on the trail. As a result, this survey estimated participation rates that in some cases varied from the ITRR survey. These two surveys broadened the scope of trail use beyond the definition of trail utilized in the trail inventory discussed earlier in this Plan.

Prior to getting into specifics about Montana trail users and use patterns, this chapter will look at some of the larger national trends affecting outdoor recreation and trail use.

National Trends Affecting Montana Trail Use

While long-range patterns are difficult to predict, a number of current trends suggest increased pressure on Montana's trail system. Both throughout the country and in Montana, an escalating population, growing numbers of tourists, and increasing rates of participation in outdoor recreation will likely mean more people using Montana's trails in the twenty-first century.

Outdoor recreation is exploding in popularity, with trail use and trail-related activities among the fastest growing. In 1995, over 94 percent of Americans participated in some form of outdoor recreation at least once, up from 89 percent in 1982-83 (Cordell, Teasley, and Super 1997). An increased demand for inexpensive outdoor recreation, especially close to home and near urban centers, is contributing to an increased use of trails and demand for more trail opportunities (Leisure Watch Canada 1998).

Fitness-oriented sports such as in-line skating, mountain biking, hiking, walking, and jogging that can be done inexpensively and on short-notice are increasingly popular. For example, according to a national recreation survey, 67 percent of Americans went walking in 1996, while 30 percent went bicycling and 26 percent went jogging (see Figure III-1). Other activities ranged from a 14 percent participation rate for off-road driving, 8 percent for backpacking, seven percent for horseback riding, and 5 percent for cross-country skiing (Cordell, Teasley, and Super 1997). While all of these activities don't always occur on trails, they frequently do.

Nationally, participation in trail-related outdoor recreation has increased dramatically. Hiking is among the fastest growing trail-related activities, with over 48 million participants in 1994, a 94 percent increase since 1989 (see Figure III-2). Backpacking gained 73 percent more participants

during this period, with over 15 million Americans participating in 1994. Off-road driving grew by 44 percent, with nearly 28 million participants by 1994 (Widdekind 1995; Cordell, Teasley, and Super 1997).

Bicycling, although among the most popular trail-related activities at the national level, grew at a slower rate than the uses mentioned above. Mountain bike riders, however, have grown by 20 percent per year since 1990, with more than 26 million Americans owning mountain bikes, including over two and a half million "avid" trail cyclists riding off-road nationwide by 1994 (Widdekind 1995). The popularity of mountain bikes today makes it easy to forget that they weren't even commercially available in large numbers until 1982. In-line skates, rapidly becoming as popular as bicycles, were also first mass marketed in the early 1980s.

Cross-country skiing was among the fastest growing sports in the country in the mid-1980s, but grew in popularity at a slower rate in the early 1990s. Horseback riding is the only major trail-related activity that saw actual declines in the number of participants between 1983 and 1994, from 16 million to 14 million (Cordell, Teasley, and Super 1997).

Traditional activities such as hunting, fishing, and nature watching are other popular outdoor sports that often involve trail use. Slight declines in the numbers of hunters and anglers were more than made up by the 54 million Americans involved in bird watching by 1994, a 155 percent increase since 1982 (Cordell, Teasley, and Super 1997).

Nationwide trends that are already affecting Montana's trail system are a growing cultural propensity for outdoor adventure sports, and rapid technological advances in equipment. The proliferation of new sports, especially outdoor adventure sports, is seen as a direct extension of America's pioneering and inventive spirit, with the propensity for taking up new sports a growing phenomena (Thurow 1996). Sports such as rock climbing, ice climbing, and back country skiing and snowboarding are experiencing rapid gains in

Figure III-1: National Participation in Trail-Related Activities

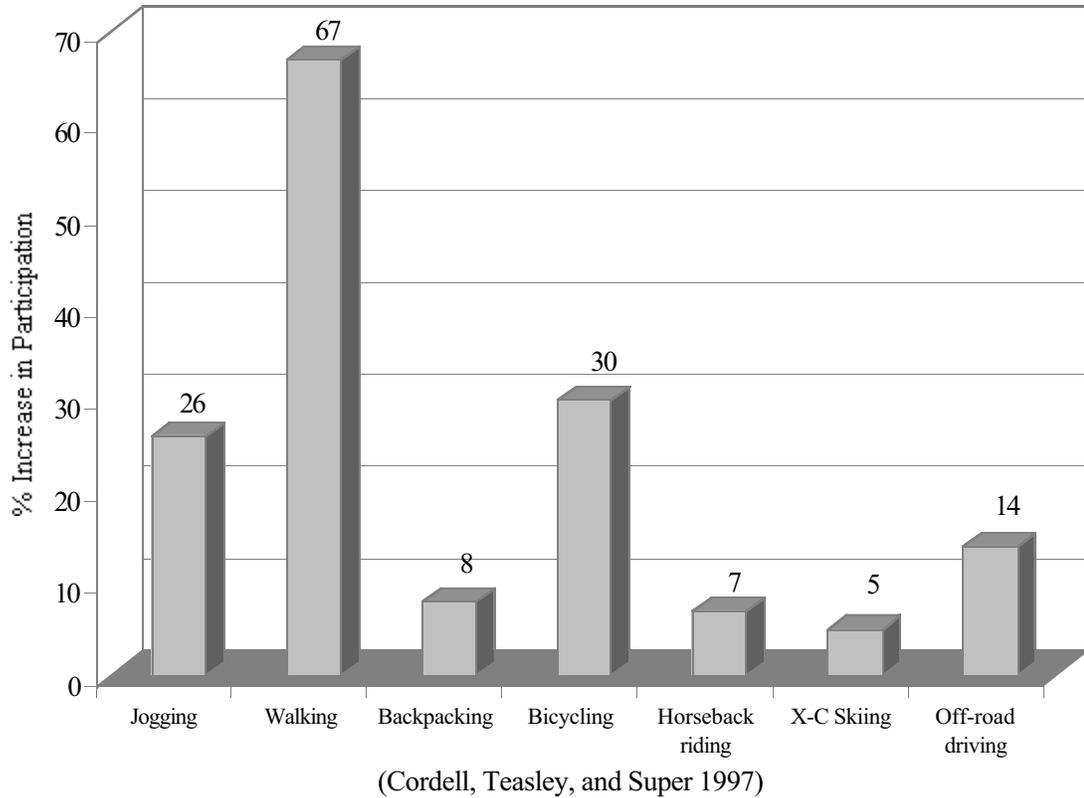
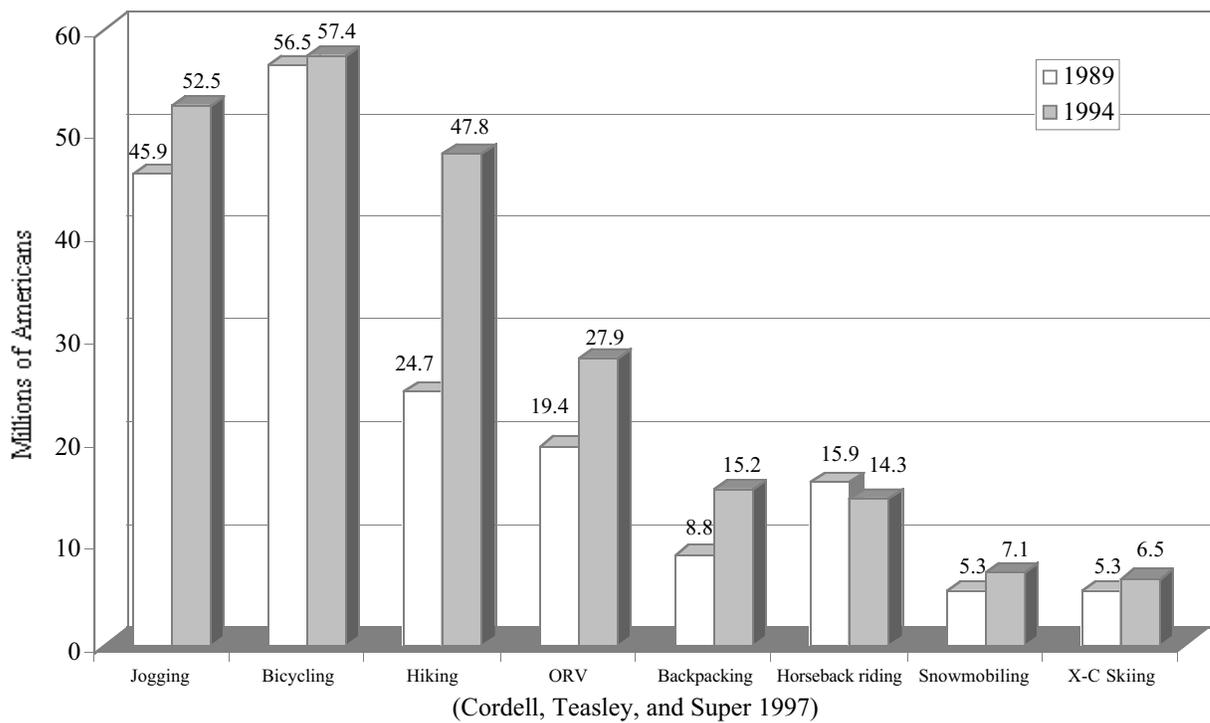


Figure III-2. Trends in National Participation Rates for Trail-Related Activities.



participants, many of whom who use trails as travel routes to desirable locations. Improvements in old technologies and new forms of wheeled recreation could occur at even faster rates. For example, recumbent tricycles, which offer comfortable seating positions and stability, are likely to evolve and increase in popularity as the population ages (Nebraska Trails Plan 1994).

One method of gauging the growth in trail-related outdoor activities is by examining the sporting goods and off-road vehicle market. In 1994, 85 percent of outdoor equipment retailers nationwide showed an increase in sales volume (Widdekind 1995). This occurred while the sporting goods industry as a whole reported slow growth, with a decline in manufacturer's shipments for such sports as tennis and downhill skiing. The growth of the camping industry, on the other hand, has been explosive, with wholesale sales reaching \$1.5 billion by 1995, an increase of 70 percent since 1989 (Teague 1996). There has been rapid growth in the sales of outdoor-adventure equipment, especially mountain bikes, in-line skates, snowboards and climbing equipment. Mountain bikes rank with golf clubs and bowling balls as the best selling sports equipment in the country.

The off-highway vehicle market has also experienced rapid growth, with \$215 million in wholesale sales for off-road motorcycles and ATVs in 1992. By 1997 well over three million ATVs and off-road motorcycles were in use, with a 40 percent growth rate in the last decade (Lundquist 1997; The Economist 1997).

Advances in motorized technology have contributed to the popularity of off-road vehicles, especially ATVs. Increased climbing capability has been achieved through improved tires, power trains, and transfer cases (Chalsma 1994). The introduction of split-housing, aluminum transfer cases, and constant mesh gears have increased ease of operation while reducing noise and vibration (Diesel Progress Engines and Drives 1996). Locking differentials allow faster driving and better climbing over rough and steep terrain. Size and weight have been drastically reduced,

and maneuverability increased in recent years. Improved suspension also allows driving on rougher terrain, increasing rider comfort. With the addition of skid plates and power winches, motorized vehicles can now go places that were impossible to reach without hiking only a few years ago.

Current trends are expected to hold well in to the twenty-first century. For example, hiking is predicted to be the fastest-growing trail activity, up 193 percent by 2040 (see Figure III-3). Backpacking is expected to grow by more than 155 percent by 2040, surpassing many existing uses in popularity. Conversely, horseback riding and off-highway vehicle use are expected to grow at slower rates, with OHV use growing by 30 percent by 2040 (English et al. 1996).

The presence of natural beauty and limited crowding are the two most important attributes given by Americans when choosing outdoor recreation areas (President's Commission on American Outdoors 1986). Montana is increasingly viewed by the nation as offering these amenities, a significant factor in both population growth and tourism. As population growth and associated development continue to make inroads into the natural world elsewhere in the country, the demand for the natural amenities offered by Montana will increase.

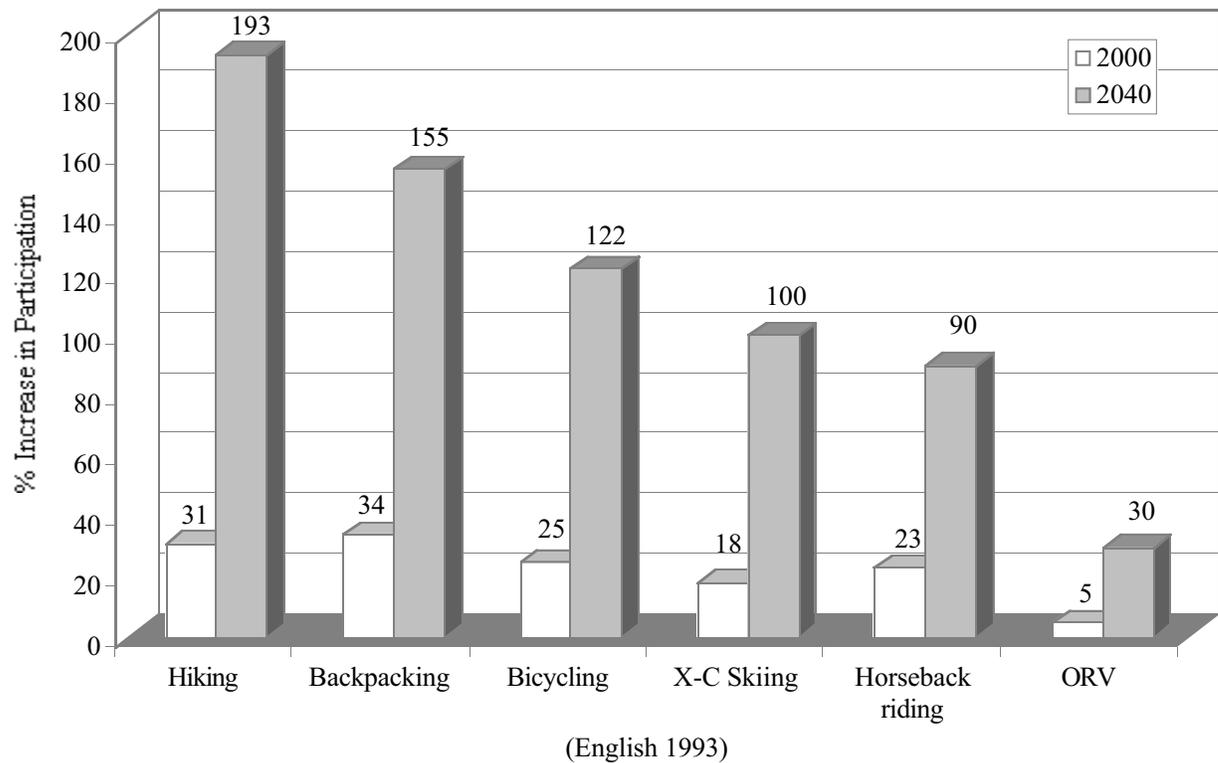
Finally, growing American interest in historic and cultural sites will have an impact on Montana tourism in general, as well as the state's trails. The Lewis and Clark Bicentennial, in particular, has the likelihood of significantly increasing visitation to Montana, particularly at sites, trails, and waterways associated with the Expedition.

Montana Trail Use

Trail Use Participation Rates and Trends

Montana's trail system plays an important role in outdoor recreation in Montana, with 56 percent

Figure III-3. Projected National Participation Trends in Trail-related Activities.



of adult Montanans using trails for a variety of activities. Based on 1998 FWP survey, 90 percent of Montana trail users participated in hiking, while other uses ranged from 11 percent for horseback riding to 2 percent for ATVs, 4X4s, and off-road motorcycling (FWP 1998—see Figure III-4).

According to an earlier FWP survey completed in the fall of 1994, over 70 percent of adult Montanans went dayhiking or walking for pleasure during the previous six-month period, by far the most popular type of trail-related activity in Montana (ITRR 1994b—see Figure III-5). After hiking and walking, rates of participation in other trail-related activities ranged from 20 percent for bicycling and 4x4 driving, to 9 percent for off-road motorcycling.

Visitors to Montana National Forests participate in trail-related activities in large numbers, with over 34 percent of Montana residents going on nature hikes or day hikes, and 6 percent mountain

biking in 1990 (see Figure III-6). Resident visitors went backpacking, horseback riding, and off-road ORV riding at much lower rates, with 3 percent or less participation (Yuan and Hammond 1991). Visitors to Bureau of Land Management lands in Montana engaged in trail-related activities in large numbers also, with annual visits of over 873,000 for hiking and biking, and over 350,000 for ORV riding, in fiscal year 1997 (BLM 1997).

Most types of Montana trail activities have relatively similar levels of participation between males and females (ITRR 1994b). Backpacking, motorcycling, four-wheel driving, and snowmobiling, however, are activities which have clear male majorities in Montana (see Figure III-7). Walking, horseback riding, bicycling, cross-country skiing, and ATV riding have the highest female participation rates.

It is difficult to track Montana trail participation over time, because different studies have tended

Figure III-4. Percentage of Montana Trail Users Participating in Various Trail Activities.

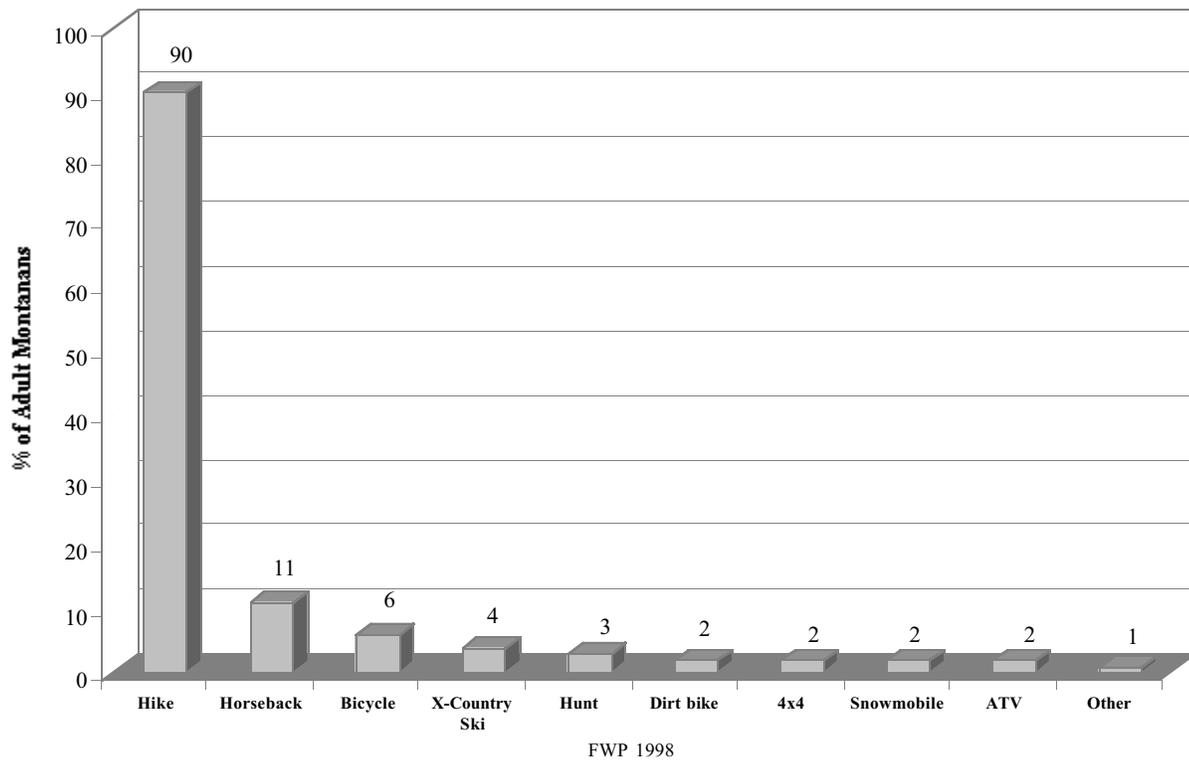


Figure III-5. Participation in Select Trail-Related Activities.

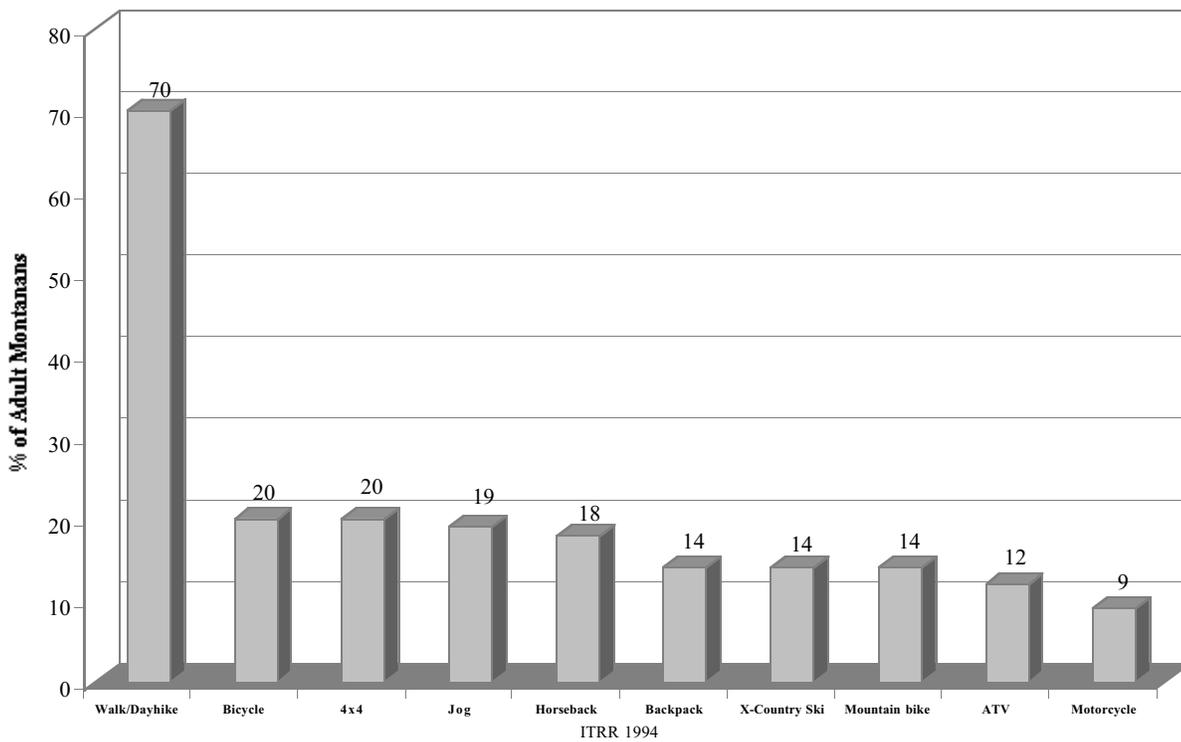


Figure III-6. Participation in Trail-Related Activities on Montana's National Forests.

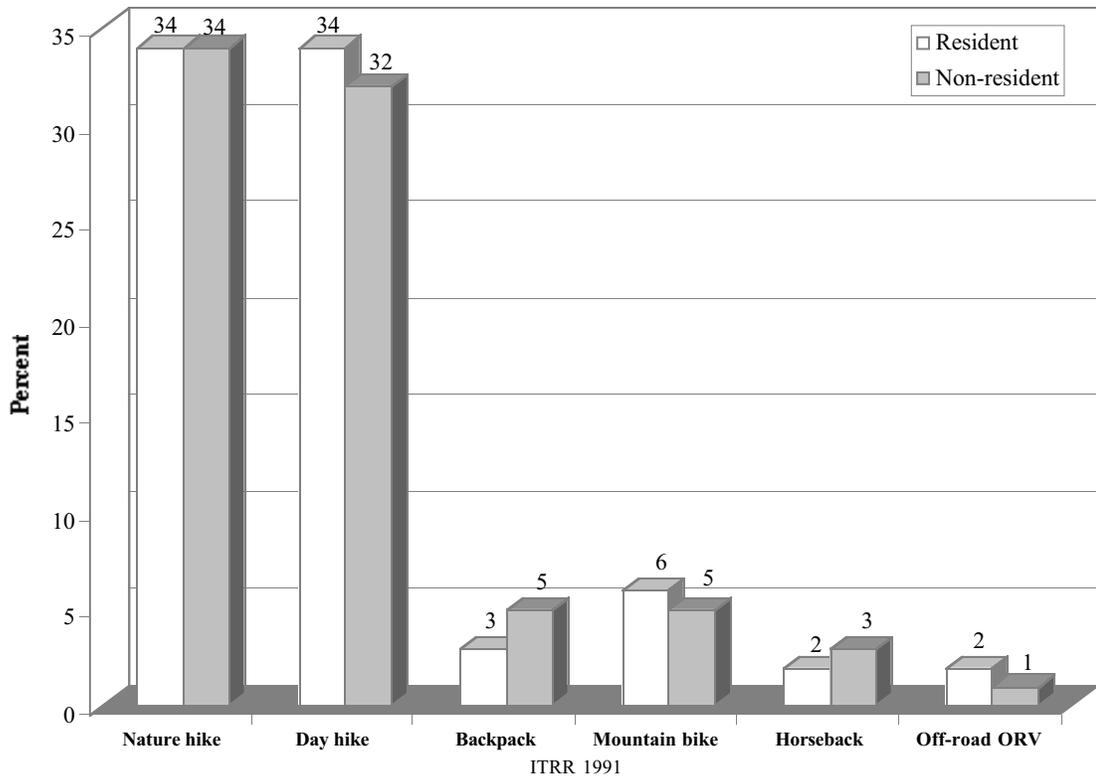
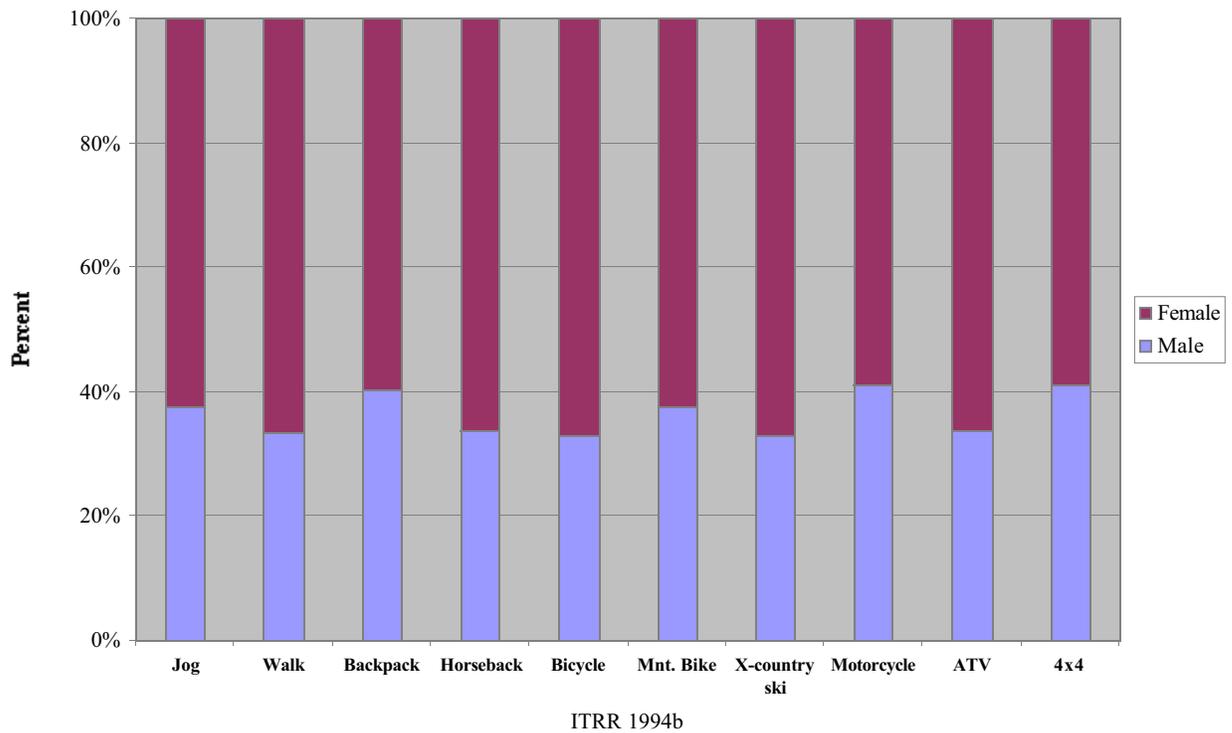


Figure III-7. Participation Rates by Sex for Select Trail-Related Activities.



to use different approaches, making comparisons difficult. Based on the limited information available, however, the following general trends were identified (FWP 1993):

- Participation in walking and hiking increased dramatically between the 1965 and 1988 State Comprehensive Outdoor Recreation Plan (SCORP) study periods.
- Participation in bicycling increased between the 1965 and 1988 SCORP study periods, with the most substantial increases during the 1970s.
- Participation in snowmobiling and especially cross-country skiing increased between the 1983 and 1988 SCORP study periods.
- Participation in horseback riding increased during the 1965 to 1969 SCORP study periods, but declined during the 1970s and 1980s.

Because the last SCORP was done in 1993, more recent comparative information for these trail uses is not available.

Off-highway vehicle registration trends in Montana affirm the growing popularity of motorized trail activities (see Figure III-8). Between 1990 and 1998, Montana OHV registrations (including both ATVs and motorcycles) increased by 156 percent, rising from 7,399 to 18,953. According to Forest Service and BLM projections for Montana, registered OHVs will climb to 29,614 by the year 2005, and 36,272 by 2015, approximately twice the number in the late 1990s (DOA/DOI 2000b). A survey conducted by University of Montana researchers estimated that 100 percent of registered ATVs and 9 percent of registered motorcycles are used in off-highway situations (Sylvester 1995).

Truck registrations in Montana also increased between 1990 and 1998, although not nearly as dramatically as OHVs. During that period, registrations climbed 13 percent, rising from 268,466 to 304,696, with relatively modest increases projected through 2015 (DOA/DOI

2000b). According to the University of Montana, approximately 9 percent of trucks registered in Montana are used off-highway (Sylvester 1995).

There is little current information available about non-resident trail participation and trends in Montana. According to the University of Montana study mentioned earlier, day hiking and nature hiking were engaged in by 34 percent of non-resident visitors to Montana National Forests (ITRR 1991a). Backpacking and mountain biking were the next most popular trail-related activities, engaged in by 5 percent of non-resident visitors. A survey of visitors who entered the state on major highways in 1990 indicated that over fourteen percent of visitors intended to go hiking while in Montana (ITRR 1991b). Backpacking and horseback riding were the next most popular trail-related activities for summer visitors, each attracting one percent.

According to another University of Montana survey, nature and wildlife viewing are among the most popular reasons for visiting Montana, with mountains, rivers, lakes, open space, uncrowded areas, national forests, and national parks major attractions. Trails are an important component of these amenities, and play a significant role in both resident and visitor outdoor recreation. According to the survey, 15 percent of the respondents included hiking as a reason for visiting the state, while 8 percent indicated wilderness was part of the attraction (ITRR 1997—see Figure III-9). In general, the growing nationwide popularity of outdoor recreation, combined with increased non-resident visitation to Montana, suggests more non-resident use of Montana's trails in the future.

The average age of adult Montana trail users is concentrated in the late 30s and early 40s (see Figure III-10). Mountain biking had the youngest average age (36) while walking had the highest average age (45). Because the survey only included adult Montanans old enough to drive, the results do not reflect trail use patterns of younger people.

Figure III-8. Montana OHV Registration Trends.

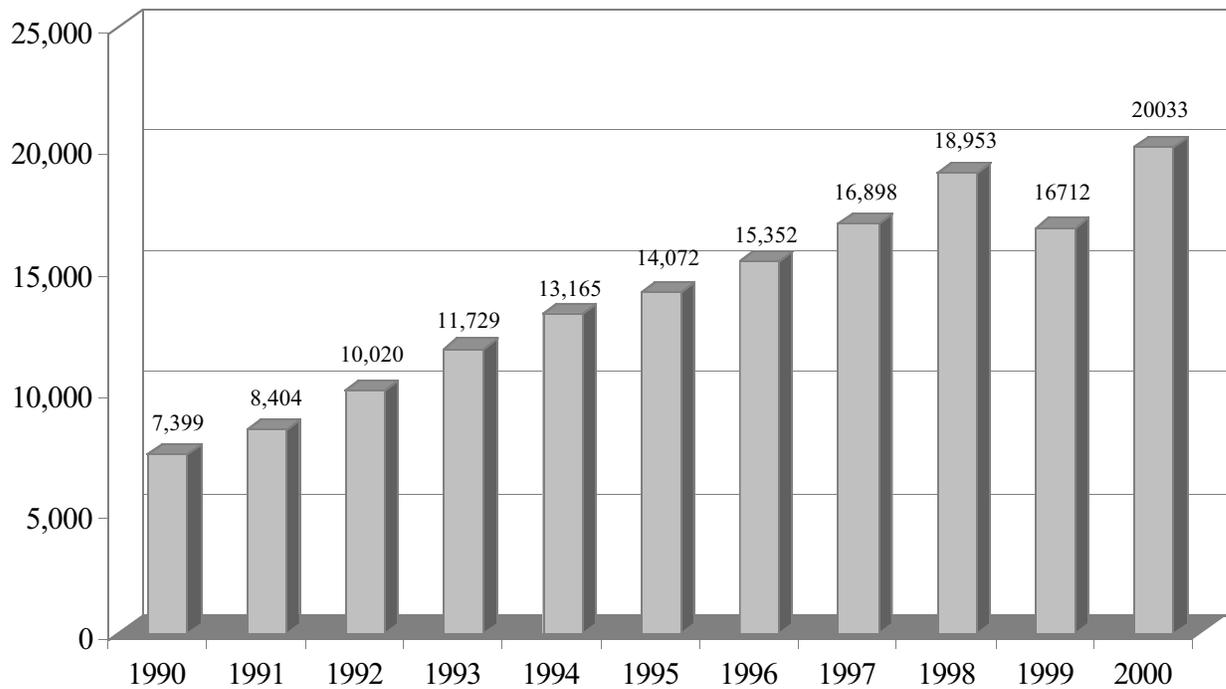


Figure III-9. Summer Visitors Top 22 Reasons for Visiting Montana (1997).

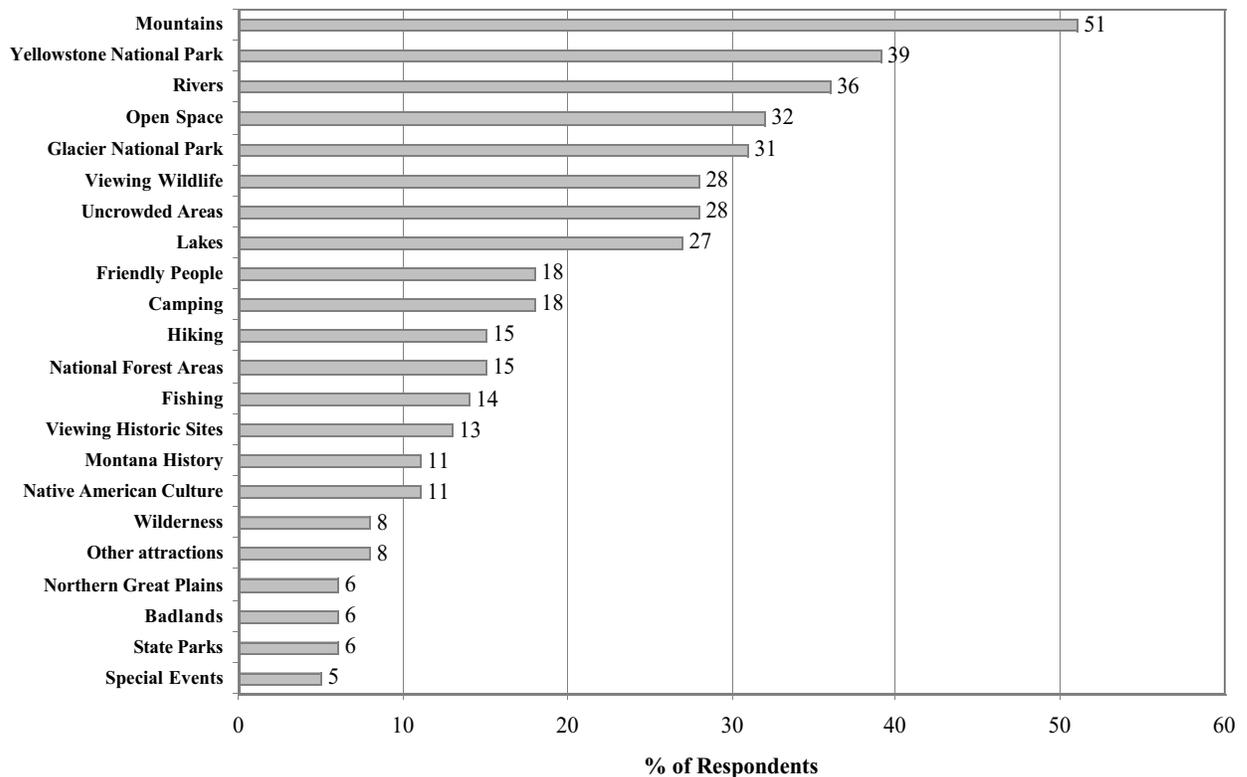
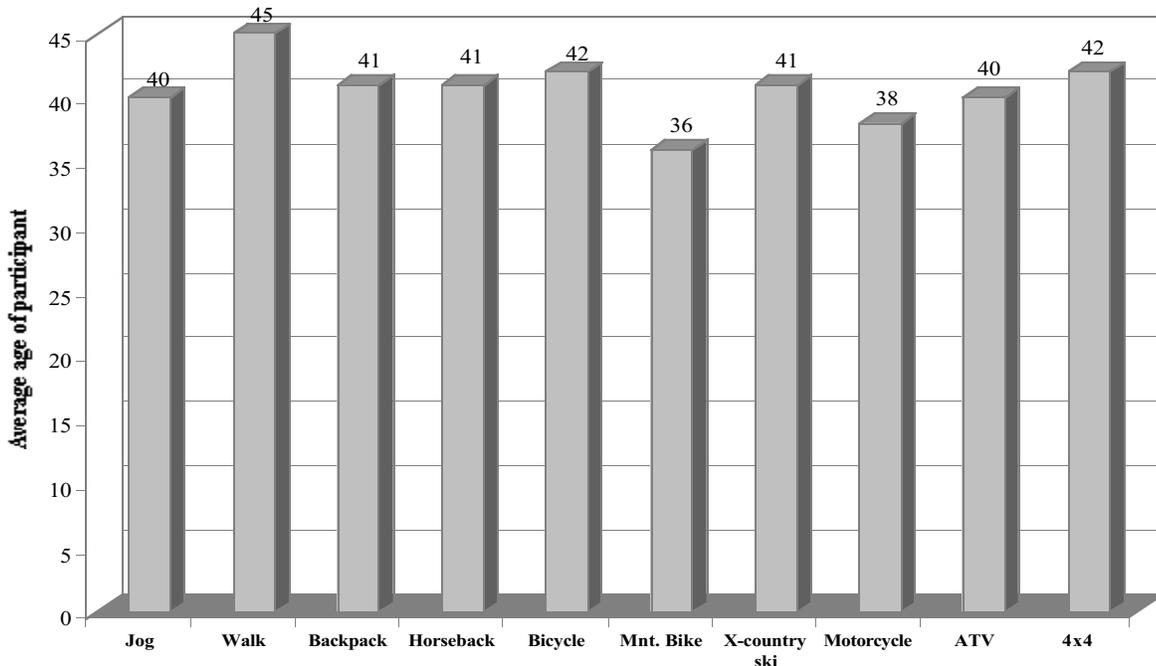


Figure III-10. Average Age of Participants.



ITRR 1994b

Trail Trip Profiles and Activity Days

Survey respondents reported that 78 percent of their trips were day trips, with 22 percent involving overnight stays, the median length of which was 2 days (ITRR 1994b). Trail users reported traveling a median of 14 miles to the trailhead, and a median distance of 6 miles on the trail trip.

Activity days, based on the average number of days spent engaging in a specific activity, is another way of examining statewide trail use. Activity days are important indicators of trail use, because an activity with only a small participation rate, for example, may be engaged in many days a year by those who do participate.

Some of the more specific information reported by particular types of trail users includes the following:

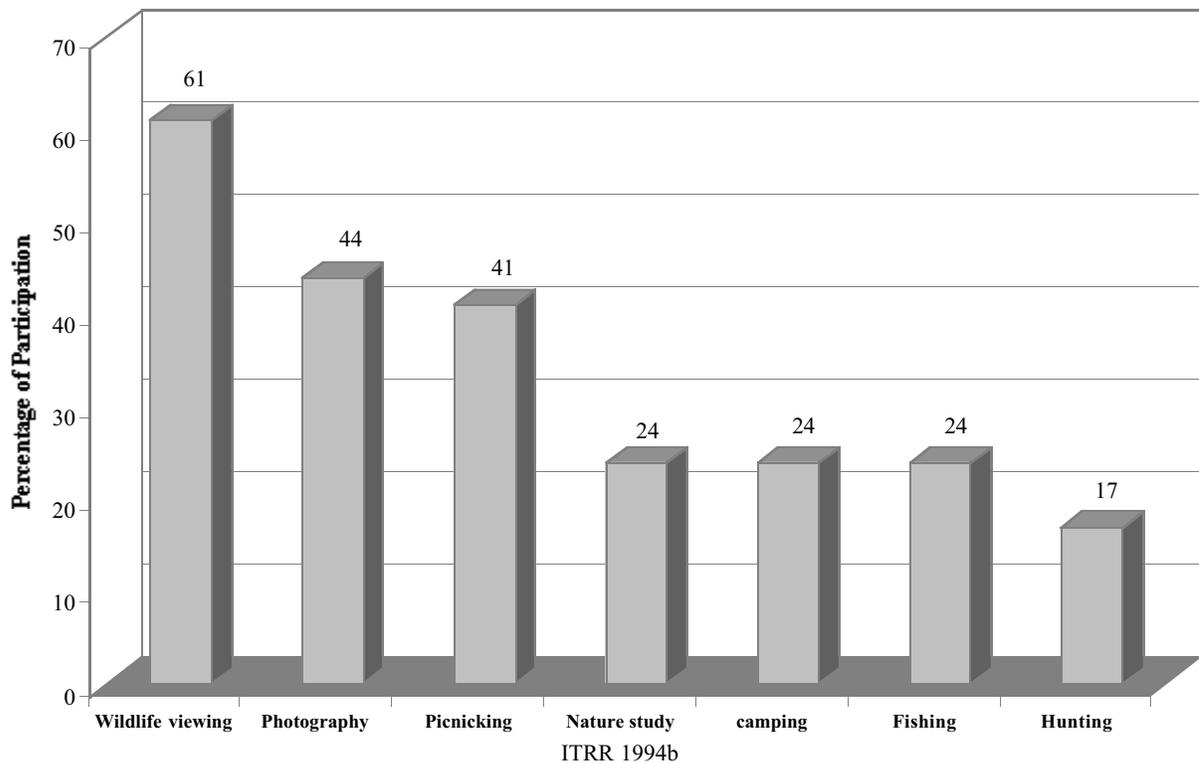
- **JOGGING:** Joggers reported a median of 20 days of participation (in Montana) during the previous 6 months, with an additional 5 days out of state. The average distance per outing was 2.5 miles.

- **WALKING/DAYHIKING:** This group reported an average of 19 in-state outings during the previous 6 months, with an additional 4.5 days out of state during the spring and summer. The average distance covered was 2.5 miles.
- **BACKPACKING:** Montanans who backpacked averaged approximately 4 days during the 6 months prior to the survey, with a median of 1 additional out-of-state day. The median spring-summer trip was 8 miles, with fall-winter trips being 5 miles.
- **HORSEBACK RIDING:** Horseback riders reported a median of 9 days during the previous 6 months pursuing their activity. During the spring and summer months, the median distance traveled was 10 miles, with 5.5 miles being reported for the fall and winter.
- **MOUNTAIN BIKING:** These users spent a median of 9 days during the 6 months prior to the survey in their activity. Mountain bikers traveled a median distance of 6 miles on each occasion.

- **BICYCLING:** Bicyclists spent a median of 11 days pursuing their activity during the spring and summer months, and 9 days during the fall and winter. The median distance traveled was 4 miles.
- **OFF-ROAD MOTORCYCLING:** Motorcyclists reported 9.5 days of participation during the previous 6 months. The median distance covered was 25 miles per outing.
- **ATVs:** ATV enthusiasts reported a median of 5 days of participation during the 6 month spring-summer period, with a median travel distance of 15 miles.
- **FOUR-WHEEL DRIVE VEHICLES:** four-wheel drivers reported 8 days during the spring-summer season, with a median distance traveled of 31 miles.
- **CROSS-COUNTRY SKIING:** Skiers reported 5.5 days of skiing during the 6 month survey period, with a median distance of 4.5 miles.
- **SNOWMOBILING:** Snowmobilers reported a median of 3 in-state days of activity during the survey period, with an additional day out of state. The median distance traveled was 27 miles.

The *Trail Users Study* also revealed that Montana trail users frequently combine trail trips with other types of outdoor recreational activities (see Figure III-11). In some cases, trail use might be the means to pursue another, more primary recreational end (e.g., packing into the backcountry to go elk hunting). The most frequently mentioned pursuit was wildlife viewing, mentioned by 61 percent of the summer trail users.

Figure III-11. Participation Rates in Other Activities When on a Trail Trip.



Montana Trail User Attitudes

Major Conclusions from Surveys and Scoping Results

Trail users in Montana are concerned with a wide range of statewide and local trail issues, as indicated by various surveys and the written and scoping meeting comments (see Appendix). A number of major themes about trail use and attitudes are summarized below:

- Walking is the dominant form of trail activity by a significant margin. However, many people who walk also engage in other forms of trail activity.
- There is some support for more trails in Montana. Trails close to where most people live and rail-trails have strong support. The data also suggests support for more quiet non-motorized trails, although little support exists for single-use trails at this time.
- Most non-motorized trail users feel motorized trail use is incompatible with their use, with almost half of Montanans in general disapproving of even legal motorized trail use.
- Strong support exists for urban trails and utilizing old railways for trails.
- Maintaining current trail miles and access to trails, as well as increasing access, have widespread support.
- There is some sense of crowding on Montana trails, but it does not appear to have reached a severe level, at least from a statewide perspective.
- Montanans also have some concerns about conflicts on trails, but the problem has not yet reached a crisis level, at least from a statewide perspective. Most conflicts involve mechanized forms of trail use.
- Trail users reported a lack of inherent compatibility between motorized and non-motorized users. Generally, motorized users reported more compatibility with non-motorized users than visa versa.
- Montana trail users are concerned about poor trail etiquette, but generally feel other trail users follow proper trail etiquette.
- Montana trail users have a preference for more remote trails and dirt surfaces. Bicyclists, however, prefer asphalt. Motorized activities prefer dirt roads slightly more than trails. The majority of cross-country skiers prefer groomed trails.
- Better trail information is needed.
- There is support for making roads and highways safer for bicycling.
- Most trail users say they would prefer to get out more often, but are prevented from doing so mainly by time constraints.
- Significant differences exist between trail users in terms of how frequently they get out and how many miles they cover on a trip. Walkers and bicyclists tend to get out most frequently, while motorized tend to cover substantially more ground on an average trip.

The survey and scoping results reveal that while the state trail system currently provides excellent opportunities for a wide range of trail-related activities, as well as significant access opportunities to public land, the public perceives a number of shortcomings, including the need to maintain existing trails and accesses, and lack of trails near the larger urban areas. The data also suggests that trail use should not be looked at in isolation, but instead examined within a larger context of outdoor recreation activities often associated with trail use. Hunting, fishing, nature and wildlife viewing, or just traveling to natural areas, are popular activities for Montanans that often involve trail use (Environmental Quality Council 1996).

Motivation and Satisfaction

Montanans often use trails or engage in trail-related activities for a number of reasons. Hunting, fishing, and nature viewing are popular activities. At the same time, a number of factors motivate Montanans to engage in trail-related activities, with the basic desire to experience nature the most important (ITRR 1994b—see Figure III-12). Stress release and physical activity are also important motivating factors.

In general, trail users are satisfied with their trail experiences, with 96 percent of the 1994 survey respondents expressing some level of satisfaction, and 75 percent very satisfied (ITRR 1994b—see Figure III-13). However, as will be discussed below, Montanans are less satisfied with other aspects of trail use.

Attitudes about Trail Supply

Although only a small percentage of Montana trail users feel too many people are using their

favorite trail, they generally feel that more trails are needed statewide, particularly near the communities where they live (ITRR 1994b). More widespread support seems to exist for maintaining existing trails and access, including maintaining allowed uses. Strong support also exists for increasing trails near urban areas, including quiet trails, and converting old railways into trails.

Overall, Montanans are satisfied with opportunities to use trails, with 85 percent expressing satisfaction (see Figure III-14). Only 24 percent of respondents agreed their favorite trail was too crowded, compared to 30 percent who disagreed (see Figure III-15).

Although Montanans are generally satisfied with opportunities to use trails, they also support additional trails; 21 percent of the respondents in the 1994 Montana Trail User Survey felt there were enough trails in the state, while 43 percent of the respondents felt there were not enough (see Figure III-16). Relatively high percentages (36 percent) were either neutral or didn't know.

Figure III-12. Motivating Factors for Engaging in Trail-Related Activities.

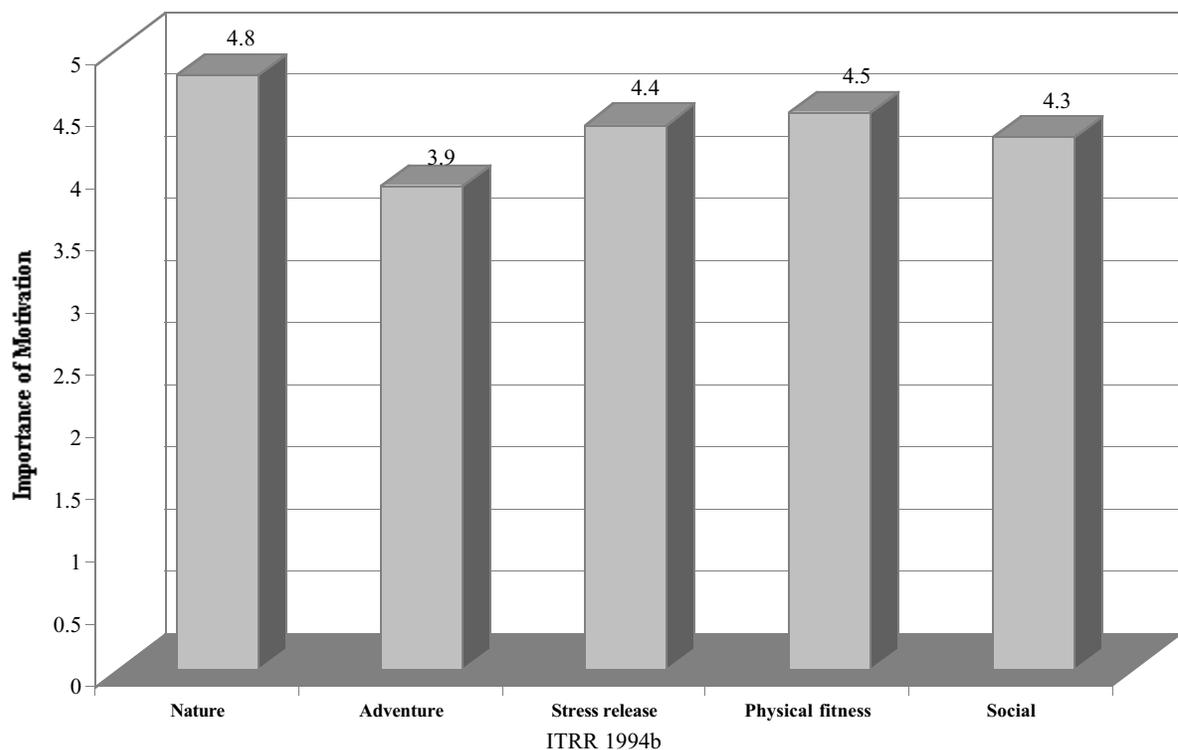


Figure III-13. Trail User Satisfaction.

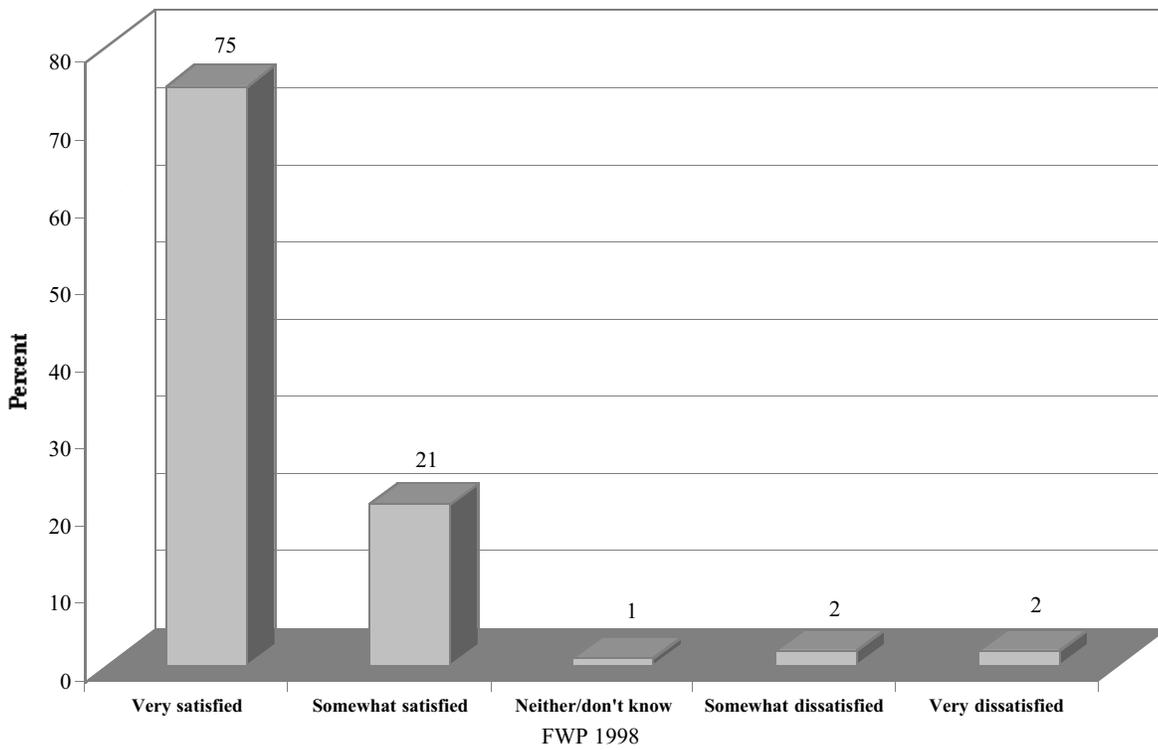


Figure III-14. Satisfaction with Trail Opportunities.

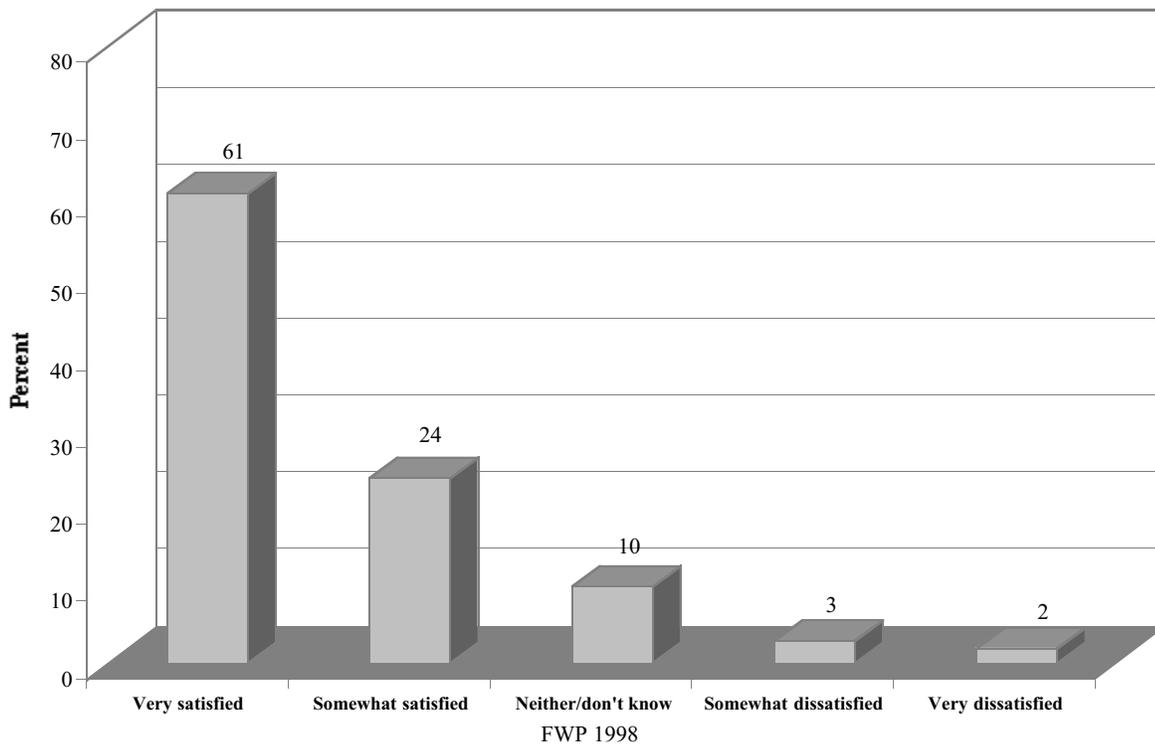


Figure III-15. Perception of Crowding on Favorite Trail.

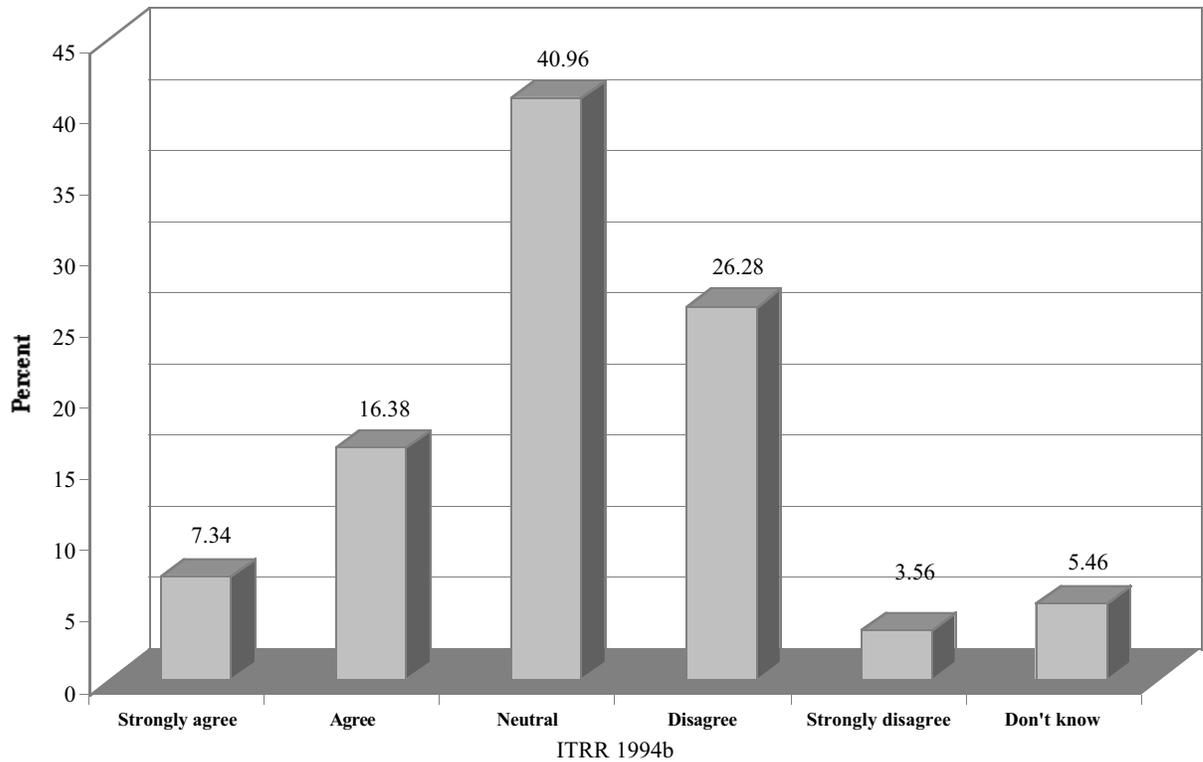
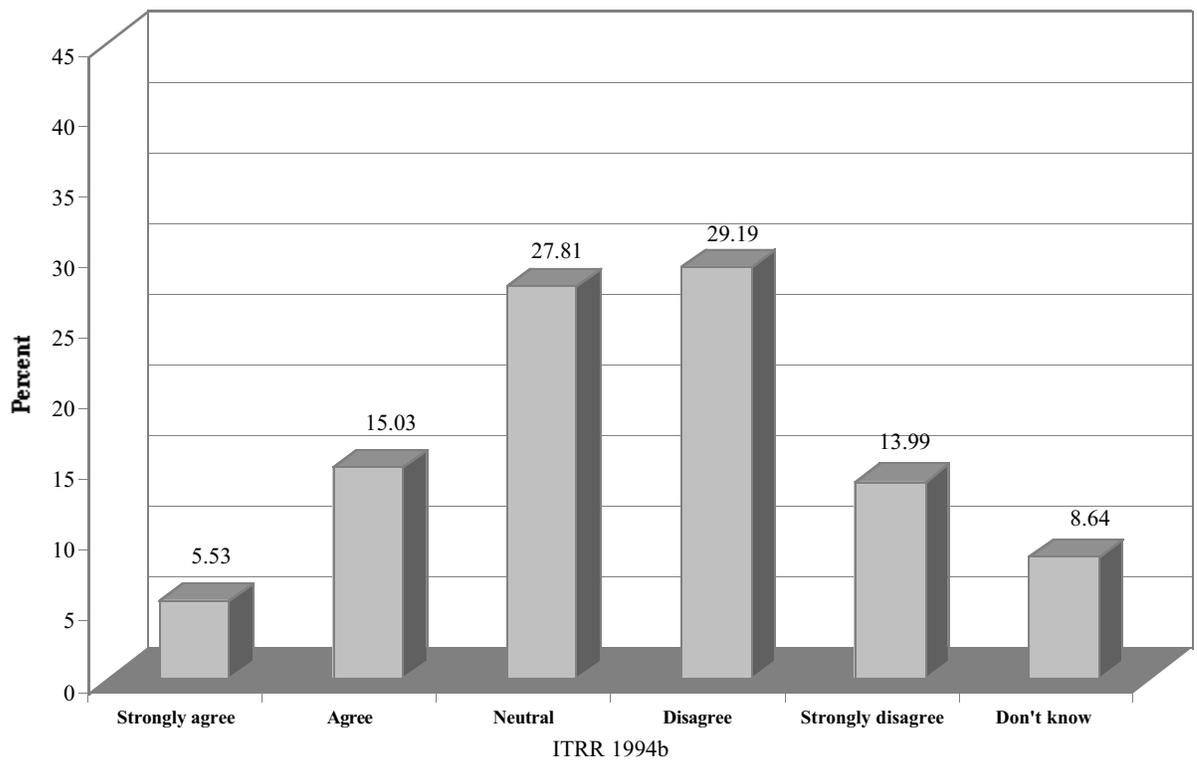


Figure III-16. Agreement that the Statewide Trail Supply is Adequate.



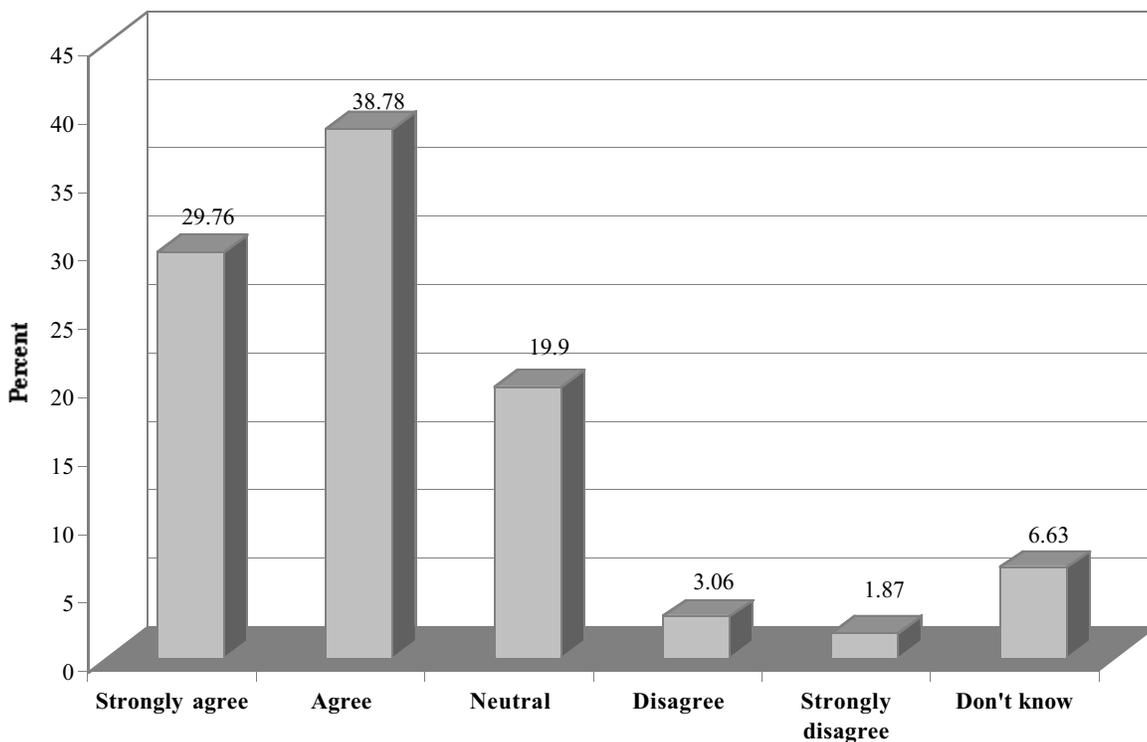
The 1993 Montana SCORP Plan also documented a need for more community trails in Montana (FWP 1993). As part of the Plan, a survey of local recreational facility needs was done in 1992. Survey data was compiled from seven large cities (Billings, Bozeman, Great Falls, Helena, Kalispell, Miles City, and Missoula). According to the survey, trails ranked third (after day use/picnicking and outdoor sports games) in terms of the number of additional facilities needed. Trails also ranked as the third most needed outdoor recreation facility in survey results tabulated for a selection of 20 Montana counties.

There was very strong support for using abandoned railroad grades as trails, with nearly 69 percentage of the respondents supported making more abandoned railroad grades into trails, while only 5 percent opposed doing so (see Figure III-17). Some states have converted hundreds of miles of abandoned rail grades into trails, but Montana has moved relatively slowly in this area. The survey results indicate support for a more aggressive program for developing railtrails.

Walking and hiking are permitted activities on all of Montana's trail mileage while other uses may face restrictions in various places and at different times. However, *The Summary of Written Scoping Comments* (FWP 1995b), which identified state and local trail issues as indicated by comments received from the public, listed quiet, non-motorized trails as the highest-priority. Of the 315 comments received during the scoping period, 216 pertained to this issue (see Appendix for more details). Alternatively, during the eighteen public scoping meetings held in cities throughout the state, trail closure was the most important issue, with strong support for keeping existing motorized trails open (FWP 1995a).

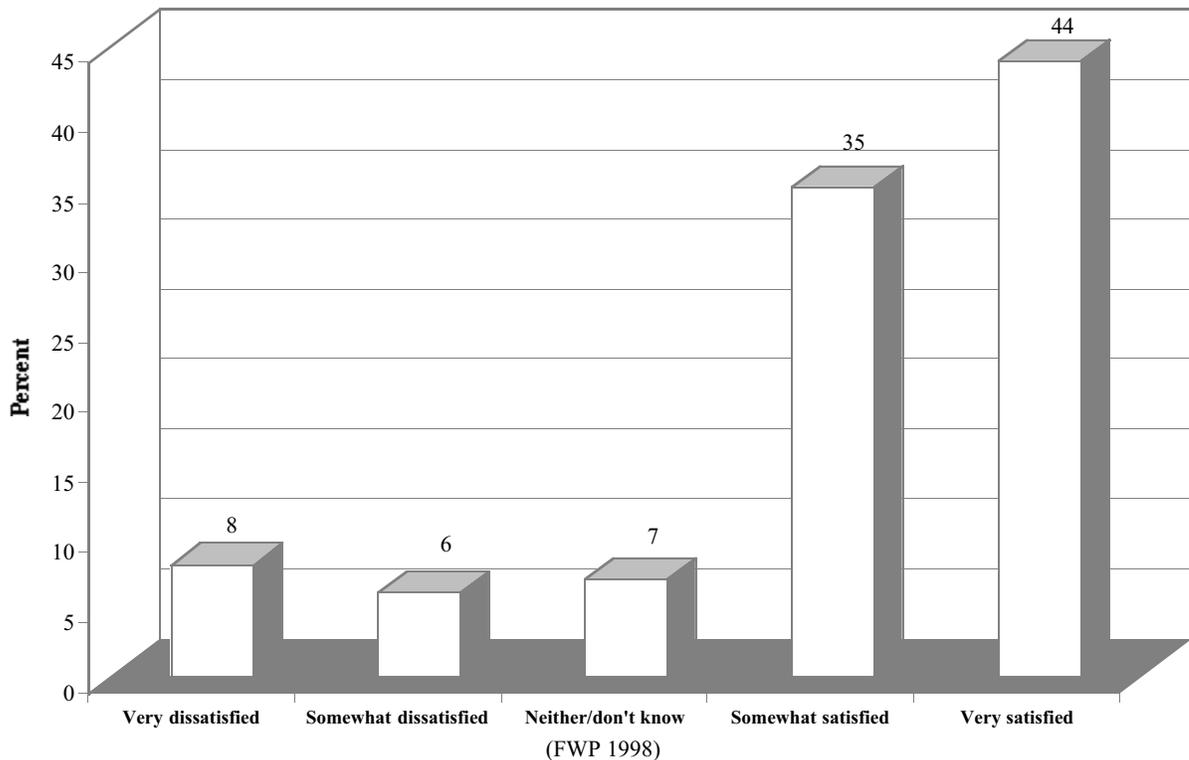
Although access to trails and public land is among the most significant issues to emerge from the scoping comments received for the trails plan, the FWP survey (1998) found Montana residents in general less concerned, with 14 percent dissatisfied with access to public land for recreation, compared with 79 percent satisfied (see Figure III-18).

Figure III-17. Extent of Support for Converting Abandoned Rail Lines into Trails.



ITRR 1994b

Figure III-18. Satisfaction with Trail Access.



Attitudes about Trail Use and Management

Responses to 1994 trail user survey indicate that Montana trail users have some sense of being crowded while using trails, but from a statewide perspective the situation does not yet appear to be at a crisis level. As indicated above, approximately 24 percent of the respondents agreed that too many people are using their favorite trails. Alternatively, 30 percent disagreed. The remaining 46 percent were either neutral or had no opinion. The survey was not designed to identify particular trails or locations where there may be severe localized crowding.

The survey also indicated that Montana trail users are concerned about poor trail etiquette, with 51 percent of the respondents agreeing that this is a problem (see Figure III-19). Approximately 19 percent of the respondents felt improper trail etiquette wasn't a problem. Accord-

ing to the survey, 30 percent of the respondents were either neutral on the issue of etiquette, or didn't know if it was a problem.

Montana trail users are more interested in better trail information, with 55 percent of the respondents saying that information about trail locations could be improved. Only 19 percent of the respondents disagreed, with 26 percent saying they were neutral or didn't know (see Figure III-20).

The Montana Trail User Study also indicated that a majority of trail users (61 percent) supported making roads and highways safer for bicyclists. Only sixteen percent disagreed with this goal, with 23 percent of the respondents saying they were either neutral or didn't know (ITRR 1994b).

Figure III-19. Agreement that Trail Users Lack Proper Etiquette.

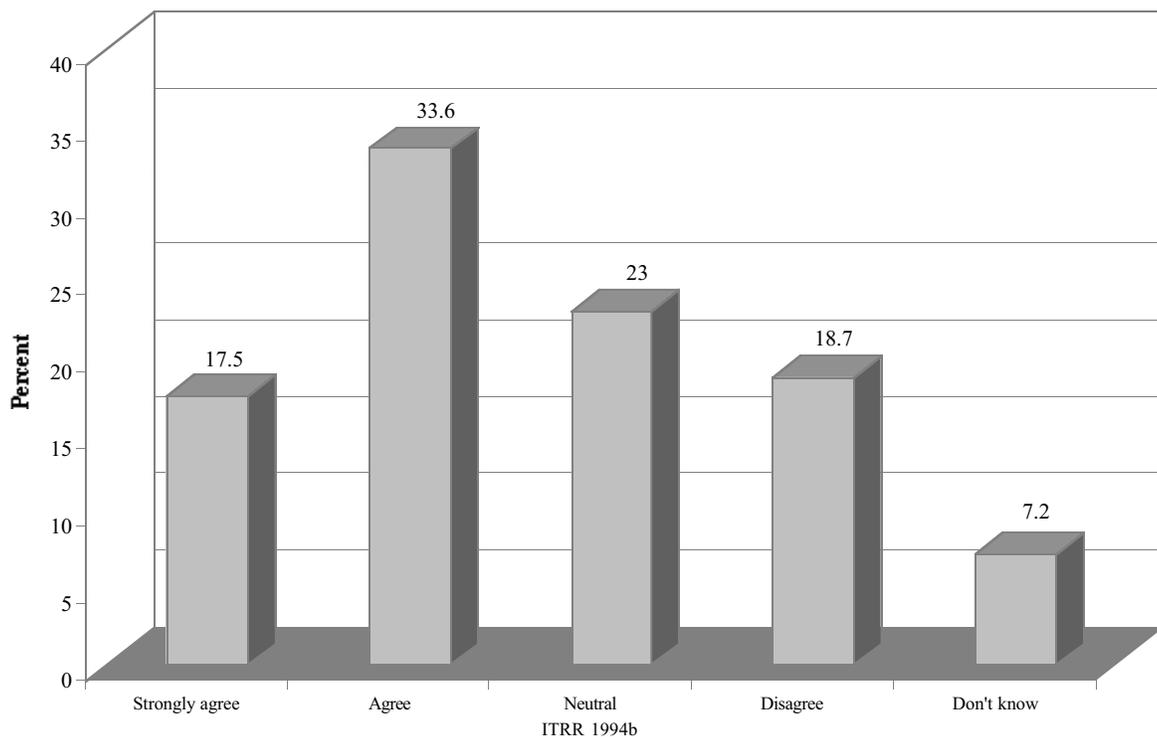
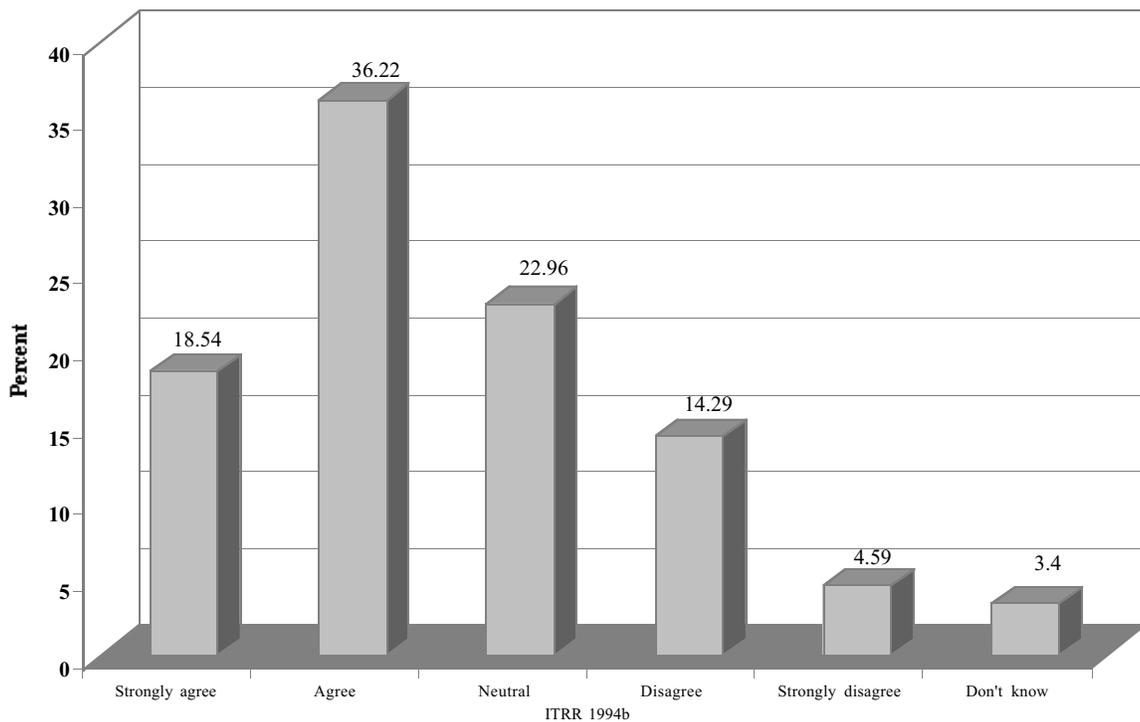


Figure III-20. Agreement that Better Trail Location Information is Needed.



Attitudes about Conflict and Compatibility

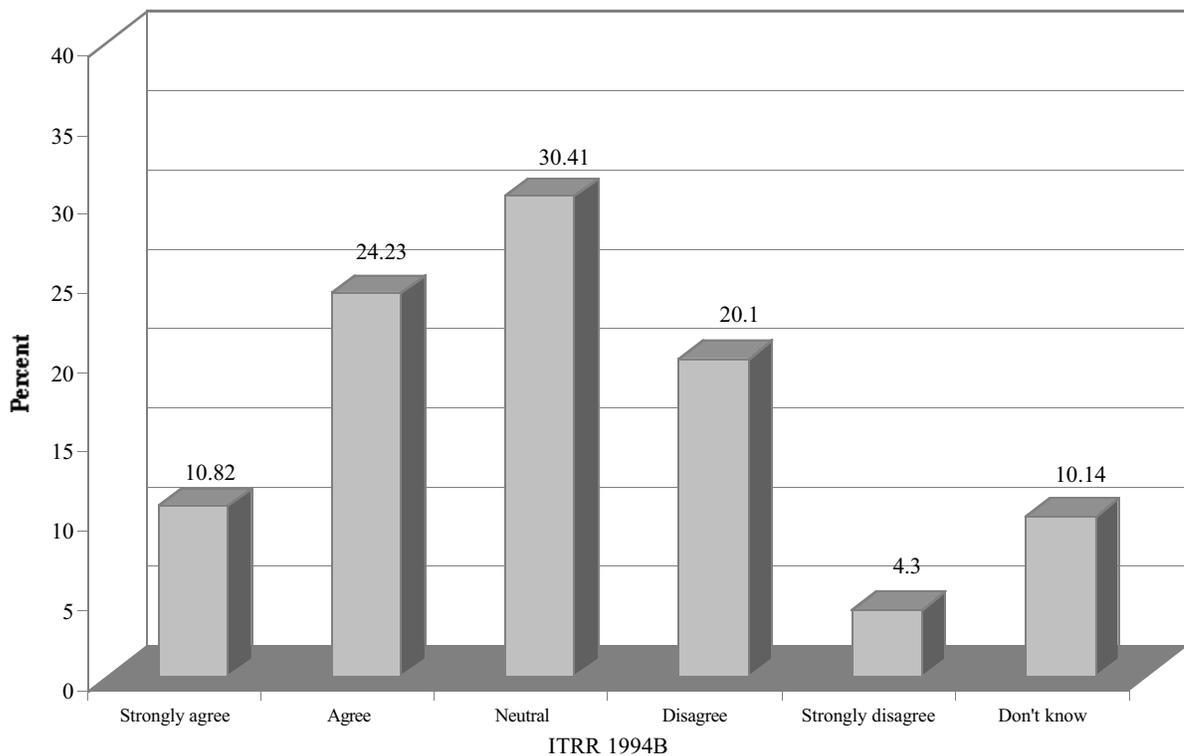
Existing data also suggests that there is some concern about conflicts on trails, but not strong agreement on the severity of the problem (ITRR 1994b and FWP 1998). Over nine percent of the responding trail users reported experiencing some sort of conflict on their last trail trip. Of those reporting conflicts, nearly 80 percent said they involved mechanized forms of trail uses (this includes motorized and non-motorized uses such as mountain bikes). When asked if there are conflicting uses on local trails, 35 percent of the respondents agreed, with 24 percent disagreeing (see Figure III-21). Approximately 41 percent of the respondents were either neutral or didn't know. When asked if conflict on Montana trails was relatively minor, 45 percent agreed, 15 percent disagreed, while 40 percent had no opinion or did not know.

While opinions are relatively mixed on the present degree of conflict (perhaps due to the way the data was presented generally without a

breakdown by use category), attitudes are more pronounced about what types of uses are perceived of as inherently incompatible. Survey results indicated that non-motorized users, in particular, do not find motorized uses to be compatible with their type of trail activities. Only twelve percent of the backpackers who responded, for example, felt motorcycles or four-wheel vehicles were compatible with their types of trail activity. Of the various non-motorized users surveyed, the percentage that felt a particular type of motorized use was compatible with their activity never climbed above 25 percent.

Horseback riders generally feel non-mechanized trail use is compatible and mechanized use incompatible, with only 33 percent of the horseback riders, for example, rating mountain biking as being compatible with their sport (compared to 72 percent for walking). Motorized vehicles were judged to be even less compatible with horses than mountain bikes, with a rating in the sixteen to eighteen percent range. Conversely, 41 percent of the mountain bikers judged horseback riding as being compatible. The relative speed of

Figure III-21. Agreement that there are Conflicting Uses on Local Trails.



mountain bikes and motorized vehicles and the chance of surprising trail stock were probably concerns that contributed to this assessment. Other non-motorized uses view motorized uses as incompatible

In a break from the overall trend, cross country skiers were more likely to find snowmobiling compatible with their activity than visa versa; approximately 25 percent of the skiers felt snowmobiling was a compatible activity. Interestingly, snowmobilers tended to view their sport as relatively incompatible with cross-country skiing; less than thirteen percent of snowmobilers said cross-country skiing was compatible.

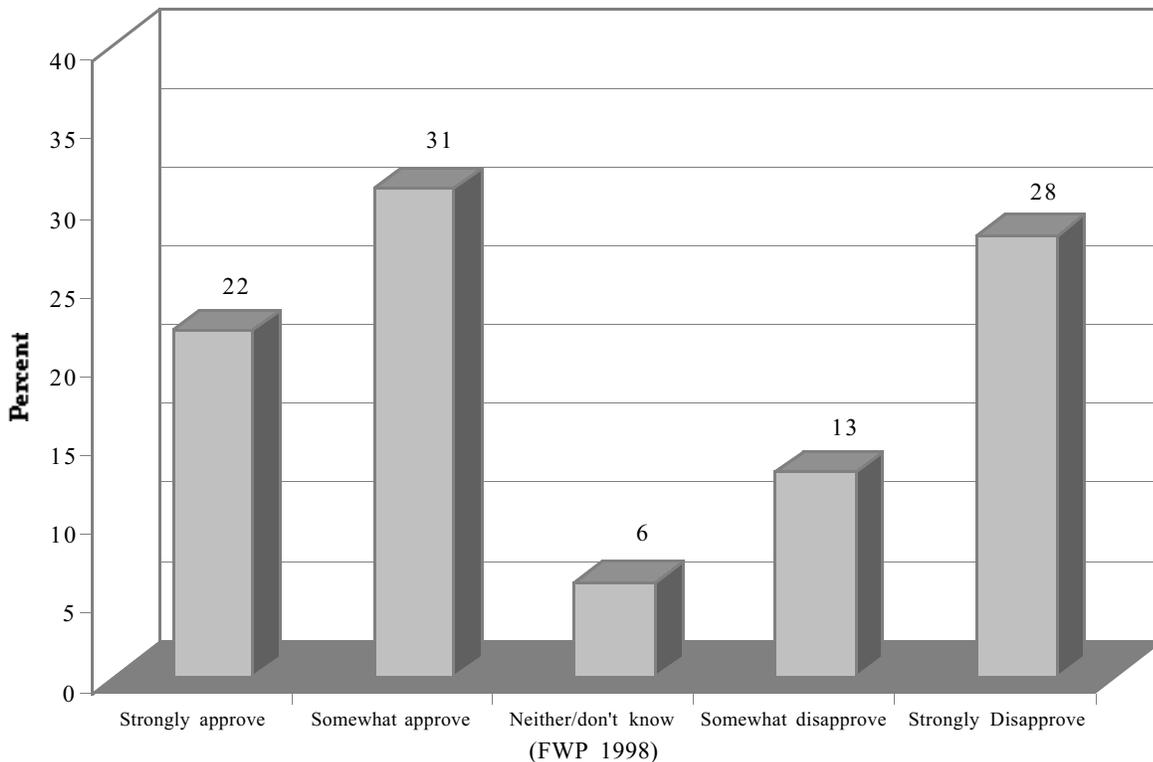
Based on the available data, a large majority of non-motorized users feel that motorized use was incompatible with their trail use. When Montanans were asked if they approved of legal motorized trail use, 28 percent strongly disapproved, and 13 percent disapproved. On the other hand, 22 percent strongly approved and 31 percent somewhat approved, with only six percent having

no opinion (see Figure III-22). Clearly, Montanans have strong and divided opinions on motorized trail use.

Motorized users, on the other hand, regarded other types of motorized trail use as compatible with their activities, while those that felt non-motorized uses were compatible generally ranged from 25 to 50 percent. With off-road motorcyclists and ATV users, for example, the percentage stating that a particular non-motorized use was compatible with their activity never slipped below 25 percent, and went as high as 56 percent.

Montana trail users appear to have mixed feelings about the desirability of single-use trails. According to the 1994 Montana Trail User Survey, although twice as many people see the need for single use trails (33 percent) than feel there are too many (16 percent), 51 percent said they didn't know or were neutral. When the issue was framed in a different manner, 22 percent of the respondents said they had a preference for single-use trails. On the other hand, 39 percent said they didn't have a preference for single use trails,

Figure III-22. Approval of Legal Motorized Trail Use.



with 39 percent saying they either didn't know or were neutral.

While conflicts between trail users do not appear to be especially severe when examined from a statewide perspective, the perceived lack of compatibility between motorized and non-motorized users, in particular, suggests a potential for much greater conflict in the future if use increases and trail supply and management remain relatively constant. In Montana, the expressed lack of compatibility between motorized and non-motorized trail users has likely not led to greater conflicts in part due to the state's numerous trail opportunities and low population.

Barriers to Trail Use

Barriers to additional trail use was also an issue addressed in the trail user survey (ITRR 1994b). A majority of respondents in every use category except one indicated that they would like to engage in their preferred activity more frequently. Jogging was the only category where less than half (34 percent) of the respondents wished they could get out more often. Among the other users, responses ranged from 89 percent for cross-country skiers to 57 percent for four-wheel enthusiasts.

Lack of time and work obligations were by far the most common barriers to additional participation mentioned by trail users. Weather was listed as a barrier for joggers, walkers/hikers, backpackers, horseback riders, bicyclists, and cross-country skiers. Not owning the necessary equipment (e.g., horse, snowmobile, etc.) was another factor mentioned by horseback riders, mountain bikers, ATV riders, four-wheel riders, and snowmobilers. Access restrictions or lack of trails was mentioned as a barrier to further use by mountain bikers, bicyclists, motorcyclists, ATV riders, and four-wheelers. Disabilities, traffic congestion, and lack of money were also mentioned by some users as factors preventing more active participation.

The survey data suggests that for the majority of trail users restrictions on available time such as

work and family obligations are the primary obstacles to further use. Developing better trail opportunities close to the cities and towns where most Montanans live is one way of addressing what appears to be a fairly serious time constraint. More people could realize their goal of more frequent trail use if they could reduce the amount of time and the cost required for transportation to trailheads.

Summary of Montana Trail Supply and Demand

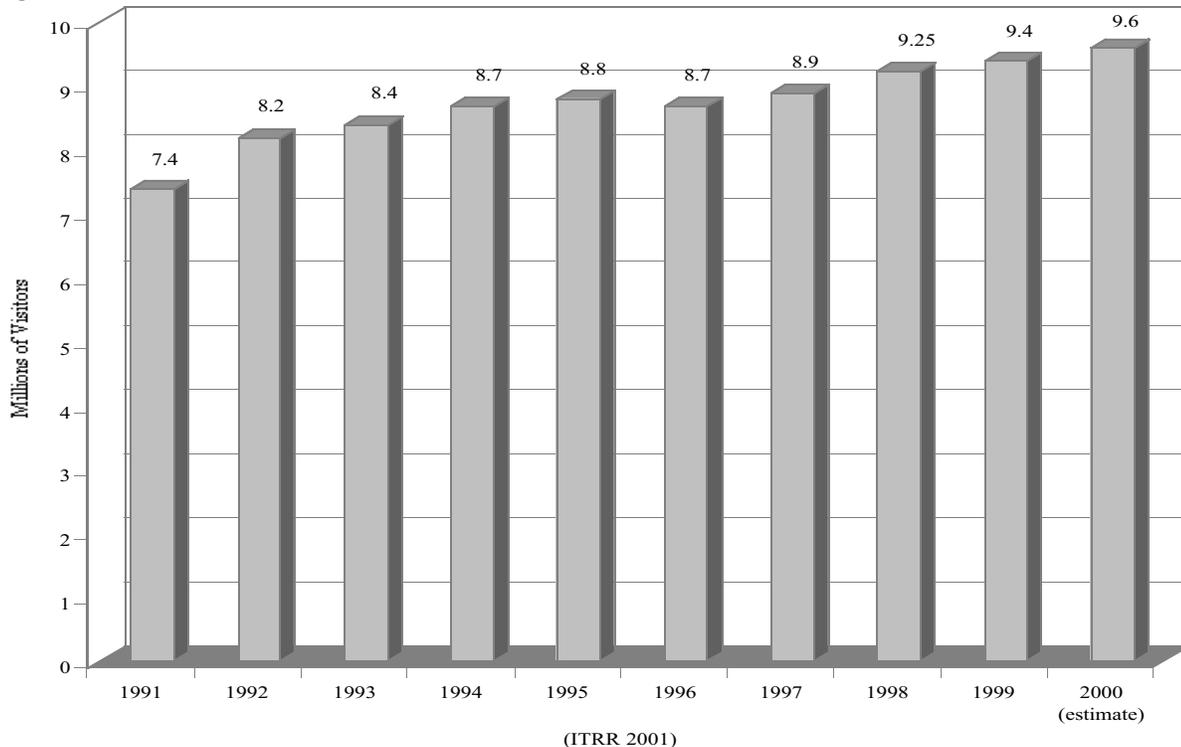
Montana's trail supply has not kept pace with increased use. Overall trail use in Montana grew in the 1990s, although participation rates remained relatively stable in many categories. Montana's population increased from 787,000 in 1980 to 800,000 in 1990, an increase of over one percent per year (Environmental Quality Council 1996). By 1995 Montana's population was 870,000, with an accelerated growth rate of over eight percent in five years. By the early part of the twenty-first century, it is estimated the state will have over a million residents. Combined with increases in population, the number of tourists in Montana increased dramatically since the mid-1980s, with more than nine million visitors annually by 1998 (ITRR 1999, see Figure III-23).

Future trends for Montana's trail system include increased use, expanding types of trail activities, and enhanced potential for conflict. Demands for greater levels of maintenance and management by the public will likely increase, as will the demand for more trails. This will be aggravated by new types of trail uses that increase the complexity of multiple-use management.

Increased crowding, conflict, and degradation of highly used trails could result in a secondary impact of increased use on other trails. The preference for primitive settings by many trail



Figure III-23. Montana Visitor Trends



users will also lead to increased use of more remote and less accessible trails. Whereas in the past many trails remained non-motorized due to physical landscape barriers, with modern technology these barriers are increasingly surmountable, requiring new management responses. Also, the rapid development and marketing of new trail technologies can create trail impacts and raise other management problems very rapidly. Innovative new management, public involvement efforts, funding programs, and volunteer efforts will be necessary to address these issues in the future.

The most critical need is for more non-motorized trails in and around Montana’s growing urban areas, where most people live. Increased interest in and funding for urban trails during the past decade has produced some spectacular new opportunities in Montana’s larger cities, a trend which has occurred throughout the country. However, the demand for more urban trails is expected to continue, as these are the routes that are most accessible to the majority of users.

While urban trails are the opportunities that are most readily available to the majority of trail

users, backcountry trails are a key part of what makes Montana’s trail system special. However, the supply of trails in Montana’s roadless areas has decreased significantly during the past half century. Although the Forest Service—as well as other federal, state and local governing agencies—has created new trails and accesses in response to public demand, trail creation has been eclipsed by the loss of existing backcountry trails.

Finally, population growth and changing land use patterns have increased property values, subdivision, and suburban sprawl, resulting in a decrease of unofficial trails and access to trails across private land. In particular, the sale and subdivision of timber company land (e.g., Plum Creek property in northwestern Montana) has significantly decreased the amount of privately owned trail opportunities for the public. Trail access and private property issues will be discussed in more detail in the next chapter.

CHAPTER IV: TRAIL ACCESS AND LINEAR CORRIDOR ALTERNATIVES

Maintaining and increasing the state's trail supply and diversity is important to Montanans, and will require creative thinking about the nature of trails and trail access. While support for good trails and trail access is strong, total trail miles in the state have declined significantly since World War II. Access to existing trails and public lands has also decreased, while recreational use of public land has expanded dramatically. Increasing trail supply and access is not merely a function of trail construction, but a complex and dynamic social, political, legal, and administrative process which requires the involvement of a variety of managing agencies, political entities, special interest groups, and individuals.

In addition to access issues, this chapter discusses linear land ownership and historical use corridors with trail potential, including railroads and abandoned rail lines, utility and irrigation easements, and a variety of historical Native American and Euro-American routes, some of which are already part of a designated National Trails System. The intent in this section is not necessarily to advocate that particular routes or types of routes be used for trails—in fact, some of these options present difficult challenges—but rather to inform readers of the broad range of trail and access possibilities.

Access To Trails and Public Land

Access to trails and public land is one of the most significant public lands issues of the decade, and is likely to increase in importance as recreational use of public land increases. A report by the Federal General Accounting Office in 1992 found that over 50 million acres—fourteen percent of the total Forest Service and BLM land base—had inadequate access, with 12 million additional

acres difficult to reach (General Accounting Office 1993). Another 5.4 million acres of the public domain located in the eleven Western states were completely closed off by surrounding private land.

Increasing and sustaining access across private land to public land is among the most important outdoor recreation issues facing Montanans (Brittan and Brittan 1989). As far back as 1976, a study for the forty-fifth legislative session of Montana concluded that access problems were increasing in the state, caused mainly by changing land ownership patterns. Since then, there has been a steady increase in both recreational use of public land and loss of traditional accesses.

Increased recreational use of public land in the 1970s pressured federal agencies to consider ways of securing and increasing access. Both the Forest Service and BLM—often working with state and local governments, special interest groups, and private land owners—have documented, signed, and acquired numerous accesses since the 1970s, although usually on a case-by-case basis. State agencies in the West have also addressed the access problem, although once again typically in a non-comprehensive, case-by-case, basis.

The Board of County Commissioners of the 56 counties in Montana is charged with opening, maintaining, discontinuing, abandoning, and recording roads (Montana Code Annotated 1997). However, a lack of documentation and a willingness to abandon roads by counties—as well as inconsistent policies and disagreement on access to public land by various levels of government—contribute to the growing access problem. The role of various levels of government in the complex legal arena of public access is discussed below.



Federal Policy and Legislation Related to Access Issues

Although federal land managing agencies have long had the authority to acquire access to public land by purchase, exchange, donation, eminent domain, or litigation, these agencies have only recently become more active in securing and increasing public access. The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 sets forth requirements on how the Forest Service deals with private landowners in acquiring property, while the 1974 Resources Planning Act (RPA)—as well as more recent policy decisions—requires the Forest Service to provide for access needs in land plans (BYU Journal of Public Law 1994). The BLM has similar authority and policies.

An important legal tool in this process is an 1866 federal law known as R.S. 2477, which granted a “right-of-way for the construction of highways over public lands.” Originally intended to preserve access to public lands over public domain land that was passing to private hands through the Homestead Act or other mechanisms, the statute is often claimed as a means of obtaining motorized use across public land (BYU Journal of Public Law 1994). The current Forest Service direction for addressing R.S. 2477 claims on Forest Service land is to not recognize these assertions unless there is an emergency need (USFS 2000).

Significantly, R.S. 2477 can also be utilized to secure public access across private land when existence of an historical public road can be proven. Although repealed by the Federal Land Policy and Management Act of 1976, federal, state, and county governments can continue to claim right-of-way where the easement had been created before the statute.

The Forest Service and the Bureau of Land Management first resorted to litigation to protect public access in the early 1990s. In *Garfield County V. WHI, Inc.* (1993), the federal government first gained standing to sue on the public’s behalf for access by prescription or by an implied grant under R.S. 2477 (10th Circuit 1993). A

legal theory known as Public Trust Doctrine, although originally used to exert a public right in navigable waterways, was used by the court in exerting a federal interest in access to public land. The Garfield County case supersedes state statutes limiting prescriptive easements, thereby allowing for historical public easements to be proven, even if the access has been closed for years.

Public Roads and Rights-of-Ways

Unofficial roads and trails across private land are an important element in accessing public land throughout the state. Many access roads which are not part of the regularly maintained county road network have been or are in danger of closure. Although used by the public, many informal roads are not well documented or listed in the county plat books, making the existence of public right-of-ways problematic.

Roads that are petitioned county roads—even those that have not been maintained—can not be closed by the landowner. The landowner’s remedy in such a dispute is to formally petition the Board of County Commissioners to close the road. During the 1999 Legislative Session, the Montana Legislature passed HB 352 (amending MCA 7-14-2615) to include the provision that the County Board of Commissioners may not abandon a county road or public right-of-way that accesses public land unless another public right-of-way provides substantially the same access.

Ultimately, the determination of what constitutes a county road, public right-of-way, or a prescriptive easement is a very fact-specific inquiry. There is typically no single rule, statute, or case that determines the issue one way or another.

In many cases, the public enjoys access to public land out of the goodwill of adjacent public landowners; that doesn’t mean that there is any legal public access. Land managers need to research and evaluate all access corridors to determine the legal status of the access. In the event that no easement or access agreement

exists, land managers should first begin working cooperatively with the landowner to formally secure permanent access.

Until counties formalize ownership of roads and trails not already included in the county records, many roads and unofficial trails commonly used by the public are subject to closure by the landowner. Once a road is physically closed by private landowners, it often takes expensive negotiations, litigation, purchase, or condemnation to restore the access.

Private and Unofficial Trails and Trail Access

Changing land ownership and land use patterns, often the result of changing economics, increased population, and associated demand for high-amenity residential and recreational rural land, are altering traditional recreational use of private land throughout the state (Copeland 1997). This includes corporate timber land, land on the outskirts of urban areas undergoing a transition from agriculture to suburban and urban, and formerly abandoned land in urban areas traditionally used for transportation, mining, industry or by the military. The more significant of these land ownership and land use patterns are discussed below.

Corporate Timber Lands

Forest industry firms own over 1.6 million acres in Montana, much of which has been used historically by the public for recreation, including for trails and access to trails. This land ownership pattern resulted primarily from a federal land grant to the Northern Pacific Railroad in 1864, including 14,740,000 acres in Montana, sixteen percent of the state's total land area (Root 1987, Peters and Johnson, 1959). This land grant generally consisted of sections (one square mile) on either side of the railroad line in a checkerboard pattern, with twenty alternate sections on either side of the right-of-way per mile in Montana. Where settlement had already occurred, the

railroads were often granted nearby public domain land. The Great Northern Railroad also obtained hundreds of thousands of acres of timberland in the West, including Montana, in lieu of land already settled in Minnesota. As a result of these land grants, hundreds of thousands of acres of corporate timberland is interspersed with public land, often in a checkerboard pattern, throughout Western Montana.

Over time, these land grants were broken up through sales and evolution of corporate entities. For example, approximately one million acres of land grant land in Montana was purchased by the Amalgamated Copper Company in 1907, with over 650,000 acres of this later purchased by Champion International in 1972, part of a larger holding. In 1993, 867,000 acres of Champion's land in Montana was sold to Plum Creek Timber Company. Additionally, Big Sky Lumber owned over 165,000 acres of timberland in the Gallatin National Forest by the mid-1990s, mostly in a checkerboard pattern.

As timber resources are depleted and corporate timberland becomes more valuable broken up into residential parcels, many historical trails and access to trails are in danger of being lost. For example, Plum Creek officials recently announced plans to sell up to 150,000 acres of land in northwestern Montana for residential development, much of which has been used historically by the public for recreation. Thousands of acres of former Big Sky Lumber land in Southwestern Montana is also slated for residential development.

Although sales of corporate timberland are threatening to close land used recreationally and for access, a more positive aspect of this trend is the opportunity for the public to acquire more land or access. Land trades intended to consolidate checkerboard ownership patterns can sometimes threaten trails and access on the traded public land, but they can also improve access opportunities. For example, the proposed Gallatin land consolidation between the Forest service and Big Sky Lumber Inc. would trade 54,000 acres of Big Sky Lumber property for



28,000 acres of Forest Service land, and in the process create twelve new accesses, close eleven, and secure title to 21 historic accesses (USFS 1997).

Non-System Urban Trails

Urban areas often contain a network of unofficial trails used for recreation and alternative transportation, utilizing old industrial, transportation, or mining areas, as well as land in the transition from more traditional agricultural use to residential or commercial uses. As the population grows and expands into fringe or rural areas, this traditional network of trails is threatened. Traditional footpaths are generally encroached on by landowners as the value of the land and the intensity of the land use increases (Millward 1996). Often, trail users do not realize the land is not public until orange fenceposts or survey stakes appear.

Public land used for segments of these unofficial trails includes parks, cemeteries, and road right-of-ways. As user conflicts increase and liability questions arise, management decisions often disrupt use. If the trails are identified before change occurs, preservation can often be achieved with participation by local government, local trail organizations, concerned citizens, and recreation and park organizations.

Linear Corridor Alternatives

When many Montanans think about trails, they tend to consider the kinds of traditional trails that have been used in the state for hundreds of years—winding, forested paths through the mountains, for example. While these kinds of stereotypical routes have been and will continue to be at the core of the Montana trail experience, there are other types of routes that fit the definition of trail that need to be considered. Important historical routes such as Native American travel

corridors or the Lewis and Clark journey, for example, might be defined as “trails,” even though they are not continuous public corridors. Additionally, there has been growing interest in using transportation and utility corridors for trails, rail trails being the most notable example. Finally, it is worth noting that a number of the country’s most significant long-distance routes are already part of a federally-designated system, the National Scenic, Historic, and Recreational Trail system, one of the best known representatives being the Continental Divide Trail which passes through western Montana.

Utilizing Existing Infrastructure for Trails

Montana's Rail System

Currently, Montana is served by seven railroads with over 3,400 miles of track (Montana Department of Transportation 1993—see Figure IV-1). Between 1979 and 1992, over 1,370 miles of railroad line were abandoned, while a number of short lines were abandoned earlier in the century. The largest railroad abandonment in Montana occurred in 1980 when the Milwaukee Road abandoned 1066 miles of line in the state, with only 215 miles purchased by other railroads, for a loss of 851 miles of railroad line. Other abandoned lines include a number of Burlington Northern branch lines and spurs totaling over 490 miles from 1979 to 1992, and the 22 mile White Sulphur Springs and Yellowstone Park line in 1980. The majority of abandoned railroad miles in Montana are already in private hands, since ownership reverted to adjacent landowners upon abandonment.

Historically, railroad abandonment has resulted in the railroad line being replaced by roads, or the linear land ownership pattern being broken up as the right of way reverts to adjacent landowners. Converting rail lines, which reverted back to private landownership into rail-trails, is generally impractical and cost-prohibitive, often requiring obtaining land or easements from a number of landowners. However, due to the significant

MAPS

In the Montana State Trails Plan, pages 117 through 118 contain map figures. Due to a constantly changing trail system, most of these maps are already outdated. The maps are intended to be general representations only and are not to be used as trail guides.

Map Index:

Fig IV-1



historical and scenic nature of some of these abandoned lines, they are discussed below. The potential for creating rail trails from remnant segments still exists in some cases, especially in urban areas or where ownership reverted to public entities. Existing rail lines that are unused or used only occasionally offer better opportunities for longer trails.

Although total rail mileage had been decreasing in the U.S. for decades, it was not until the demand for urban trails increased dramatically in the late 1970s that preserving railroad easements for trails gained widespread support. In 1983 Congress enacted an amendment to the National Trails System Act, directing the Surface Transportation Board to allow railroad lines that were undergoing abandonment to be “railbanked,” which prevents the rail line from fragmentation (Rails to Trails Conservancy 1997). A request for railbanking, by a public agency or qualified private organization, prevents reversion to adjacent landowners, as well as prohibits the railroad company from selling off property or trail-related structures for 180 days, giving potential trail managing agencies time to purchase the rail line.

Montana's Rail Trails

Rail trails have become one of the most rapidly growing land acquisition movements in American history. When the Rail-To-Trails Conservancy formed in 1986, their staff knew of only 75 existing rail-trails, with 90 projects in the works. By 1997 there were nearly 900 railtrails completed, totaling nearly 10,000 miles of trail, with over 1,000 projects planned. One of the longest rail trails in the country is the 145 mile Milwaukee Road Corridor in Washington, created from a segment of the Milwaukee Road mainline, while a 400 mile trail is in the works for the San Francisco area. Montana ranks 33rd in the nation for the number of rail-trail projects, and 30th for mileage, although a number of projects are currently planned.

At least eighteen rail-to-trail routes have been completed or are under construction in Montana, with over 125 miles of projected trails, many of them along the former Milwaukee Road (see Table IV-1). The longest rail trail in the state is the recently-opened Route of the Hiawatha, a 33 mile trail from St. Regis to the Idaho Border through the Lolo National Forest. The majority of this stretch reverted to the Forest Service,

Table IV-1. Rail Trails in Montana (MDT 1999)

<u>Name</u>	<u>Location/Management</u>	<u>Length (miles)</u>
Gallagator Linear Trail	Bozeman	1.5
Great Northern Historical Trail	Flathead County	1.25 (23 planned) (.8 along active line)
Heights Bike Trail	Billings	3.5
Kim Williams Nature Trail	Missoula	2.5
Milwaukee Road Trail	Missoula	?
NorPac Trail	Lolo Nat. Forest	12.1
River's Edge Trail	Great Falls	7.1 (30 planned)
Spring Meadow Lake and Centennial Park Trail	Helena	2.5
Tobacco River Memorial Trail	Kootenai National Forest	2
Gulch Trail	Cascade County	2.4
Joliet Railway Ped/Bike Path	Joliet	5
Story Mill Trail	Bozeman	2 (railtrail)
Route of the Hiawatha Rail Trail	Lolo National Forest	33

although a number of easements through private land were donated or purchased.

Although the majority of Montana's rail trails are located along former rail lines, two of the trails parallel existing rail lines. Slightly less than one mile of the Great Northern Historical Trail in Flathead County is slated for development along a heavily used Burlington Northern spur, while the Story Mill Trail in Bozeman parallels an unused Montana Rail Link spur. With appropriate planning and design, creating trails along active rail lines can be safe and offer the same benefits as other trails (Rails-to-Trails Conservancy 1997).

Montana has missed the opportunity to convert entire abandoned lines into rail trails. However, unused or rarely used spurs and segments of line occur throughout the state and offer perhaps the best potential source of rail trails outside of urban areas. There are three branch lines in Western Montana that deserve specific mention due to their current use status, location, and scenic nature. A 26 mile Montana Rail Link branch line from Drummond to Philipsburg along the Flint Creek Valley has been out of service since a derailment in 1983 damaged the tracks. A 45.6 mile Montana Rail Link branch line from Whitehall to Alder along the Jefferson Valley has been rarely used since 1987 when a crude talc loading facility was moved to Three Forks. The 19.5 stretch from Twin Bridges to Alder is out of service, while the remainder of the track is classified as a light density line and is rarely used, with a speed limit of 25 mph; only five carloads of grain utilized the segment in 1991. This route passes through some of the most scenic intermountain valleys in Southwestern Montana, in addition to skirting a number of outstanding historical resources.

Another currently inactive segment of the former Milwaukee Road is an eleven mile stretch from Whitehall to Spire Rock, owned by the Montana Rail Link. Burlington Northern owns the short inactive segment from Spire Rock west to Butte, which combined with the Montana Rail Link segment, could form an alternative transportation

route from Whitehall to Butte over the Continental Divide north of Interstate 90.

The Central Montana Rail, a non-profit corporation formed to restore service on a segment of the old Milwaukee Road mainline in Central Montana, also acquired an 8.4 mile stretch of line from Spring Creek Junction to Lewistown. Currently inactive due to an unsafe wooden trestle, this segment could be utilized as a rail trail for Lewistown. Other inactive or rarely used spurs and segments of rail lines occur throughout the state, and would often make excellent recreational trails and alternative transportation routes.

Utility Corridors

Utility corridors represent a source of linear land ownership with the potential for trail development, wildlife habitat enhancement, and other ancillary uses. For example, the Washington & Old Dominion Trail in Virginia is a former rail line purchased by an electric utility. Presently, a buried sewer line and fiber optic cables, as well as a paved trail, share the easement. In Washington State, an abandoned railroad right-of-way was acquired for a rail trail with financial help from AT&T, who wanted to lay a fiber-optic cable along the route, while in the Seattle area, a sewage line easement was utilized for segments of a public trail (Interagency Committee for Outdoor Recreation 1991).

Public utility and irrigation easements are the most common linear land ownership pattern in the state, and include oil and natural gas pipelines, sewer lines, irrigation ditches, electrical transmission lines, and telephone, television, and fiber optic cable. Montana Power Company alone owns over 2,100 miles of natural gas transmission pipelines, and over 6,750 miles of electric transmission lines.

Although located throughout the state, these easements offer the potential for trails in lower elevation foothills and valleys where the demand for trails is the greatest but the supply is limited. Montana law already excludes utility easements

from road abandonment, thereby preserving linear land ownership patterns. Although the utility infrastructure itself (e.g., high voltage power lines) could compromise the aesthetics and natural qualities of the corridor, in many cases the utility is or could be buried.

Irrigation easements, which by necessity follow the natural contours of the land more rigorously than roads, are perhaps the most numerous linear land ownership patterns with the potential for use as trails in the state. However, federal, state, and irrigation district easements, are presently closed to public access to protect public safety and private property, whereas the remainder of irrigation easements are privately owned.

The legal complexities and costs of utilizing these types of linear corridors needs to be considered, especially since both the owner of the utility easement and the actual land owner have a role in management decisions. Safety and liability are also major concerns that need to be addressed. Additionally, easements are often granted for only a specific use, and wouldn't necessarily apply to recreation.

Existing Roads

A substantial amount of trail-like recreation and transportation occurs on a wide variety of existing roads. This ranges from OHV/4x4 riding, hiking, and mountain biking on primitive roads, to bicycling on paved streets and highways. Sometimes traveling on the road itself is the focus of the trip, while in other cases roads may be used as connecting links between trail segments.

On the primitive end of the scale, the BLM has designated a number of backcountry byways in Montana and elsewhere that highlight exceptional backcountry touring opportunities. Additionally, the Forest Service manages hundreds of miles of primitive roads in Montana, offering a wide range of opportunities. The Forest Service has also designated a number of roads with outstanding natural, cultural, and recreational resources as scenic byways.

A considerable amount of bicycling occurs on Montana's paved roads and highways. Bicycles are considered legitimate road vehicles and—unlike many other states—bicycles are not prohibited on federal highways or interstates. According to Montana statutes “every person operating a bicycle shall be granted all of the rights and shall be subject to all of the duties applicable to the driver of any other vehicle” (MCA 61-8-602). In a number of Montana towns and cities, bike lanes and routes have been established along some roadways to facilitate bike travel and improve safety.

The Montana Department of Transportation (MDT) has published a brochure and map for bicyclists which includes data on traffic volumes and shoulder widths on Montana highways. Copies are available from the MDT Bicycle and Pedestrian Coordinator, at 1-800-714-7296 or 406-444-9273. Additional information on Montana bicycle touring opportunities is available from Adventure Cycling Association, a non-profit organization based in Missoula (406-721-1776).

There are significant safety and legal issues involved in using roads for trail-type activities. Helmets are recommended for all OHV and bike activities, regardless of where they occur. In most cases, OHVs must be registered and licensed to legally operate on roads. A registration decal is required for all OHV use on public roads and lands in Montana, although the Forest Service now has the authority to designate roads where OHVs don't need to be licensed. To date, the designation of these routes has been limited.

Historic Routes and Trails

Montana contains many historically significant trails, including Indian trails and Euro-American trails and railroads, as well as trails included in the National Scenic, Historical, and Recreational Trail System. Although some of these trails have already been designated as part of the federal system, others have been largely ignored or received attention only at a local level. While not intended as a comprehensive list, the trails

included in this section were chosen due to their historical significance, possibilities for historical interpretation, and overall recreation potential.

With less than 200 years of permanent Euro-American habitation in Montana—and Native American history leaving in many cases a subtle and often obscured imprint on the cultural landscape—enjoying Montana history often requires an appreciation of the physical landscape as the stage upon which historical events occurred. Vastness defines Montana more than any other feature. As a result, much of state's history is that of travel and trails; retracing the state's historical trails is a good way of exploring Montana's history. Montana is also a scenic state, with a wealth of natural amenities, and rich in natural history. Many of the major historic trail corridors pass through a landscape that combines unique elements of both cultural and natural history. As a result “the inseparable link between landscape and historic resources” is especially strong in Montana, and along Montana's trails (Sommer 1990).

Trails that began as game-trails evolved into foot trails used by prehistoric hunter gatherers, then horseback trails used by historic Indian tribes, then Euro-American trapper and trader trails, military and civilian wagon roads, and finally railroads and automobile roads. In some cases, segments of trails were abandoned during these transitions and the landscape in the interim has remained relatively undisturbed. Many of the trails included in the current state trail system are more than fifty years old and could themselves be considered historic trails, although most have not been researched or evaluated in a preservation framework. Throughout Montana, important cultural and physical features of historic trails remain on the landscape, and could be the focus of historical interpretation and education activities, even though only scattered portions of the original routes may be in public ownership. It is worth emphasizing that many segments of the routes described below are no longer discernable as trails.

Historic Railroads

The construction of railroads in Montana began with the Utah and Northern from Corinne Utah, following the old Corinne Trail and reaching Butte in 1881. The last spike of the first trans-continental line to cross Montana—the Northern Pacific—was driven at Gold Creek Montana in 1883, near the site of the first discovery of gold in the state in 1852.

The construction of railroads continued in the state into the early twentieth century, while at the same time changes in the economy and technology were already setting the stage for railroad abandonment. Independently operated short-line railroads throughout the state were abandoned or sold to the larger railroads early in the century, including the Butte, Anaconda, and Pacific Railroad, the Montana Western, the Gilmore and Pittsburgh, the Big Blackfoot, and the White Sulphur Springs and Yellowstone Park lines. Few traces of these historic railroads exist, the routes they followed generally occupied by other railroads, roads, and utility corridors. However, in some cases remnant and relict landscape features remain, offering the potential for historical interpretation and other trail associated recreation.

Three historical rail lines in particular deserve specific mention here due to their significance in Montana history: the Butte, Anaconda, and Pacific; the Montana “Jawbone” Railroad; and the Milwaukee Road (see Figure IV-1).

The Butte, Anaconda, and Pacific Railroad:

The Butte, Anaconda, and Pacific Railroad included a 31.5 mile line, built in 1894, to haul copper from the mines in Butte to the smelter in Anaconda. In 1912, this line became the first railroad to electrify in the country (Taber 1960). Closure of the smelter in 1980 and most mining in 1983, forced the line to close in 1984. Reformed as the Rarus Railroad in 1985, the historic line continues to serve the Butte and Anaconda area and is a major component of the proposed Butte/Anaconda Historical Park.

The Montana “Jawbone” Railroad: The discovery of silver in the Castle mountains in 1882 prompted the formation of the Montana Railroad Company. Construction began at the Northern Pacific rail stop of Lombard on the Missouri River. The line slowly snaked up Sixteen Mile Creek Canyon and through rugged terrain between the Belt and Bridger Ranges, with the town of Castle its goal.

The repeal of the Sherman Silver Purchase Act in 1892 and the ensuing financial panic of 1893 led to the decline of mining in the Castle district, which was still waiting the arrival of a railroad to decrease costs. By 1897 the line reached Castle, but traffic was already tapering off and financing was difficult: “Between the talk of Richard Harlow to raise money and the talk to keep men working without much pay,” the line became known as the “Jawbone” (Baker 1990).

A series of extensions to serve central Montana reached Harlowton in 1899 and Lewistown in 1903, finally producing profits. By 1912 the line was incorporated into the Milwaukee Road, which had provided financial assistance throughout its construction with this very goal in mind. Although much of the route was abandoned and subsequently purchased by adjacent landowners, historical sites and features along the route could be utilized for historical interpretation and recreation.

The Milwaukee Road: The last transcontinental line to be built across Montana was the Chicago, Milwaukee and St. Paul. Later known as the Milwaukee Road, the route reached Butte in 1908 and completed its march across the state in 1909. This railroad purchased the Montana Railroad, and was one of the first railroads in the country to electrify, with the segment from Harlowton to Avery Idaho electrified in 1915.

The Milwaukee Road played a large role in promoting the last great homesteading era on the northern plains in the 1910s, as well as drawing early tourism to Yellowstone National Park, and resorts and spas throughout the state.

The entire line was abandoned in 1980s, with only portions of the line taken over by other railroads and the remainder reverting to adjacent landowners. Much of the line no longer exists, although some of the abandoned sections remain relatively intact, including a 34 mile stretch in the Judith Basin west of Judith Gap.

Prehistoric and Historic Native American Trails and Trail Corridors

The following list and description of Native American trails is not meant to be exhaustive, but rather intends to summarize some of the better known and most significant routes (see Figure IV-2).

The Old North Trail: The Old North Trail—running north-south along the eastern slope of the Rockies from Canada through Montana—has been an important travel and trade route for at least 3,000 years, leading to chert quarries in southern Montana and obsidian deposits in Yellowstone National Park (Reeves 1990). Complex stone features found along the trail were likely erected for sacred purposes associated with the route. The trail served a specific spiritual function to the Blackfoot Indians, whose creation myth tells of the Old Man who walked north, creating the world, the mountains and the plains, as he went (Stark 1997).

Although the actual location of the trail along most of its length is unknown, portions are better mapped, and in some cases discernable evidence of the trail still exists on the landscape. The best preserved portions of the trail, as well as the most scenic, are located along the Rocky Mountain Front, running from the International Boundary through the Blackfoot Indian Reservation to the Sun River near Augusta. Land ownership patterns in the general vicinity of the trail consist of a mix of federal, state, and private holdings include three FWP Wildlife Management Areas and the Pine Butte Swamp Nature Conservancy Preserve.

The Bannock Indian Trail: The Bannock Indian Trail, although overlaying earlier travel routes, was a trail used by Bannock, Shoshone, and other Columbia Plateau Indians traveling to the buffalo hunting grounds in the high plains of Montana and Wyoming, after buffalo grew scarce in the Snake River Plains in the late 1830s (Haines 1962).

Although easier routes existed, the Blackfeet controlled the land to the north, and the route to the south was long and led through the heart of Crow Indian land. The remaining route across the Yellowstone Plateau while rugged and timbered led to a number of widely separated buffalo-hunting areas in the intermountain valleys of Montana and Wyoming and the Great Plains beyond.

The trail began at Camas Meadow in Idaho, crossed over Targee Pass to the Madison River in Montana, bisected the southern end of the Gallatin Range into the Gardner River drainage, then proceeded eastward up the Yellowstone and Lamar Rivers in Yellowstone National Park. The route then split into a number of connecting trails leading to buffalo hunting areas in the Madison, Gallatin, Yellowstone, Clark Fork, and Shoshone River valleys.

Although much of the trail is in Yellowstone National Park, the trail also crosses various federal, state, and private land in Montana. Much of the trail is located in rugged mountainous country with minimal development, although private land, especially along the upper Madison River, is undergoing commercial and residential development.

The Kootenai Falls Portage Trail: The Kootenai Falls Portage Trail is part of an important Indian trade route linking the eastern slope of the Rockies with the Columbia Plateau and the Pacific Coast. The route followed the Kootenai River and its tributaries through the extremely rugged and wooded country in the panhandle of Idaho and northwestern Montana (Davis and Vinson 1981). The actual location of the trail is unknown for most of its length, but an approximately three mile segment along Kootenai Falls

remains relatively intact. The trail was the portage and primary travel route around the falls. Sites located on the terraces above the falls contain archeological evidence, suggesting both ceremonial and utilitarian uses, going back several thousands of years.

Although dams upstream and down have altered the landscape drastically, the stretch flowing through Kootenai Falls remains free-flowing, preserving the last major falls in the entire Columbia River drainage. The falls are located approximately twelve mile west of Libby along Highway 2, situated within the Kootenai National Forest, although a parcel of land overlooking the falls to the south is owned by Lincoln County and maintained as a park and scenic overlook. Montana Fish, Wildlife & Parks also manages over 340 acres in the area. Archeological and historical evidence suggests that the primary travel route was on the north shore, currently accessible by a wooden footbridge. A Forest Service trail created in the 1920s overlays portions of the historic trail.

Bad Pass Trail: Bad Pass Trail is a trail linking the Bighorn Basin in present-day Wyoming with the lower Bighorn River, which flows north into the Yellowstone River in south central Montana. The trail parallels the rugged and treacherous Bighorn Canyon, threading between the Pryor and Bighorn Mountains. The surrounding country has been occupied by prehistoric peoples for thousands of years; they utilized the many caves for shelter and storage, engaged in game drives, and traveled through the area gathering plants (National Park Service 1996). Shoshone Indians traveled the Bad Pass Trail more recently to access the buffalo hunting plains to the north. Explorers, trappers, and traders also used the trail to avoid the dangers of the Canyon.

A number of landscape features are still discernable on the landscape, including rock cairns, pottery shards and worked stone. The Bad Pass Trail is one of the most significant and impressive rock pile cultural landscape features associated with a trail in the Northwestern Plains (Loendorf and Brownell 1981). Much of the trail is already protected within the Bighorn Canyon

MAPS

In the Montana State Trails Plan, pages 125 through 126 contain map figures. Due to a constantly changing trail system, most of these maps are already outdated. The maps are intended to be general representations only and are not to be used as trail guides.

Map Index:

Fig IV-2



National Monument, while the remainder is located within the Crow Indian Reservation and the Pryor Mountain Wild Horse Range.

The Lolo Trail: Approximately 120 miles in length from the Bitterroot Valley of Western Montana to the lower Clearwater River in Idaho, the Lolo Trail has a history as a major Indian travel and trade route, dating back to at least to the late 1700s. The trail was also traveled by the Lewis and Clark Corp of Discovery on their way to the Pacific in 1805, and on their return trip in 1806, as well as by the Nez Perce on their retreat in 1877 (McLeod 1981).

Beginning in the mid-1860s, a number of road and rail projects were organized with the intent of getting over Lolo Pass (including the Union Pacific and Northern Pacific Railroads); none of these projects were ever completed. Finally, in 1933, the Lolo Motorway was constructed by the Civilian Conservation Corp, disturbing much of the trail. Nonetheless, a study conducted in 1980 along the 28 mile stretch located in the Lolo National Forest from the town of Lolo in Montana to Lolo Pass on the Montana-Idaho border found that significant portions of the trail remain undisturbed and discernible. Increased interest due to the Lewis and Clark Bicentennial will likely result in increased public use of this trail, which is already recognized as a National Historic Landmark, and listed on the National Register of Historic Places.

Euro-American Exploration, Trading, and Settlement Trails

The Missouri River was the primary transportation corridor for Euro-American settlement patterns until roads and railroads out-competed river traffic. The steamboat era began in earnest in 1860 when the steamboat Chippewa reached Fort Benton, the head of Missouri River navigation, and the primary inter-modal transportation hub for many of the historical trails mentioned below (Ingram 1976). By the end of the Civil War overland routes became more competitive, greatly reducing river traffic, although the last

commercial boat did not leave Fort Benton until 1890.

The Missouri River and its tributaries, although not trails in the traditional sense, embody the full range of recreation, historical, cultural, and natural resources that are the basis of our parks and trail system. Most of the Montana's historical trails led from ports along the river system to outlying regions, generally following the larger river valleys. The approaching bicentennial of the Lewis and Clark Expedition, which is expected to draw large numbers of visitors to the state, increases the importance of a unifying vision for management for the Missouri and its tributaries. The stretch of river from Fort Benton to the Fred Robinson Bridge, designated and managed as a Wild and Scenic River by the BLM, is among the least developed and most popular portions of the Lewis and Clark Trail.

Even before steamboats reached Montana, overland routes were being opened by explorers and fur-traders, often following the most heavily-used Indian trails. The outbreak of war with Spain in 1846 prompted the Federal government to hasten exploration of routes over the Rockies to the West Coast.

In 1849, following a plan created by the Secretary of War, a group of Army engineers escorted a group of emigrants from Fort Leavenworth to Fort Hall, Oregon Territory, opening up the Oregon Trail. Branching off from this route, the Stevens Expedition of 1853 explored possible wagon and railroad routes to the north, connecting Minnesota with Washington Territory. The expedition also explored the general route of what would become the Bozeman Trail, starting at Fort Laramie on the Oregon Trail and leading to central Montana.

The following section examines significant historic trails and railroads in more detail, as well as addressing the potential for a larger management presence on the part of resource agencies.

Northern Overland Route: The Northern Overland, or Minnesota-Montana Road, was the path taken by the Stevens Expedition from St.

Paul to Fort Benton in 1853, traveling generally to the north of the Missouri River. Captain James Fisk led a wagon train of settlers from Minnesota to Fort Benton along this route in 1862 and 1863. However, the route never became popular, due to economic and social stresses caused by the Civil war, rapid development of river boat traffic, and hostile Indians (Malone and Roeder 1976, Montana Department of Fish and Game 1975). Much of the route is now followed by state highways and passes through private land, although the low population and rural nature of northeastern Montana have resulted in comparatively little landscape change.

Mullan Military Wagon Road: While working with the Stevens expedition of 1853 as a railroad and wagon road surveyor, John Mullan was sent west from Fort Benton to explore a route over the mountains to Idaho. His route included traveling over a pass on the Continental Divide from the Helena Valley to the Deerlodge Valley, now known as Mullan Pass, as well as a pass over the Bitterroot Mountains into Idaho. In 1858 he was assigned by the War Department to complete a wagon road from Walla Walla, Washington to Fort Benton along the same route. Although the trail was completed in 1863, the rough stretch over the mountains was used by very few wagons, and by 1866 freighters complained the road was difficult even for pack animals (Jackson 1952). Although much of the route was subsequently followed by railroads and highways, the stretch over the Bitterroot Mountains was avoided by following the Clarks Fork River to the north or other passes, resulting in a relatively undisturbed landscape along this portion of the route.

Bozeman Trail: In 1863 John Bozeman and John Jacobs set out from the one-year old Bannock mining town to find an easier route from the Oregon Trail to the Montana goldfields (Johnson 1971). By the time they reached the Oregon Trail, gold had been discovered in Alder Gulch, so they culminated their trail in Virginia City. Although the trail avoided the high mountain passes by skirting north to the Yellowstone, it passed through the last great hunting grounds of the Sioux and Cheyenne.

The Bozeman Trail, soon dubbed “The Bloody Bozeman,” was a battleground from the start, as the Sioux and their Northern Cheyenne allies—under the leadership of Red Cloud—fought desperately to protect land granted to them by an earlier treaty. Although the Army built three forts along the trail to protect wagon trains, including Fort C.F. Smith along the Bighorn River in Montana, the trail was used for only a few years. The Army abandoned the trail in 1868 after a number of military setbacks, as well as political pressure exerted by the Department of the Interior. In Wyoming, Sioux warriors under the leadership of Crazy Horse killed over 100 soldiers in an ambush that is now called the Fetterman Massacre. Red Cloud’s series of battles along the “Bloody Bozeman” is often acknowledged as the only war won by Indians in North America (Johnson 1971).

Much of the trail, overlaying even earlier Indian, trader, and exploration routes, is now part of the modern network of roads and highways. However, in some areas the land remains relatively undisturbed, and a number of historical sites along the trail remain intact. A wide range of land ownership occurs along the route, including federal, state, and private, complicating preservation and historical interpretation activities. A number of groups are actively involved in efforts to preserve and interpret portions of the Bozeman Trail.

Bridger Trail: Bridger’s route, with two deviations from Bozeman’s trail, was also a shortcut from the Oregon Trail to the Montana goldfields. By passing to the west of the Big Horn Mountains, the trail avoided the Sioux hunting ground, but instead passed over rugged terrain that lacked forage (Malone and Roeder 1976). The other deviation was an easier route over the mountainous terrain between the Yellowstone River and East Gallatin River drainages, following an old, well established Indian Trail (Vincent 1978, Johnson 1971). Much of the Bridger Trail is also now part of the modern road network.

The Corinne-Virginia City Trail: The first important overland route to the goldfields in Montana was carved from the old fur trade

routes, and connected the Utah settlements along the Oregon Trail with the mining communities to the north in western Montana (Ingram 1976, Montana Fish and Game Commission 1975). The Corinne-Virginia City Trail—also known as The Salt Lake City-Bannock Trail, or The Montana Trail—led northward through Utah and Idaho, and crossed the Continental Divide into Montana over Monida Pass. The Trail split along the Beaverhead River: One fork went to Bannock and the Deerlodge Valley to the north, while the main fork led to Virginia City (described below as the Vigilante Trail) and on to Helena, connecting with the Mullan Road. Completion of the Union Pacific Railroad through Wyoming into northern Utah in the 1870s increased the dominance of this trail.

The Vigilante Trail: The discovery of gold in Alder Gulch in the Spring of 1863 prompted a flood of miners from Bannock and elsewhere. The 70 mile extension of the Corinne road from Bannock to Virginia City played an especially important role in the history of Montana (Burlingame 1981). This trail, often following older Indian and fur-trader trails, became the primary link with the outside world. Robbery and theft of gold dust was very rampant during this period; many of the 102 murders documented from mid-1862 to mid-1863 for the mining communities of southwestern Montana occurring along this trail. The Montana Vigilantes, a poorly documented but extremely important element in the settlement history of Montana, hung at least 21 alleged law-breakers and banished many more from December 1863 to March 1864. These incidents, many occurring at roadhouses along the trail, prompted a name change for the road from the Road Agents Trail to the Vigilante Trail. Although many of the Vigilantes became important political leaders and members of Montana society, reaction against Vigilante extremes was also instrumental in the creation and acceptance of a legal system.

Road houses, generally spaced fifteen to twenty miles apart to provide fresh horses for the stages, occurred along all the major trails of the period, with road houses spaced closer together along this route to accommodate the large amount of

traffic (Ingram 1976). Beaverhead Rock, known to locals as Point-of-Rocks, or Copeland's Ranch in the 1860s, was an important stop along the trail and is now part of the State Parks system, as is Bannock (now known as Bannack).

The Whoop-up Trail: The Whoop-up Trail led from Fort Benton north across the U.S.-Canadian border, near present-day Sweetgrass. After fording the Milk River, the trail split into three branches, supplying the vast reaches of the northern plains and Canadian Rockies (Berry 1953).

The trail from Fort Benton was the primary travel and trade route for this geographically isolated area from the 1860s through the 1880s. As better routes to the mining towns in Western Montana opened up, the economy of Fort Benton became increasingly dependent on trade to the north, the destination of one third of the freight reaching the town from 1874 to 1885. Much of the trade was in whiskey, which was illegal to sell to Indians in the states, but an important trade item north of the border, where no formal law enforcement yet existed. The trail was also used by settlers, including American cattlemen interested in the vast open range grasslands across the border. Due to its geographical and political remoteness and isolation, the country north of Montana was exploited for furs relatively late in Fur Trading Era, and was the last stronghold of open range.

Fort Whoop-up, a whiskey trading post in the Cypress Hills on the Alberta and Saskatchewan border, was established in 1869 by American fur traders and was the site of the Cypress Hills Massacre of 1873, where white traders killed a number of Indians. This helped precipitate the intervention of the Canadian Mounted Police, who reached Fort Whoop-up in 1874, the beginning of Canadian control in the region. The Whoop-up Trail was seen by many Canadians as a symbol of the economic domination of America over the newly-created Canada, spurring construction of the Canadian Pacific Railroad, which reached Medicine Hat, Alberta, in 1883. In a few short years the economic grip of Fort Benton on the country to the north was severed.

The National Trails System

In 1968 Congress passed the National Trails System Act, which established a national system of trails, composed of National Scenic, Historic, Recreation, and Connecting Trails. These trails are generally for non-motorized use only, and are intended to be continuous corridors for outdoor recreation.

Presently, three national trails occur in Montana: the Continental Divide Scenic Trail, the Lewis and Clark Historic Trail, and the Nez Perce (Nee-Me-Poo) Historic Trail. The National Park Service coordinates the national trails program, and provides assistance to other managing agencies (e.g., much of the Continental Divide Trail is on Forest Service land). Significant portions of the trails are located on private land, particularly the historic trails, with public sites along the trail utilized for historical interpretation and recreation. Other sites and segments of the trail corridors might be well suited for such activities, as will be discussed below.

The Lewis and Clark National Historic Trail:

The Lewis and Clark National Historic Trail, which traces the routes traveled by the Lewis and Clark Expedition on their trip from St. Louis to the Pacific and back from 1804 to 1806, is perhaps the most famous of all the historic trails in the United States. Traveling up the Missouri River and its headwaters, then over the Continental Divide, the expedition members were the first Americans to see many of Montana's best-known landscape features, including the Great Falls of the Missouri, the Missouri Headwaters, and a number of major mountain passes. The explorers established American claims to the West and inspired an exploration and trading era soon followed by actual settlement. Lewis and Clark carefully noted the nature of the country and its inhabitants, and in doing so left a lasting record of a vast and remote region.

A number of governing agencies manage portions of the Lewis and Clark National Historic Trail, and provide historical interpretation opportunities, ranging from Forest Service interpretive trails and a new interpretive center in Great Falls,

to Montana Department of Transportation Historical Markers along highways. Although much of the trail parallels developed transportation routes, in other cases the trail remains undeveloped. Increased use of public facilities and lands along the Lewis and Clark Trail threatens cultural and environmental resources, as well as their enjoyment. Inter-agency planning for the Lewis and Clark Expedition Bicentennial is currently underway in Montana (and elsewhere along the route) to help improve sites, provide consistent and integrated interpretation, and manage resource impacts.

The Nee-Me-Poo (Nez Perce) Historic Trail:

The Nee-Me-Poo (Nez Perce) Historic Trail, extends approximately 1,170 miles from near Wallowa Lake in Eastern Oregon to the foothills of the Bear Paw Mountains in northeastern Montana. The trail traces the route taken by a small number of Nez Perce Indians who refused to sign a treaty requiring them to give up their land.

In 1877 when the U.S. Army ordered the nontreaty Indians to move onto a government reservation, violence erupted. The Nez Perce fled the Army and took a circuitous route across Idaho and through the recently created Yellowstone National Park to seek refuge with their allies, the Crow. They then fled north across Montana seeking the Canadian border. Although vastly outnumbered by the Army, the Indians successfully defended and extricated themselves from a number of battles, and outmaneuvered pursuing forces in what is considered the most courageous and brilliant defense waged by Indians in North America. The main group finally surrendered just south of the border in what is now the Bear's Paw National Battleground.

Although the trail was used in its entirety only once, portions followed other important travel routes (e.g., the section overlaying the Bannock Indian Trail and the Lolo Trail will be discussed below). Much of the trail has now been developed into modern transportation routes, although some segments remain relatively undeveloped,

including portions of the route along the Clarks Fork of the Yellowstone, where the Nez Perce avoided armies behind and in front of them by escaping down the rugged and seemingly impassable Clark's Fork Canyon. Present management involves a number of Federal and state agencies, although much of the trail passes through private land. The National Park Service manages the Big Hole and Bear's Paw Battlefields as key interpretive components of the trail.

The Continental Divide National Scenic Trail:

The Continental Divide Scenic Trail (CDNST), established in 1968, follows the Continental Divide from the Canadian to the Mexican border. The 795 mile Montana portion passes through Yellowstone and Glacier National Parks, ten national forests, a number of wilderness areas, and a number of BLM management areas, some state land, as well as small segments of private land.

The trail is composed of a number of trail segments on or near the Continental Divide, interrupted by gaps where detours or short stretches of road travel are required. The gaps are generally caused by roads, highways, and railroads crossing passes over the divide, although private land without easements also disrupts the trail in places. Acquisition of land or easements are planned for a number of these gaps. Opportunities for education and interpretation occur where the trail parallels or crosses other historical trails.

The agencies responsible for managing the CDNST receive funding, maintenance, and construction assistance from a non-profit volunteer organization, the Continental Divide Trail Alliance.

Motorized use of the CDNST has been a point of contention and confusion. According to a 1997 Forest Service directive that was sent out to regional foresters, the policy on this issue is as follows:

When designated by Congress, the route of the CDNST followed some segments of primitive roads on which motorized vehicle use was allowed. The special language of subsections 5(a) (5) and 7(c) was intended to allow continued motorized use of such roads. However, as the CDNST is further developed, it is expected that the trail will eventually be relocated off roads for its entire length.

It is the intent of the Forest Service that the CDNST will be for non-motorized recreation. As new trail segments of the CDNST are constructed to link existing non-motorized trail segments together, and to reroute the CDNST off of primitive roads or other routes where motorized travel is allowed, motorized use should not be allowed nor considered. Allowing motorized use on these newly constructed trail segments would substantially interfere with the nature and purpose of the CDNST. If any newly constructed trail segments of the CDNST are currently allowing motorized use, that motorized use should be stopped as soon as practicable, but not later than January 1, 2000 (USFS 1997c).

CHAPTER V. TRAIL FUNDING

Adequate funding is a critical trails-related challenge that affects many of the other issues addressed in this plan. This section overviews funding sources for trail projects at the federal, state, local, and private level, including requirements, restrictions, and limitations. A more detailed discussion of many of these funding sources is available in *A Guide to Grants for Community Planning and Development Projects in Montana: Resources for City and County Governments* (1995), by the Montana Department of Commerce. Additionally, the FWP *Trails Programmatic Environmental Impact Statement* (2000) provides a detailed analysis of two important state trails grant programs.

Federal Trail Managing Agencies

Since the federal trail managing agencies manage approximately 99 percent of the public trail miles in Montana, their ability to secure funding for trail projects is critical to the overall health of the system. As summarized below, federal agencies rely on their own trail-related funding, as well as outside sources and volunteer labor.

United States Forest Service

The forests utilize Forest Service funding, grants through various state-administered programs, donations, and volunteer/in-kind services. Also, some forests are pursuing new sources of funding (e.g., user fee dollars generated through the new federal Fee Demonstration Program, which can include trailhead fees).

Current trends indicate that the Forest Service has reduced its funding for construction and maintenance of trails in Montana since 1995. Forest Service estimates show that maintenance funding decreased approximately 20 percent from

fiscal year (FY) 1995 to FY 1997; according to the Forest Service, construction funds have also decreased by approximately 40 percentage during the same period. Decreasing federal funding is an important factor preventing forests from reaching their trail-related goals.

National Park Service

Funding comes primarily from the National Park Service operating budget and special funding sources. However, many parks are increasing their use of outside funding, including money available from cooperating partners. Significant funding has become available to national parks through the Fee Demonstration Program, authorized through 2002. The Program allows a portion of the gate revenue in participating sites to be utilized for projects within the park, including trail maintenance and construction.

Bureau of Land Management

Federally appropriated funds as well as grants and private contributions are utilized for funding. The BLM will also likely increase reliance on user fees for various facilities and activities. A high percentage of BLM trails are informal, non-system, unmaintained routes.

Federal Funding Sources Available to Trail and Transportation Management Agencies

Federal programs constitute the largest source of funds for trails in Montana, both in terms of grant programs created specifically for recreational trails, and grant programs with related goals,

such as reducing pollution, preserving open space, and protecting natural resources.

Transportation Equity Act for the 21st Century (TEA-21)

Federal trails-related funding received a major boost with the passage of the Intermodal Surface Transportation and Efficiency Act (ISTEA) in 1991. Many hundreds of miles of trails were completed with funding made available through this historic piece of legislation, which represented a fundamental shift in the kinds of projects federal transportation dollars could be used for.

A number of the same trails-related programs were included in the new federal transportation legislation, which was passed in 1998. Similar to the old ISTEA legislation, the Transportation Equity Act for the Twenty-first Century (TEA-21) includes, among other components, the Surface Transportation Program (STP), National Recreational Trails Program (RTP), Congestion Mitigation and Air Quality Improvement Program (CMAQ), National Highway System and Federal Lands Highway Funds. All of these can be used to fund trails. More details are included below:

- **The Surface Transportation Program** includes a mandatory, ten percent set-aside for projects which fund federal, state, and local transportation improvements. The Montana Department of Transportation (MDT) administers the enhancement program called the Community Transportation Enhancement Program (CTEP), with selection of projects occurring at the local level. Among other things, CTEP funds trail-related projects including bicycle and pedestrian facilities, rail-trails, and the acquisition of scenic, historic, and natural easements and land. Local governments must match the federal money on a 13/87 basis.
- **The Recreational Trails Program** supplies federal trail dollars that are administered by FWP in Montana, and will be discussed in more detail later in the state funding section. When the original version of this was passed as a component of ISTEA, it was often

referred to as the “Symms Act” in reference to Senator Symms, one of its sponsors.

- **The Congestion Mitigation and Air Quality Improvement Program (CMAQ)** can be used for trail projects that promote alternative transportation projects with air quality benefits. Administered at the state level by the Montana Department of Transportation, this program is limited to “nonattainment” areas that failed to meet federal air quality standards for ozone, carbon monoxide, and particulate matter, as well as areas considered at high risk for becoming non-attainment areas. Projects eligible for funds include rail/trail and bicycle trails.
- **National Highway System and Federal Lands Highway Funds** are primarily for construction and maintenance of highways. Alternative transportation, such as bicycle paths can be funded, but such projects are generally limited to improvements along the designated National Highway System or on federal lands. Projects must clearly demonstrate they provide a viable alternative to automobile commuting.

Land and Water Conservation Fund (LWCF)

The Land and Water Conservation Fund (LWCF) is a key federal funding program managed by the National Park Service, a component of which allows states to assist their political subdivisions by providing grants for the acquisition and development of public outdoor recreation projects, including trails. Another component of LWCF provides funding to federal agencies for resource conservation projects such as land purchases.

Since its inception in 1965, LWCF has provided over \$3 billion nationwide to states for outdoor recreation projects, with Montana receiving approximately \$31 million. Between 1995 and 1999, no funding was available in Montana for the LWCF local recreational grant program. At this writing (June, 2000), Congress is considering a bill—the Conservation and Reinvestment Act

of 2000 (CARA)—which would permanently fund LWCF at a higher level than previously; more details on this proposal are included in the potential future funding sources section of this chapter.

Rivers and Trails Conservation Assistance Program

Another component of the National Park Service, this program offers planning and organizational assistance for local community projects promoting nature-based recreation and environmental, historical, and cultural conservation projects. The Program has had a long involvement in trails projects.

Resource Conservation and Development Funds

A program managed by the federal Natural Resources and Conservation Service, this fund is designed to encourage state and local governments and non-profit organizations to improve resource conservation by providing 50 percent matching funds for recreation, including parks and land acquisition.

Other Federal Programs

A number of federal grants targeted at urban redevelopment, economic development, community non-profit groups, and other purposes can be used for trails. Some of these include Community Development Block Grants, the Entitlement Program, and the Small Cities Program. Entitlement Program Funds, in particular, are restricted to communities with a population of 50,000 or greater, and are earmarked for projects with economic, historic, and/or cultural merit. This program is administered by the Department of Housing and Urban Development and requires some matching of funds.

State Trails Grant Programs Managed by FWP

The Parks Division of FWP administers three trail grant programs: the federally funded Recreational Trails Program (RTP), and the state funded Off-Highway Vehicle (OHV) and Snowmobile Grant Programs. Snowmobile trails in general and the Snowmobile Grant Program in particular was addressed in a programmatic environmental impact statement completed in 1993, and are not covered in this document.

Regardless of whether an FWP funded trails project is on federal, state, or private lands, it must comply with the Montana Environmental Policy Act (MEPA). On federal lands, trails must also comply with USFS Travel Plans, BLM Unit Plans, and the National Environmental Policy Act (NEPA).

Recreational Trails Program (RTP)

The funding for RTP comes from the Federal Highway Administration (FHWA), but the program is typically managed at the state level by natural resource agencies, including FWP in Montana. The Program receives a share of the Federal Highway Trust Fund based on an estimate of motorized, non-highway recreational fuel consumption.

According to federal guidelines, at least 30 percent of the RTP funds must be allocated to motorized recreation, 30 percent to non-motorized recreation, and the remaining 40 percent is discretionary for diversified/mixed trails use. The Recreational Trails Program allows a maximum of 7 percent of a state's appropriation to be used for administration.

Reenacted in 1998 as a component of the new federal transportation legislation (TEA-21), this

program has provided a growing source of trails funding throughout the country. The amount available for Montana trail projects, for example, has increased from \$193,000 in 1997, to \$364,000 in 1998, \$486,000 in 1999, to an estimated \$643,300 annually in fiscal years 2000-2003.

The TEA 21 program requires an 80/20 cost share, unless a federal agency sponsors the project. In those cases, the federal agency can contribute 15 percent of the cost, requiring the applicant to come up with the remaining 5 percent of the match. The Recreational Trails Program is a reimbursable program; that is, sponsors are reimbursed with federal dollars after costs are incurred.

FWP can grant funds to federal, state, county, tribal, or municipal governments, as well as to private individuals and organizations. FWP has developed an application process with a priority ranking system to screen project applications (more details on the process are included in the Trails Program PEIS). Under federal regulations, the funds may be used for trail development, renovation, maintenance, acquisition, safety, and interpretation. States are encouraged to give priority consideration to environmental mitigation projects.

States qualifying for funding are required to have a State Trails Advisory Committee (STAC). Montana's committee is composed of eight members (plus alternates) representing hiking, snowmobiling, cross-country skiing, horseback riding, ATV riding, traditional and mountain bicycling, four-wheel (4WD) driving, and off-road motorcycling, as well as advisors representing the FWP, USFS, BLM, the Department of Transportation, and the Montana Wildlife Federation. The Advisory Committee makes recommendations on which projects to fund to FWP, which must approve the projects before they are submitted to the FHWA for final authorization.

Projects are evaluated and prioritized by the Advisory Committee based on the following criteria:

- Provides for a number of compatible recreational purposes, and unique or innovative corridor-sharing techniques.
- Provides linkages among existing trails systems, greenways, scenic byways, or other natural, cultural, historical, or recreational areas.
- Meets a clear and documented user demand.
- Provides trails near homes and workplaces.
- Has low maintenance requirements, or maintenance that will be provided by the applicant.
- Utilizes volunteer assistance or non-traditional labor.
- Provides for a wide range of abilities.
- Creates partnerships among trail users, private interests within the area, and public agencies.
- Furthers the goals of the State Trails Plan and/or other relevant plans.
- Has no other public funding available.
- Provides an opportunity that will be lost if not immediately funded.
- Provides new, unique, or more effective means for making trail opportunities available to the public.
- Addresses the access and use of trails by persons with disabilities, senior citizens, and other challenged populations or groups with disabilities.
- Incorporates cultural/natural resource interpretation and trail safety education in projects.

- Completes projects where NRTFA funds were invested earlier.

Allowable uses of RTP funds include the following:

- Expenses incurred by the state to administer the program (no more than 7 percent of the state's allocation).
- Operation of state environmental protection and safety education programs relating to recreational use of trails (no more than 5 percent of state's allocation).
- Development of urban trail linkages near homes and work places.
- Construction and maintenance of trails on state, county, tribal, municipal, or private lands.
- Maintenance of trails on federal lands.
- Maintenance of existing recreational trails, including grooming and maintenance of trails across snow. States may allow purchases of snow grooming and mowing equipment.
- Restoration of areas damaged by trails and backcountry terrain use.
- Development of trailside and trailhead facilities (benches, restrooms, etc.).
- Provision of features that facilitate the access and use of trails by persons with disabilities.
- Acquisition of easements.
- Acquisition of property from a willing seller when the objective of a trail cannot be accomplished by other means.
- Where necessary and required by the State Comprehensive Outdoor Recreation Plan (SCORP)—and only when approved by the primary administering agency—the construction of new trails crossing federal lands.

Uses not permitted with RTP funds are as follows:

- Land acquisition by condemnation.
- Construction of new motorized trails on either USFS or BLM lands that have been designated as Wilderness Areas.
- Upgrading, expanding, or facilitating motorized use on trails that are predominantly non-motorized.

The Montana Off-Highway-Vehicle (OHV) Program

The FWP Parks Division also administers a grant program for the development, renovation, and maintenance of OHV trails and riding areas. The program supplies grants to maintain and renovate existing OHV trails and facilities, and to create safety and educational programs. The OHV Program is funded by OHV decal and registration fees, as well as a portion of the state gasoline dealers' license tax, based on the number of registered off-road vehicles.

Montana statute requires that all OHV's used on public lands for recreation must display an OHV decal. The OHV decal is \$5.00, with 40 percent of the proceeds used for enforcement, and 60 percent to develop and implement a comprehensive program and to plan for appropriate OHV recreation use. In addition to the decal fees, one-eighth of one percent of the distributor's gasoline tax is earmarked for the OHV program. The program devotes 10 percent of the money to promote OHV safety, up to 10 percent to repair areas that are damaged by OHV use, and the remaining funds to develop and maintain free public facilities. In the late 1990s, the total program budget was approximately \$160,000; more details on funding are included in the Trails Program PEIS.

The program is oriented toward projects that provide renovation or improvement to existing OHV trail or trail systems. Applications for OHV Program funding need to discuss the

following elements: 1) trails renovation; 2) soil stabilization measures to prevent or diminish erosion and provide a safe riding experience; 3) trail layout; 4) trail signing to provide users trail route information, natural resource or historic interpretation, and information about ethical conduct; 5) measures to reduce or eliminate resource impacts; 6) multiple-use benefits; and 7) noxious weed control.

OHV Program grants may be approved for the following project variables:

1. **Trail Maintenance & Renovation:** This may include brushing, grading, surfacing, bridges, retention walls, stiles, drainage structures (culverts, tiles, water bars, etc.), parking lots and grading, unloading platforms, latrines, trail-head kiosks, rerouting, noxious weed control.
2. **Equipment:** No small tools will be approved for purchase with OHV funds. However, equipment commonly used for trail maintenance may be purchased with OHV funds. Leasing is preferred for larger pieces of equipment.
3. **Signs:** This includes trailhead signs, reassurance blazes, cautionary and regulatory signs, general information signs, interpretive signs, etc.
4. **Labor and Administrative Costs:** Labor costs may only be reimbursed if that labor is accomplished by 1) governmental staff (only at existing salary rates), or 2) a private contractor. Administrative costs are not reimbursable. FWP prefers to invest limited OHV funds in on-site improvement and recommends that labor be accomplished through volunteers.
5. **Trail Mapping:** Mapping of trails using GPS or other technology can be funded as long as the appropriate trail managing agency has approved the work.
6. **Special Studies:** Special studies can be funded that provide information for OHV program planning and management.

Grants are for the full value of the project, as recommended by an OHV review and selection committee, and approved by FWP staff. However, FWP strongly recommends an investment by the project sponsor or cooperators such as cash, volunteer labor, and/or donated materials. Grants are provided to successful applicants (project sponsors) on an annual basis. A project sponsor may be an OHV club, OHV association, a chamber of commerce, or governmental agency working in conjunction with an OHV club.

The Montana Snowmobile Grant Program

The Snowmobile Grant Program is managed by FWP, and helps provide and maintain facilities on Forest Service, BLM, state, county, and private land. Over 25 snowmobile clubs across Montana groom and maintain trail systems totaling in excess of 3,200 miles using state-owned and funded equipment. As mentioned previously, snowmobiling and the Snowmobile Grant Program were covered in detail in a 1993 programmatic environmental impact statement, and will not be addressed in this plan.

Other State Trail Funding Sources

Montana Footpath and Bicycle Trail Act of 1975

Administered by the Montana Department of Transportation (MDT), this act allows the Montana Transportation Commission to spend an average of \$200,000 annually for non-motorized foot and bicycle trails in areas with a demonstrated need for alternative transportation. No specific funding source was provided as part of the Act to support these activities.

State General Funds

General funds from the state budget can be used for trail implementation. This source would require strong statewide public interest and political support.

Tourism Infrastructure Investment Program (TIIP)

The Tourism Investment Program (TIIP), administered by Travel Montana at the State Department of Commerce, funds tourism-related infrastructure that could conceivably include urban trails related to visitor attractions.

The University System

The University System can promote trails in a number of ways, including granting easements on university land; providing technical, planning, design, and construction assistance; and other collaborative efforts.

Private/Non-Profit Funding Sources

Private sources of trails funds include non-profit organizations either directly or indirectly associated with trails, as well as corporate and business sponsors. A few of the larger national and state sources are discussed here, but a much larger number of potential private funding sources exist.

- **American Conservation Association:** Helps finance conservation programs, including greenway and open space projects by non-profit organizations.
- **A Territory Resource:** Provides grants for projects with high levels of citizen involvement that are environmentally sound, including open space, transportation, and riparian preservation planning. Non-profit organizations must be the lead group.
- **Nature Conservancy:** Provides financial assistance to preserve significant natural areas from development.
- **Rails-to-Trails Conservancy:** Offers technical assistance on a wide range of topics related to conversion of abandoned railways to trails and the sharing of active rail lines with trails.
- **Liz Clairborne-Art Ortenberg Foundation:** Dedicated to the conservation of nature, especially mitigating conflict over land and natural resources in rural communities, and the conservation of biological diversity. The foundation is particularly involved in promoting conservation in Montana. Non-profit organizations are eligible for funding programs including conservation planning, greenway projects, open space planning, and water/riparian preservation.
- **W.K. Kellogg Foundation:** The W.K. Kellogg Foundation has donated over \$25 million to its Rural Development Program. Non-profit organizations, and local governments to a lesser degree, are eligible for grants to preserve farmland and open space.
- **Harder Foundation:** The Harder Foundation has shown interest in helping preserve Montana's natural environment, including wetlands and grizzly bear habitat preservation.
- **Jessie Smith Noyes Foundation:** The Jessie Noyes Foundation funds projects that promote environmentally sound approaches to development, sustainable agriculture, and protect groundwater. Non-profit organizations are eligible, with local projects that preserve farmland and water/riparian areas.
- **Land Trusts:** A number of statewide and local land trusts that promote the preservation of open space and natural areas will also participate in creating and preserving trails and trail access. Montana is one of the leading states in the Nation in number of acres in conservation easements.

- **Continental Divide Trail Alliance:** This group monitors and supports the Continental Divide National Scenic Trail, which follows the Rocky Mountains from Canada to Mexico.
- **The Public Lands Access Association:** The Public Lands Access Association (PLAA) is a Montana non-profit organization involved in access to public land issues, especially in restoring historic accesses. The PLAA has been instrumental in re-opening a number of historic accesses throughout the state, sometimes resorting to legal means. The PLAA is also a resource for researching historical trails and access to public land.

Local Trails Funding

Funding for local trail systems generally comes from city and county general funds, federal sources including CTEP funds, private donations and grants, state DNRC grants, and major business donations. Helena and Missoula have passed initiatives to acquire land for open space and trails. Local land trusts and other special interest groups, other trail managing agencies, as well as local service clubs and interested individuals, often donate money, time, and material. Many local trail agencies have enacted an “Adopt-a-Trail” program. In the thirty year period between 1965 and 1995, one of the most important mechanisms for funding local recreation projects such as trails were federal LWCF dollars, which funded hundreds of outdoor recreation improvements throughout Montana (see below).

Potential Future Funding Sources

The single most important potential funding source for trail projects in Montana is the permanent funding of the federal Land and Water Conservation Fund (LWCF) through the Conser-

vation and Reinvestment Act (CARA). In November 1999, the House of Representative’s Resource Committee approved CARA by a 37-12 vote. As of April 2000, a vote in the full House had not yet occurred.

CARA has the potential to do for natural and recreation resources in the twenty-first century what the Federal Aid in Wildlife and Sport Fish Restoration acts of 1937 and 1950 began in the last. CARA, as H.R. 701 has become known, is landmark legislation that will provide on-going wildlife, land, and parks conservation with the largest infusion of federal funds in history. Over the next 15 years, most of the funds would go to various state and local conservation programs, including state-level wildlife conservation and local level parks and recreation developments.

Montana could see an infusion of more than \$5.8 million annually to help conserve many of the state’s dwindling wildlife species and habitats. An additional \$4 million or more would come to Montana every year to help fund state and local LWCF projects such as developing new trails, restoring historic parks, constructing local recreational facilities, and purchasing open space. The legislation also includes financial incentives to private landowners for maintaining threatened species and for conservation easements.

CARA’s concepts have been supported by more than 3000 groups and organizations, including the National Governors Association, the Western Governors Association—including Montana Governor Marc Racicot—the National Association of Counties, and the Montana League of Cities and Towns.

In addition to CARA—and as discussed elsewhere in this chapter—the Federal Fee Demonstration Program has the potential to play an increasingly important role in trail funding. Whether the Program becomes a permanent, long-term funding component remains to be seen; many public land users are opposed to paying additional fees to utilize public lands, yet the Program appears to have substantial political momentum and support.

Attitudes About Funding

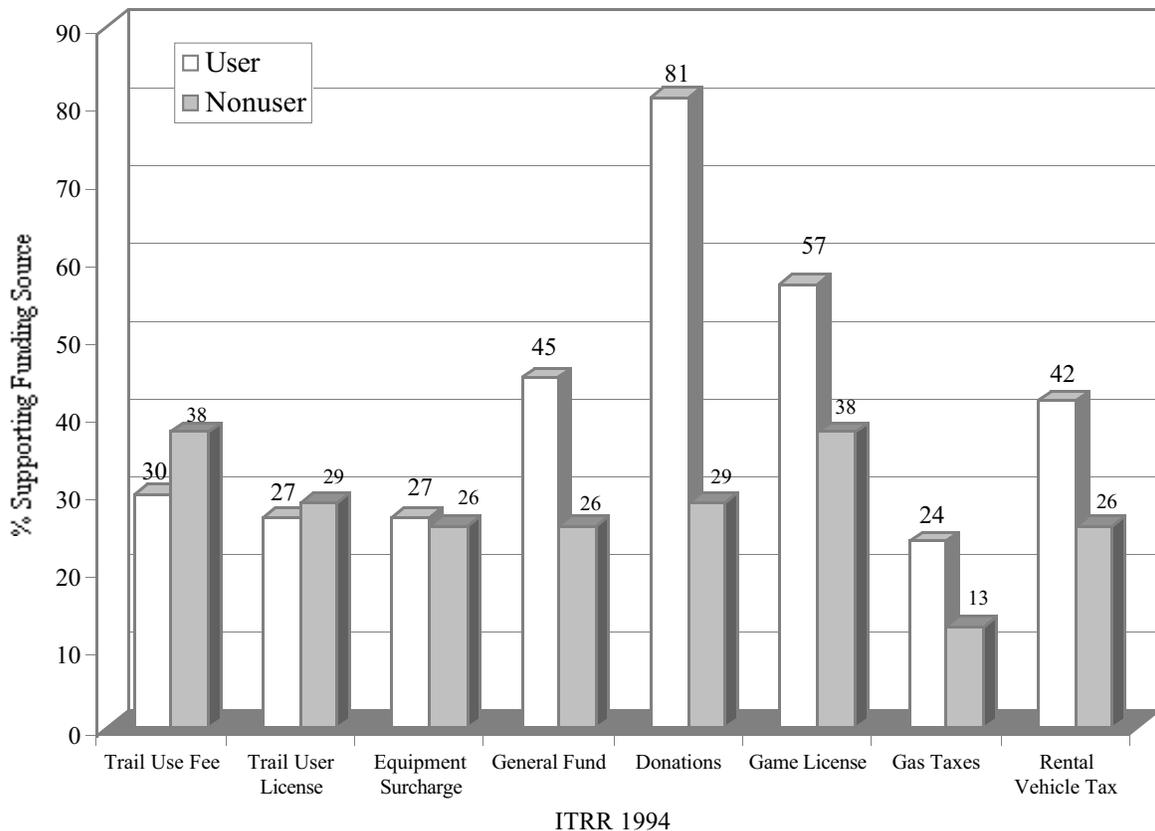
A portion of the *Montana Trail Users Study* addressed attitudes towards funding among both trail users and non-users (ITRR 1994b). Not surprisingly, trail users showed a greater positive response toward a variety of potential funding sources than non-users (see Figure V-1). However, most of the potential funding options identified in the survey lacked strong support from both users and non-users.

Although trail user fees and other funding methods that focus more directly on the users themselves were relatively unpopular among trail users in Montana. Preliminary results from the (user) Fee Demonstration Pilot Program enacted at 48 Forest Service and 98 BLM recreation sites throughout the country, show higher levels of support for user fees (Chavez 1999). Over 55

percent of those filling out comment cards at the fee areas that included trail heads, wildlife viewing areas, and camping sites, supported user fees to help pay for visitor services on public land, while 26 percent did not support such fees. A 1998 study of the NPS's Fee Demonstration Program (including Glacier and Yellowstone) showed a strong favorable response to higher fees when the money went to improvement of facilities within the park.

Earlier studies have also shown willingness to pay user fees, especially if the money generated went directly to the trail managing agencies for spending on trails (Johnson 1991). Attitudes toward alternative funding sources in Montana may change as people become more aware of the declining funding available to the USFS other trail managing agencies, and begin to experience increasing levels of crowding and conflict on trails.

Figure V-1: Attitudes Toward Funding



CHAPTER VI. THE DIRECTION FROM HERE: TRAIL ISSUES, GOALS AND STRATEGIES

Introduction

A number of important issues emerged from the state trails plan and PEIS public scoping period, as well as from surveys and research. This chapter summarizes these issues, and recommends goals and strategies to address the goals. These are intended as recommendation to provide guidance for trail managing agencies and trail-related organizations. In conjunction with the PEIS, this plan will help guide FWP trail-related activities and programs, most importantly the Montana State Trails Program.

Many recommendations included here were initially derived from public comments received during the plan scoping period. A total of 315 written comments were received, and more than 400 people attended one of the 18 public scoping meetings held across Montana. The results of the written comments and meetings were tallied and combined (see Appendix for more details).

Following the scoping meetings, a “workbook” was compiled for review by the two advisory committees (composed of agency staff and user group representatives) which assisted in developing these recommendations. The workbook contained issues, goals, and strategies that were derived from the scoping sessions, with space for writing in comments and suggestions. The initial workbook was revised based on advisory committee comments, and released for public review in March 1996.

In analyzing the information from the scoping period, an effort was made to capture all the major issues and concerns which emerged. The top local and statewide issues from both the written comments and scoping meetings, as well as many of the other less often mentioned trail issues, are addressed below, and were also used

to help develop the issues identified for analysis in the PEIS.

The fifteen trail-related issues listed below were developed and consolidated from more than ninety issues identified during the scoping period.

- 1) Access
- 2) Urban Trails
- 3) Resource Protection
- 4) Trail Supply and System Configuration
- 5) Funding
- 6) Maintenance
- 7) Management and Enforcement
- 8) User Conflict and Compatibility
- 9) Safety and Liability
- 10) Communication, Coordination, Information, and Education
- 11) New Linear Corridor Alternatives
- 12) Alternative Transportation
- 13) Disabled Accessibility
- 14) Trailheads
- 15) Research, Planning, and Design

Goals and Strategies

The following section discusses long-range goals and strategies for addressing and resolving the fifteen major trail issues addressed in this plan. In some cases, similar strategies may appear under different issues, although an effort has been made to reduce redundancy. Implementing many of the following strategies will require increased funding and personnel, as well as redefining roles for the various agencies, interest groups, and individuals involved.

1) ISSUE. ACCESS

GOAL: *Improved access to public trails and lands.*

EXPLANATION: Access problems were the most frequently mentioned statewide issue at the Trail Plan scoping meetings. Often, the only access to public trails and other recreational resources is across private land. Unless there is a public road or trail easement, the public can legally be locked out. Not only are these de-facto accesses decreasing, the incidences of closure of historically established public accesses, generally by new landowners, is increasing. Improved cooperative management and planning between public agencies, non-profit organizations, trail users, and private landholders is necessary to improve access problems.

Generally, the decrease in public access is the result of land use and land ownership changes, as well as increased pressure and problems caused by increased use. Access difficulties may also occur when different public agencies don't cooperate effectively. Access problems sometimes result from irresponsible behavior on the part of recreational users, which provides a powerful incentive for private property owners to close access. In other cases access has been abandoned as the result of decreased budgets and personnel constraints by the BLM and USFS.

Tools to open accesses could include a mix of education, incentives, leases, purchases, alternative routes, land management plans, legal and policy changes, and other means. As informal access to public land across private land decreases, it is crucial to secure access to public land. Priorities should be on areas with increased use and /or decreasing access.

For more details on trail access, see the discussion in chapter IV.

STRATEGIES.

A) IDENTIFY, MAP, AND EVALUATE

ACCESS PROBLEMS: Managing agencies and user groups should identify, prioritize, and map trails which are currently (or likely to become) blocked because of land access problems. Depending on the situation, various alternatives should be identified and evaluated. Particular attention needs to be paid to lower elevation "front" country trails which often provide access to large areas of federally-managed backcountry, and to urban trails and greenways where critical linkages are threatened. Accesses that can be protected or restored without legal challenges or purchase should be emphasized in order to limit costs. Research is important in proving the existence of an historical public access through the RS 2477 federal statute, or in demonstrating that an easement by prescription has been created under state law.

B) INFORMATION ON ACCESS: Agency staff, trail user groups, private property owners, and other interests should work together to develop better information about access issues. The information should be compiled in one or more publications, or added to existing brochures (e.g., "Montana Access Guide to Federal and State Lands"). Potential areas to work on include the following:

- 1) Develop a pamphlet describing and defining various types of access, and the means for ensuring access rights, or restoring and increasing access where current access is inadequate. The notebook should recommend specific changes and improvements (e.g., legal, agency policies, plans, etc.) which should be pursued to improve access.
- 2) The leasing or purchase of easements should be encouraged by offering a range of incentives. Information should include general and agency-specific guidelines, as well as contact names and numbers.
- 3) Develop an information package for landowners and managers that discusses liability and other issues associated with permitting

access across their land. Many landowners and agency staff may have an inaccurate understanding of liability risk and other issues associated with access.

- 4) Develop better information for the public explaining their responsibilities when legally crossing private land to access a public trail. Landowners will be more receptive towards trail easements if litter, vandalism, and trespassing were less common. Focusing “adopt a trail” clean-up and maintenance efforts along stretches of trail where landowners have granted access may be one way of addressing litter and other problems. A group of local users who use a particular stretch of trail frequently can be effective in helping to monitor and look after the trail.
- 5) The potential for problems with private landowners can be reduced by clearly marking property boundaries.

C) ACCESS FUNDING AND COORDINATION: Agencies and user groups should work toward securing better funding and improved coordination for purchasing trail easements and rights-of ways (see funding section). Montana trail advocates may want to consider establishing a non-profit foundation specifically dedicated to resolving access issues and other trail-related problems. The resources of a larger, statewide organization or coalition would be especially helpful in dealing with major landowners on significant corridor issues, particularly in cases where local groups and/or governments are overwhelmed.

D) PUBLIC LAND CONSOLIDATION: Trail managers and users should work with appropriate staff in resource agencies to continue the process of consolidating small, isolated blocks of public land into more manageable units, where this is beneficial. It is important that trail interests be represented during land exchange negotiations with private landholders; maintenance of public access must be a primary consideration in evaluating all land exchanges. Where appropriate, trail easements might be attached to public land being traded to private landowners.

E) URBAN-RURAL CONNECTIONS: Local governments in Montana need to work closely with other managing agencies to ensure that local trail systems are connected with trails in more primitive settings on state and federal land. In some cases, non-profit land trusts may be able to provide assistance in securing recreational easements across private lands.

F) INTER-AGENCY COMMUNICATION: Trail managing agencies should consider writing a memorandum of understanding (MOU) to facilitate communication and cooperation on access issues. Managing agencies may want to consider establishing a central contact person for access issues.

G) LIMITING LIABILITY AND RISK: Agencies, user groups, and other interested parties should work cooperatively to support legislation and other means that clearly define and limit the liability of landowners along trails. Landowners need to know the extent to which liability is a risk for them. In some cases, temporary easements may be a way for landowners to test whether they are comfortable granting access on a more permanent basis.

H) TRAIL EASEMENTS: The provision of trail access across private land should be a consideration when private landowners are negotiating with public land managers over grazing or other types of leases. Trail access issues also need to be considered when conservation easements are being purchased primarily for other purposes (e.g., wildlife habitat). Local governments should consider (if they haven’t already) maintaining or creating access to public land as part of the dedication of park land (or the equivalent in money) required for subdivisions (MCA 1997).

I) INCENTIVES: Trail managers may be able to use various financial incentives to encourage landowners to grant easements. Agencies and non-profit organizations negotiating for conservation easements should consider including public access and trail easements and working with trail managing agencies and non-profit

organizations to include access and trails as part of the easement.

J) MAINTAINING EXISTING ACCESS:

Managers need to ensure that existing easements remain open to trail users, and be willing to take legal action in cases where landowners close them illegally. Conversely, more aggressive enforcement of trespass, vandalism, littering, and other violations may help maintain access across private property.

The determination of what constitutes a county road, public right-of-way, or prescriptive easement is a very fact-specific inquiry. This area of the law is very convoluted and there is no single rule, statute, or case that determines the issue one way or the other.

2) ISSUE. URBAN TRAILS

GOAL(S): *1) More local trails, greenways, and trail connections for recreation and transportation in, around, and between Montana's populated urban areas; 2) Develop urban trail linkages between residences, parks and other recreational facilities, schools, historic and cultural sites, open space, shopping areas, and other important community destinations.*

EXPLANATION: Montana is comparatively well-endowed with back-country trails, but suffers from a relative lack of trail opportunities closest to where most Montanans live—in cities and towns. In general, the need for new trails is greatest in and around urban areas. Trends in Montana and throughout the country (e.g., growing urbanization, less free time due to longer workweeks and both spouses working) have increased the importance of recreational opportunities close to where most people reside.

Some Montana cities are situated near large amounts of public land, but lack good trail access to the edge of town. A number of Montana cities are actively improving their trail network, and are providing outstanding models for other towns.

At the same time, however, many excellent urban trail opportunities are being lost due to development and other factors. Many informal trails used by urban residents are often private, and users may assume these are public routes until the land is posted, or bulldozers suddenly appear.

STRATEGIES.

A) OPEN SPACE, RECREATION, AND LAND USE PLANNING: Potential (summer and winter) trail corridors should be integrated with local and regional open space, recreation, and land use plans. Good open space planning is a key to providing an excellent urban trail system. Critical land inventories done at an early stage in the planning process are a valuable means for identifying key corridors and open space areas. Potential trail corridors should be identified and mapped as a part of local comprehensive plans, with enough specific details so that plans remain intact through shifting political tides.

Cities which currently don't have an open space, outdoor recreation, or trails plan (or lack the resources to produce one) may want to consider using University students in a landscape architecture, planning, geography or other relevant program to produce a plan as a class project.

B) URBAN TRANSPORTATION PLANNING: Since many urban trail system linkages include on-street segments, bicycle and pedestrian-friendly plans need to be more actively considered and incorporated into local street and roadway planning and design. Trails and bicycle and pedestrian friendly roads and streets need to become a more integral part of Montana's urban transportation planning. Utility corridor planning is another area that could be better integrated with trail needs. Good urban trail systems should be democratic; they should connect all parts of the city and provide non-motorized transportation opportunities for people of all income levels.

C) TRAIL INFORMATION FOR LOCAL GOVERNMENTS: Ensure that local governments have access to the tools and information they need to improve their trail systems. In

rapidly growing areas, local governments may need to act quickly to preserve rights-of-ways for future trails, and having access to good information will increase their chances of success. The Internet may be one vehicle for helping accomplish this. Information on easements, design, maintenance, volunteers, liability, takings, rails-to-trails, trail use trends, new technology, use of utility corridors, planning, and ways of working cooperatively with developers would enhance the ability of local governments to improve their trail systems.

Managing agencies and user groups need to work together to educate developers about the value of trails (e.g., how they can increase property values and the desirability of a location). The State Trails Conference and State Trails Newsletter are valuable forums for discussing new trends and developments in urban trails. Information programs at meetings of the Montana League of Cities and Towns, the Montana Association of Counties, and other organizations would be useful. Furthermore, local public works and planning departments, chambers of commerce, and politicians need to need to be brought in more closely to the statewide trail information network.

D) COOPERATION BETWEEN LOCAL AND FEDERAL GOVERNMENT: Improve working relationships between local governments and the federal agencies that manage large quantities of land surrounding many Montana cities. Better cooperation is needed to complete connecting trails between cities and the trail networks on surrounding public land. Securing routes through the lower elevation “front” country is particularly important, as these areas are developing rapidly around a number of Montana cities. Selected memorandums of understanding (MOUs) between federal trail managers and local governments on trail coordination might be place to start.

In some cases, establishing a regional trails organization or parks district may be worth considering. In the Missoula Area, for example, an organization called Feet First (under the auspices of the City of Missoula, Missoula

County, the University of Montana, the Lolo National Forest, and FWP) is coordinating trail efforts among various trail interests in the region. The groups are reinforced by the efforts of the others in funding applications, publicity, and information sharing. These groups—when allied—can create powerful forces to move trail projects forward. Similarly, establishing a parks district could be a useful way to coordinate and focus resources, possibly across political boundaries (e.g., a district which includes both a city and the county it is located in).

E) SETTING ASIDE OPEN SPACE AND TRAIL CORRIDORS: Requiring new residential, commercial, and industrial developments to set aside space for trails and open space is one mechanism that has been successful in various communities across the country. Ideally, public access corridors for trails should be part of the right-of-way dedication within subdivisions, similar to roads. Open space and trail needs should be a consideration when reviewing local planned unit development (PUD) applications.

F) SECURING TRAIL EASEMENTS: Secure public use easements across common area park lands dedicated to homeowners associations as part of the subdivision process. Commonly used public access through common areas can be legally restricted by homeowners at any time. The public walkway easement is a good means to achieve trail access, especially in circumstances where the open space in the subdivision is a common area not specifically dedicated for public use.

G) FUNDING FOR URBAN TRAILS: The greatest funding needs are for non-motorized urban trails, although there is also a demand for more motorized opportunities near Montana’s cities. A variety of funding mechanisms pertinent for urban areas are discussed elsewhere in the plan.

In cases where funding is not immediately available, being in a position to claim “first right of refusal” enables local governments or other organizations time to mobilize financial resources before a property is sold to another buyer.

3) ISSUE. RESOURCE PROTECTION

GOAL: *Reduced trail-related impacts on natural and cultural resources through avoidance and mitigation.*

EXPLANATION: Montana’s trail network bisects some of the state’s most spectacular natural resources, as well as providing access to important cultural features. In more remote areas, in particular, trails may be the only access to these resources; construction, maintenance, and use of trails can result in adverse impacts. Some of the resource concerns mentioned at the Trails Plan scoping meetings include the following: wildlife; noise and air quality; streams and fisheries; vegetation destruction; erosion; historical and archaeological features; and unauthorized trails built by trail users.

In certain areas, the sheer number of users—however well-intentioned—may be creating adverse impacts, not only to trails, but sensitive areas around them such as high altitude lake shores. In some areas, these “secondary” impacts resulting from trail use may be more significant than impacts, which occur, when people are actually on the trail. (One example of a secondary impact would be wildlife impacts resulting from a new trail, which provides access to a previously inaccessible hunting area.) Trail-related environmental impacts can never be entirely eliminated, but elimination of severe damage and abuse should be a priority.

Historical and cultural resource issues are often overlooked in respect to trail use. Trails can function as a valuable management tool in areas with important historical and cultural resources; they can help route people through an area in a way that has the least impact on resources (the same principle holds for natural resources). It is worth noting that many of the trails included in the current state trail system are more than fifty years old and could themselves be considered historic trails, although most have not been researched or evaluated in a preservation framework.

STRATEGIES.

A) NATURAL AND CULTURAL RESOURCE IMPACT ANALYSIS: Public input during the Trails Plan scoping process emphasized the importance of examining environmental impacts early in the planning process, and involving the public while doing so. Various state and federal laws (e.g., the National Environmental Policy Act) typically require that agencies do this routinely. Agency staff should work to ensure they are complying with both the letter and spirit of these requirements. Because secondary impacts are often major trail-related impacts, it is important that they be considered during the environmental review of trail projects. A detailed analysis of the environmental impacts associated with two of FWP’s trail grant programs are found in the Trails Program PEIS, which was done in conjunction with this plan. The PEIS discusses a number of changes to the programs to reduce their resource impacts.

B) NOXIOUS WEED MANAGEMENT: Noxious weeds are an increasingly serious trail-related issue. Exotic weed species have become especially troubling for native vegetation, wildlife, and agriculture. Weed infestations at trailheads provide a reservoir of seeds that can be transported into the backcountry while soil and vegetation disturbances associated with trails provide opportunities for weed establishment. Managing agency staff should work cooperatively, and involve volunteers, user groups, schools, 4-H groups, conservation districts, agricultural industry to effectively address this issue. A noxious weed plan was included as part of the Trails Program PEIS, and grant applicants are required to consider how their proposed project will affect the spread of weeds. Weed issues will be important determining factors in assessing proposed projects.

C) ENVIRONMENTAL EDUCATION: Education has a major role to play in addressing many environmental issues associated with trail use (e.g. Tread Lightly and Leave No Trace programs). Cooperation between managing agencies—and between agencies and educational institutions—is essential to improving and

coordinating environmental-related education efforts. There may be potential for integrating discussion about trails and other recreational resource issues into pre-existing environmental education curriculums.

D) IMPROVED ENFORCEMENT: A theme which emerged from public comments was that enforcement of trail regulations needs to be improved, in part to reduce environmental impacts. Illegal uses on existing trails, illicit off-trail use, and construction of unauthorized trails are examples of problems where improved enforcement has the potential to reduce environmental impacts. While tight agency budgets preclude hiring large numbers of new enforcement personnel, trail-managing agencies should jointly consider and discuss additional ways of improving enforcement (see discussion in management/enforcement section).

E) TRAIL DESIGN AND LOCATION: Proper design and location of trails can play a major role in reducing environmental impacts such as erosion. Inter-agency communication and mutual sharing of information is an important means for assuring that good design and locational information gets to the agency personnel and volunteers who need it. More widespread use of inter-agency design and monitoring standards might also be helpful. Development of standards with a range of improvement levels can be an effective discussion tool in cases where there may be conflicts between resources and trails. Reliance on non-agency experts can help agency staff in many ways—finding the best route for a new trail, avoiding critical natural and cultural resources, etc. Designing and locating trails in a way that avoids impacts should be the first priority. In general, negative effects can be reduced by building new trails in areas where there are already human impacts on the landscape.

From this perspective, trails can be an important tool for managing recreational use, helping focus human activity in areas where resource damage can be minimized. Properly designed and located trails can keep people (and their pets) away from sensitive resources, while allowing them to pass through the area without fragmenting habitat.

Directing human activity to well-located trails can help reduce disturbances to wildlife because human encounters become much more predictable—they are largely confined to routes where animals expect them to occur. Of course, there are some areas which are so sensitive that *no* recreational activity should occur, on trails or otherwise.

F) PRESERVING TRAIL VIEWSHEDS: Working together, agencies and non-profit organizations should utilize creative tools such as conservation easements to help protect resources on private land adjacent to trail corridors. Preserving key trail viewsheds can also help promote important resource conservation goals.

G) EDUCATING VOLUNTEERS ABOUT RESOURCE PROTECTION: Regular maintenance is an important factor in minimizing the environmental impacts of trails. Because of tight agency budgets, volunteers will likely need to be tapped for an increasingly important contribution to trail maintenance in Montana. To be effective, volunteers must be familiar with techniques that protect trail integrity and reduce environmental impacts. A period of intensive, well-designed field training with agency trail staff would be useful. For agencies that do not have them, a volunteer trail maintenance and construction manual and/or video would be helpful; there may be value in assembling an inter-agency manual to reduce duplication of effort.

H) MONITORING RESOURCE IMPACTS: Agencies should carefully monitor trail-related environmental impacts. Various procedures have been developed to categorize different resource areas, establish baseline standards, and monitor for changes over time (e.g., Recreation Opportunity Spectrum, Limits of Acceptable Change, etc.). Soil loss, vegetation damage, and other environmental (and social) factors can be monitored and managed using these techniques. In areas where resource impacts are significant, management changes may need to be implemented. Trail segments requiring frequent maintenance and producing unacceptable levels of environmental damage should be redesigned,

relocated, or closed. Seasonal restrictions and other types of temporal management may also reduce natural resource impacts.

One area of growing concern is the impact of increasing ATV use during hunting season, both in terms of wildlife impacts as well as affects on the hunting experience. This is an issue that has rapidly become a significant one, and needs to be closely monitored by resource management agencies.

As just one example, excessive motorized access can have a negative impact on elk security, making them much more vulnerable to hunting pressure. The 1992 FWP *Elk Management Plan* states the following:

...DFWP will promote maintenance of key unroaded areas that provide important elk security and offer backcountry or roadless recreation. Where elk security has already been reduced, FWP will...coordinate with land managers to regulate distribution of hunting pressure through use of road closures or other motorized vehicle restrictions (FWP 1992).

I) COOPERATE TO REDUCE MOTORIZED IMPACTS: Agencies should work with motorized user groups to help reduce impacts from both legal and illegal motorized trail use, including ensuring that regulation mufflers and spark arresters are used. Agencies, user groups, and industry representatives in Montana and from throughout the country need to continue working on reducing motorized sound and air pollution impacts.

Currently, the Forest Service and BLM are evaluating cross-country OHV travel in Montana, North Dakota, and portions of South Dakota (U.S. DOI/DOA 1999b). Because of significant increases in the number of OHVs as well as improvements in their performance, many areas which previously had little or no motorized traffic are being impacted. It is important from a resource protection standpoint—as well as from the perspective of managing conflicting uses—that cross-country motorized use be more strictly controlled than it has in the past.

J) PROTECTING SIGNIFICANT NATURAL RESOURCES: The integrity of significant natural resource areas must be protected from illegal and improper trail use, and other types of environmental damage. Areas of concern include impacts on designated wilderness areas; wilderness study areas and other backcountry lands; water quality; and habitat for threatened, endangered, or sensitive plant and animal species. During the past fifty years, there has been a substantial decline in the number of areas where Montana trail users can have a backcountry experience; backcountry opportunities for all trail users need to be preserved, since these experiences are an important part of what makes Montana a special place to live and visit. Agencies need to actively enforce existing regulations pertaining to federal Wilderness Study Areas and other areas with restrictions. Good education efforts are necessary to improve self-policing by trail users in these and other areas.

K) PROTECTING HISTORICAL TRAILS: Although historical trails are for the most part indiscernible on the modern landscape, the trail corridors in many cases remain relatively undeveloped, preserving natural landscape features linking the past. A number of historical trails have already been designated as part of the National Trail System or received attention at a local level, while for other trails important cultural and physical landscape features remain that could be the focus of historical interpretation and education activities.

L) ADOPT A LANDSCAPE APPROACH TO PROJECT EVALUATION: Trail projects should not be planned and designed in site-specific terms, in isolation from their surrounding environment. A landscape context is necessary to accurately identify potentially affected natural and cultural resources within the “zone of influence” of the project, as determined by the uses and users that it accommodates. In addition, a landscape view fosters consideration of all land uses and recreational activities occurring simultaneously within a geographic area, as well as the synergistic relationships among them. Thus, a landscape approach to project planning and evaluation is key to ensuring that proposed

projects are compatible with natural and cultural resource values, and that they will not result in inadvertent conflicts among recreational uses and users.

4) ISSUE. TRAIL SUPPLY AND SYSTEM CONFIGURATION

GOAL: *A diverse trail system, for a wide variety of uses, in all parts of Montana.*

EXPLANATION: In some locations, and for some user groups, the demand for trails and trail-related facilities exceeds the supply. Motorized users, on the one hand, are concerned about a continuing loss of opportunities due to conflicts and environmental concerns. Conversely, some non-motorized users believe they are losing opportunities because motorized use is making areas they have traditionally used less desirable. During the scoping process, the public identified a particular need for more and/or improved urban trails, urban-rural connections, rail trails, greenways, interpretive trails, loop trails, long-distance trails, trail system linkages, and trails connected to a variety of recreational opportunities.

Montana has long had a large and impressive backcountry trail system, with an improving network of urban trails. Due to budget constraints and the large size of the existing system, a substantial increase in the amount of backcountry trail mileage in the near future is unlikely. In fact, Montana’s backcountry trail mileage has been declining for decades and, if current budget trends continue, it will be increasingly difficult to maintain the current system. With a growing number of residents and tourists, many of whom participate in trail-based recreation, maintaining the current base—as well as opening strategically located new trails and linkages—will be important to help disperse use and minimize crowding and conflicts. A key aim of the Montana State Trails Plan is maintaining and improving opportunities for all types of trail uses. This is not to say that Montana’s trail system can or should be expanded indefinitely; maintenance capabilities and environmental

factors place constraints on how many new trails should be built. Ultimately, the system must be economically and environmentally sustainable.

The usefulness of Montana’s trail system is sometimes limited by trails that don’t offer an alternative return route and/or provide access to a larger network of trails. Loops and connecting trails are an excellent means for maximizing the effectiveness of Montana’s existing trail system.

Managing agencies must continue to work with user groups to improve long-distance trails in Montana, as these opportunities are something which many other states can not offer. Designated historical routes such as the Lewis and Clark Trail also offer the potential for longer opportunities with an interpretive theme.

STRATEGIES.

A) NEED FOR URBAN TRAILS: As discussed under the “urban trails” issue, trail users and managers need to collectively work to improve the network of trails closest to where most Montanans live—in cities and towns, where only about 1 percent of Montana’s trails are currently located. Managers and trail advocates need to be involved early in all plans for new roadways, developments, and utility corridors which might provide trail potential. Non-motorized trails in urban areas are the greatest need, although there is a demand for more motorized opportunities near cities as well.

B) THE MAINTENANCE CHALLENGE: New trails should not be considered unless there are solid plans and funding for long-term maintenance. If present federal budget trends continue, simply maintaining the network of trails already in place will be a tremendous challenge for both agencies and user groups, aside from additions to the system.

C) IDENTIFYING KEY LINKS IN THE SYSTEM: Trail managing agencies, local governments, and user groups should utilize state-wide trail mapping as a tool to identify and assess potential connections and circuits which would significantly improve the overall trail

network. Based on user interest, it might be worth investigating the possibility of establishing a statewide, long-distance “backbone” trail system to ensure that key segments are identified and appropriate links and connections are made, especially to major routes such as the Continental Divide Trail. Perhaps a “10 most wanted list” could be developed annually to highlight top priority urban and rural segments in need of completion. Montana’s trail system should include an extensive series of networks in all parts of the state, well-connected to urban centers, and linked as appropriate by long-distance trails.

D) MAKING CONNECTIONS ACROSS

BOUNDARIES: Montana trail-managing agencies should work closely with each other (and their counterparts in neighboring states) to ensure that logical connections between trail systems are made across agency and/or state boundaries. A statewide, inter-agency working group could be one vehicle for helping coordinate this. In some cases, important trails which cross regional, agency, or state boundaries may require special kinds of information (e.g., a single map that has the entire trail system on it, even though it may be on land managed by several entities).

E) USING OTHER CORRIDORS TO COMPLETE CONNECTIONS:

In cooperation with the Montana Department of Transportation (MDT) and other transportation authorities, local governments should strive to complete appropriate connections between various local trail systems. In some cases, wide roadway shoulders, utility corridors, or other alternatives might be used to provide trail system linkages which might not otherwise be possible. One key to doing this successfully is ensuring that there is opportunity for early input on all state, county, and city roadway and other public works projects.

F) PRESERVING PRIMITIVE OPPORTU-

NITIES: Many backcountry paths are tough to find, poorly signed, and difficult to follow, but they provide primitive opportunities for hikers willing to seek them out. In general, these opportunities occur on animal routes,

unmaintained and/or undesignated trails, or off-trail entirely. Because of liability and other factors, agencies should strive to provide adequate signing and information for system trails. However, managers need to remember the value of retaining a diversity of primitive and unpublicized routes for hikers who prefer them. For those so inclined, there need to be opportunities to discover things on their own.

A related issue is the long-term loss of backcountry trails in Montana. Remaining backcountry trails are an essential component of Montana’s heritage, and it is vitally important that these valuable resources are preserved, along with the aesthetic and biological integrity of the landscapes which surrounds them.

G) LOOP TRAILS: Managing agencies should consider adding loops to trails whenever possible (and environmentally acceptable). Loops provide an alternative route back for trail users and help disperse use. The availability of an alternate route also provides agencies with a greater range of options for managing conflicting uses. However, the addition of a loop route in a wild setting needs to be analyzed in the context of the surrounding landscape, as loops can increase trail density and fragment habitat.

H) OHV ROAD CONNECTIONS: Motorized trail users riding vehicles which are not registered for road use sometimes have difficulty legally completing loops which may include a primitive road. Managing agencies should continue to investigate whether certain segments of lightly traveled roads might be opened to OHVs trying to make a connecting link. A related issue is the need for OHVs to travel short distances on roads from campgrounds to reach trails opened to motorized use. While progress has been made on this issue, managing agencies should examine whether additional changes would be helpful in addressing OHV road use issues. In general, more effective utilization of primitive public roads for OHV use may help to take some of the pressure off trails, reducing conflicts with non-motorized users.

D) STATE SCHOOL TRUST, TRIBAL AND PRIVATE LANDS: Trail managing agencies and user groups should work together to better utilize State School Trust lands for trail access and trail uses. Legislation may be required to more fully incorporate recreational values into the mission of the School Trust Lands. Managing agencies need to also work closely with tribal governments on trail issues. Additionally, agencies need to work closely with private providers of trails. While a very small percentage of the overall trail system, privately owned and operated trails need to be considered as part of Montana’s overall recreation picture. Private trails are especially important for providing groomed cross-country ski opportunities.

J) TRAILS IN EASTERN MONTANA: More attention needs to be focused on providing additional trails in eastern Montana, to offer more opportunities in this region for residents and visitors, and help disperse use from more heavily-used western areas of the state. Because USFS land is more limited in eastern Montana, the BLM, FWP, and local governments will likely have proportionately larger roles to play than in the western portion of the state. Additional trail opportunities may be available on land managed by the U.S. Fish and Wildlife Service (e.g., C.M. Russell National Wildlife Refuge). In part because of Travel Montana’s focus on increasing tourism in the eastern portion of the state, there may be opportunities for managing agencies to work closely with tourism organizations and chamber of commerce officials. In addition to eastern Montana, agency officials need to focus on other regional gaps in trail coverage, across the whole spectrum of trail uses.

K) CROSS-COUNTRY SKI TRAIL SYSTEM: Federal, state, and local officials should work with winter trail groups to improve funding for cross-country ski trails and grooming. Currently, cross-country skiers lack a funding mechanism (e.g., park and ski fee) to enhance opportunities commensurate with what snowmobilers have done (e.g., they helped establish allocated fuel tax and registration receipts for trail program improvements). When

work is done maintaining or developing summer use trails, consideration should be given to potential winter ski use.

L) LONG-DISTANCE TRAILS: Agencies should continue to work with user groups to ensure that Montana has one of the best long-distance backcountry trail systems in the country, a well-balanced network which provides opportunities for all types of users. The opportunity to take long-distance trips through wild country is one of the attributes that make Montana’s trail system special.

S) ISSUE: FUNDING

GOAL: *Improved trail-related funding at all levels of government; the demand for enhanced non-motorized funding is especially great.*

EXPLANATION: There is insufficient funding for developing and maintaining trails in Montana. FWP’s State Trails Program currently has OHV and snowmobile grant programs, funded through registration decal fees and a percentage of gas tax receipts. Another trails funding source is the Recreational Trails Program (RTP), which provides funding for both motorized and non-motorized trails.

Montana is also the recipient of federal Transportation Enhancement dollars available through TEA 21, which can be used to fund trails related to transportation. In addition to the above, trail managing agencies at the federal and local levels also have their own internal funding sources for trails.

Currently, the biggest funding need is for non-motorized trails in Montana, especially those not eligible to receive Transportation Enhancement funding. Unlike motorized users, non-motorized users lack a state-generated funding source (RTP funds come from the federal government). The majority of Montana’s non-motorized trails are managed by the USFS and National Park Service (NPS), agencies that have greater trail-related demands than they can meet with their own budgets. Trail users and the groups they belong

to need to take an aggressive role in working to see that trails are adequately funded at all levels of government.

It is worth noting that, although trail funding is currently insufficient, the demand for new trails in Montana is not infinite, and that the capacity of the land to support them in a sustainable manner has limits. Montana's backcountry trail system is now largely in place, and most funding needs in these areas are related to maintenance, rather than the construction of new facilities.

STRATEGIES.

A) INVESTIGATE POTENTIAL NEW FUNDING SOURCES: Montana trail groups and managers should continue to work on maintaining and improving existing funding sources as well as developing new and creative ways to improve funding, particularly for non-motorized trails. Possible local and statewide options to debate and consider could include a mix of the following (these are listed as ideas only, not formal proposals):

- 1) Develop a trails income tax checkoff, where taxpayers could elect to donate income specifically for trail-related work.
- 2) Implement a bicycle registration/license fee, a portion of which would be dedicated to bike trail construction and maintenance.
- 3) Establish a general user fee program such as a statewide trail user license, the proceeds of which would be available for trail-related work.
- 4) Establish a Montana Park and Ski program to help fund cross-country ski trails. Another option would be a statewide cross-country ski pass, the proceeds from which would be used to develop and maintain ski trails.
- 5) Support adequate funding of the federal Land and Water Conservation Fund (LWCF), which traditionally has funded a wide range of local and state recreation projects, as well

as federal land purchases. The federal Conservation and Reinvestment Act (CARA) of 2000—which included an LWCF component—failed to pass, but may resurface again in Congress. This legislation would provide enormous benefits for trails and many other types of outdoor recreation.

- 6) Work to ensure that TEA 21 Enhancement funding continues to be reauthorized by Congress, and that the federal RTP receives adequate funding.
- 7) Work to organize lobbying efforts for improving Federal agency trail budgets. The health of the Forest Service trail budget, in particular, is critical to the overall health of Montana's trail system. Maintaining the USFS trail budget as a separate line item (rather than being combined with other types of activities) makes it easier to track the amount of funding actually flowing into trail work.
- 8) Establish an inter-agency network of vandal-resistant donation collection boxes at heavily used trailheads. Funding should go directly to the agency's trail program, or inter-agency trails funding source.
- 9) Develop special public funding and marketing campaigns for work on selected, high profile trails. Local user groups could combine marketing and fund-raising efforts by selling trail-related t-shirts, coffee mugs, postcards, and other items.
- 10) Establish a state trails trust fund as a conduit for estate, corporate, and private donations for trails projects throughout the state. In conjunction with the trust fund, it would be useful to investigate the establishment of a statewide non-profit foundation dedicated to the advocacy of trails and possibly other related outdoor recreation issues.
- 11) Work to implement subdivision parkland dedications (or dollars in-lieu-of parkland) for trails. Another option used in a growing number of communities is the establishment of development impact fees, where new developments pay in advance for impacts

new residents will have on local services and infrastructure. A portion of this fee could be used for trails and other recreational facilities. Local governments should develop a list of prioritized needs, so that when developers request subdivision review, the best use of trail-related land donations or dollars can be determined in a methodical way.

- 12) Develop a statewide campaign to solicit donations for trail construction and maintenance. Private sector donations could be targeted for certain key, high-profile trail projects. Donations could be in the form of either money or materials.
- 13) Produce user-friendly information for local governments about various options for funding trails.
- 14) Local trail organizations should investigate the possibility of getting a trails/open space funding initiative on the ballot. The chance of voters approving a trails/open space initiative is likely to be enhanced if the proposal is framed broadly (e.g., everything from baseball fields to nature preserves could be eligible for open space funding), and supported by a diversity of interest groups. Passage also tends to be enhanced by having a specific, high profile trail corridor or land parcel to help focus interest and generate support. This was the approach taken in Missoula (and later in Helena), which passed an open space bond initiative in the 1990s. Missoula's initiative allows for both trail acquisition and development costs. This was designed to address situations where land might be available, but funding for trail development is not. The bond money can be an important vehicle for matching federal funding sources that require matching funds.
- 15) Some states utilize a portion of lottery funding for trails and other resource-related projects. Trail users might explore the potential of utilizing a portion of this funding source.

- 16) Work with equestrian groups to explore the viability of a trails-related tax on horse trailers, which could vary according to the size of the trailer.
- 17) Work towards establishing a statewide trails/recreation funding source through legislation or the initiative process.
- 18) Work closely with land trusts to explore ways that local trail needs can be integrated with other land protection objectives these organizations may have in a particular area.
- 19) In urban areas, funding generated through tax-increment finance districts could be a source of funding for trails and other amenities.
- 20) Cooperate with local government officials in investigating the potential of developing tax incentives for developers to preserve trail right-of-ways and other types of open space in their projects.
- 21) Continue and possibly expand the federal Fee Demonstration Project; ensure that some of the funding gets used for trail projects.

The STAC and other organizations and agencies should work together to keep trail constituents informed about the need to improve funding and possible opportunities for doing so. Unless trail users are effective in making their voices heard in the political process, chances for increased trail-related funding are poor. Hikers, in particular, are currently not well organized in Montana, although various conservation and environmental groups represent some of their interests. The Montana State Trails Newsletter and State Trails Conference are two vehicles that might be used to discuss various funding options.

B) VOLUNTEERS: As discussed under the maintenance section, the strategic use of volunteers can partially compensate for funding shortfalls for both construction and maintenance in some situations (e.g., adopt-a-trail programs). Volunteers can also provide valuable assistance with fund raising.

C) GRANT APPLICATION PROCEDURES:

Agencies responsible for distributing trail grants should periodically review their application procedures to make sure the information and processes are as simple and easy to understand as possible. Grant programs are of little value if many potential applicants lack the resources to complete the applications. As part of the Trails PEIS process, FWP revised the grant application processes for the OHV and RTP programs.

FWP Trails Program staff—in cooperation with the STAC—should continue to monitor RTP expenditures and application criteria to ensure they are adequately addressing Montana's greatest trail needs. Currently, the highest priorities in the state are non-motorized urban trails, followed by non-motorized rural trails.

D) PUBLIC INFORMATION ABOUT FUNDING:

Trail managing agencies need to work harder to inform their constituents about where trail funding comes from and how it is used. A basic problem throughout many areas of government is that citizens do not see a clear connection between funding they supply through taxes and other sources, and results on the ground. It is important that managing agencies effectively communicate to trail users and groups how trail funding is spent and the rationale for doing so. Budget trends are another piece of information which agencies need to share with users and groups.

6) ISSUE. MAINTENANCE

GOAL: *A Montana trail system that is maintained in a safe, attractive, and environmentally sound manner, with no net loss of mileage due to lack of maintenance or other causes. Maintenance levels should be appropriate to the amount and type of use the site receives, and reflect the type of experience trail users desire.*

EXPLANATION: Government funding to maintain the current network of trails is not sufficient. In Montana's National Forests, for example, one result of inadequate budgets has been the loss and abandonment of many trails,

and an accumulation of a multi-million dollar backlog of needed rehabilitation work on existing trails. Because it is doubtful that traditional sources of maintenance funding can be significantly increased at any level of government—or even maintained at current levels, in some cases—the long-term viability of Montana's trail system depends upon finding alternative solutions to trail maintenance problems. In the immediate future, maintaining the current Montana trail system will be one of the biggest challenges facing users and managing agencies.

In this context, maintenance is repair of existing trails to accommodate current use patterns, (and reduce impacts to soil, vegetation, and water resources), and does not include changing trails to accommodate different types of users, including the widening of trails.

STRATEGIES.

A) EFFECTIVE USE OF VOLUNTEERS:

Use volunteers more effectively in maintenance activities. Suggested ways to accomplish this are as follows:

- 1) Compile and distribute a booklet that lists organizations with an interest in trail-related volunteer work.
- 2) Promote, publicize, and reward volunteerism more actively. An inter-agency newsletter, or regular column in the existing State Trails Newsletter on volunteerism, are two ways to publicize successful volunteer projects and generate more interest in volunteering. Agency trails staff should track which groups do the most work, and recognize and reward them annually. A television promotional piece by the Governor praising trail volunteers and explaining their value might be worth pursuing; there is also an annual Governor's Conference on Community Service and Volunteerism which agencies and trail groups might want to actively participate in. An occasional article on volunteer trail projects in Montana Outdoors magazine and

other publications would be useful, possibly timed to coordinate with National Trails Day. In addition, more programs on volunteerism at the State Trails Conference would be helpful, along with an award program for outstanding volunteers.

- 3) Produce educational material that includes information on the status of federal trail maintenance budgets, and how volunteers can work to partially offset shortfalls.
- 4) Work to ensure that all trail-managing agencies have staff who are knowledgeable about volunteer issues, and have the leadership skills to effectively manage volunteers. Consider joint funding for an inter-agency volunteer coordinator position, which would promote volunteer trail activities throughout the state, and at all levels of government. A non-profit organization established to coordinate volunteer efforts between the agencies and user groups might be another option. Periodic training workshops for volunteer coordinators would be useful; agencies might want to jointly develop a standardized training curriculum and reference material package, and award a certificate of completion for agency staff and others who complete the course. The STAC may be able to help initiate some of the statewide volunteer activities. A concise booklet about how to use volunteers effectively could help local governments, in particular, tap into this resource.
- 5) Identify user groups who are not actively participating in volunteer trail maintenance and target them for information material. It is important that all major trail user groups participate actively in volunteer programs. Programs which use integrated teams of various types of trail users are good vehicles for establishing a sense of commonality among recreationists with different interests.
- 6) Promote “adopt-a-trail” programs more widely. Under this approach, an individual or group assume responsibility for specific maintenance tasks along a particular trail segment. Adopt-a-highway programs have

been very successful in many states; this concept has the potential to be more widely used for trails. Corporate sponsorships of adopt-a-trail activities could be promoted more widely. There are many companies and non-profit organizations who have employee groups involved in adopt-a-highway programs; there is potential for doing more of this with trails.

It is important that adopt-a-trail programs be established for trails located on easements crossing private property. Trail maintenance is often part of the trail easement agreement, and maintaining good relations with land-owners is critical to the future success of trail easements.

- 7) Address insurance and liability issues involving volunteer maintenance activities.
- 8) Organized groups dedicated to maintaining and improving a particular trail or trail systems are encouraged. In addition, organizations aimed at assisting with trails in a particular management area (e.g., the Bob Marshall Foundation) can provide key assistance to managers.

B) MAINTENANCE FUNDING: The Montana State Trails Advisory Committee (STAC), along with the State Trails Coordinator, should continue to act as catalysts to push for and explore innovative and improved maintenance funding sources at the federal, state, and local levels. Trail users need to be regularly informed about funding shortfalls, potential new funding sources, and ways to become involved in the effort to maintain and improve trails funding.

C) INFORMATION ON DESIGN AND MAINTENANCE: Because trail design can have a powerful impact on future maintenance, all trail managing agencies should have access to good maintenance resources (e.g. an inter-agency maintenance standards manual, a bibliography of publications on trail design, etc.). A collection of videos on trail construction and maintenance would be helpful too, particularly for briefing volunteers on proper maintenance techniques,

trail location guidelines, and other topics. Agencies may want to work together to produce videos which fill information gaps in their programs. A well-designed trail may cost more initially, but could save many thousands of dollars in long-term maintenance and liability costs. A poorly designed or located trail, on the other hand, may eventually need to be relocated because of environmental damage and high maintenance costs. Good information about urban trail design and maintenance is especially important because of the complexity of routing and maintaining trails in heavily populated areas.

Information material on proper trail maintenance procedures (e.g., in brochures and on maps) for users could be worthwhile. Many hikers will spend some time cleaning up their camp or clearing debris from a trail; this behavior should be encouraged, and education material could help ensure that it is done properly.

D) AVOIDING/MINIMIZING IMPACTS TO TRAILS: Each trail managing agency should ensure that work along or around trails (e.g., timber harvesting, road building and repair, etc.) does not result in long-term damage or loss of a trail or its immediate surroundings, without replacement. Repair and enhancement of trails to specified standards should be stipulated as part of all relevant permits, when damage is unavoidable.

E) VANDALISM: Agencies should try to repair vandalized signs and other trail facilities promptly, as a deterrent to additional vandalism. Depending on the location of the facility, resistance to vandalism should be an important criterion when selecting materials for interpretive signs and other trail-related amenities.

It is a good practice to consult user groups when replacing signs, or installing new ones. In addition to providing a potential pool of volunteer labor, users may have valuable ideas about placement, wording, and other sign-related issues.

F) PRIORITIZING MAINTENANCE

NEEDS: Current federal budget trends are making it increasingly difficult to meet maintenance needs for many of Montana's trails. Consequently, it is essential that managing agencies have clear priorities for the limited maintenance funds that are available. Having prioritized maintenance needs available will help agencies tap into volunteer efforts, particularly if they arise on short notice.

G) MAINTENANCE STANDARDS: Within the broad context of the Montana trail system, there is room for a range of different maintenance standards; all trails do not need to be maintained to the high standards which may be appropriate for heavily used trails. Agencies should make sure that designated trails they have been unable to maintain are appropriately signed at the trailhead, so users have some sense of what to expect. New facilities should not be built where there is no ability to maintain them.

H) CORRECTIONAL FACILITIES: Explore contracts with corrections facilities, juvenile offender programs, and courts to perform trail maintenance activities as part of community service. Convicted vandals should be required to spend a certain number of hours maintaining and repairing the types of facilities they damaged.

I) THE MONTANA CONSERVATION

CORPS (MCC): The MCC is a resource managers can use for both trail maintenance and construction activities. In addition to taking on projects themselves, the MCC can help provide leadership to volunteer efforts. In some cases, for example, the MCC can be used as classroom resources when schools are involved in various kinds of trail projects. The MCC has also provided supervision for juvenile offenders on projects.

J) MAINTENANCE DISTRICTS: Another strategy for improving maintenance would be the establishment of a park, open space, and trails maintenance district. Within the district, maintenance responsibilities for particular segments of trail would be assigned to various parties, with

overall coordination assumed by a government agency or other party. For some commercial, industrial or residential properties within the district, a condition of development could be agreeing to cover maintenance of trails passing through their property.

7) ISSUE. MANAGEMENT AND ENFORCEMENT

GOAL(S): *1) Trail management processes that consider all important issues, actively involve the public throughout the process, and entertain a range of management alternatives; 2) Improved enforcement of trail regulations, and a reduced need for enforcement by improving the behavior of all trail users.*

EXPLANATION: Results from the Plan scoping process demonstrated that a portion of the trail-using public is dissatisfied with the way trails are sometimes managed. Some people, for example, feel that there should be more trail restrictions for various kinds of uses. Others feel there are too many restrictions on trail use, that the processes used to determine restrictions aren't fair or based on accurate information, or that restrictions—if they are implemented—should pertain to all users.

Opinions differ among trail users, trail and resource managing agencies, and other concerned individuals and groups on trail restrictions and related regulations. As the demand for trails and associated resources continues to increase, so will the debate over regulations. The role of commercial activities on public trails will also become a more important issue.

From the perspective of managing agencies, restrictions must remain an option, and sometimes may be necessary to comply with legal mandates. Restrictions on various types of trail use may be prompted by a number of factors, including preventing or minimizing resource damage, preserving trail settings, reducing user conflicts, maintaining safety, and other reasons.

Many trail users feel that there is not sufficient enforcement of existing trail-related rules and regulations (e.g., motorized and mechanized use in wilderness areas, trespassing, etc.). Improved enforcement of existing laws would likely make a major contribution to reducing conflicts between trail users on both urban and backcountry trails.

As with many other trail issues, limited budgets make it impossible that the full burden of enforcement improvements can fall on agencies alone. If trail users want to see improvements in the way trail regulations are enforced, they must be willing to work closely with managers in reporting violations and problem areas.

STRATEGIES.

A) CONSIDER ALL REASONABLE OPTIONS: Ensure that agency planning processes thoroughly consider all reasonable alternative management options before restricting particular uses.

B) INVOLVE PUBLIC IN DECISION-MAKING: Ensure that the public is involved in travel management discussions. Interested parties of all types should be notified as early as possible about what the issues are, what the decision-making process will be, and what their opportunities are for participating in the process. Agencies, trail users, and organizations need to work cooperatively to ensure that trail restrictions and other regulations adequately reflect the opinions of trail users, to provide the best possible trail experience for users while protecting natural resources.

C) PROVIDE INFORMATION ABOUT RESTRICTIONS: Provide better information and notification about restrictions after they occur. The rationale behind management changes should be clear, supportable, and available to the public. Signs should be posted at trailheads after a restriction occurs explaining the reasons the agency took the action. A phone number and address should also be posted so trail users know

whom to contact if they have questions or want more information. Agencies should also make it clear both through the information they provide and their actions that they intend to enforce restrictions once they are imposed.

D) CONSIDER ALTERNATIVE OPPORTUNITIES: When trail use is restricted, managing agencies should try to ensure that alternative opportunities are available in appropriate areas if there is sufficient, documented demand for that type of activity. Impacts of restrictions need to be monitored to see if they are working.

E) CONSISTENT DECISION-MAKING PROCESSES: Trail managers should work together to ensure that processes used to implement restrictions are as consistent as possible between regions and across agencies.

F) PREVENTION THROUGH EDUCATION: The best way to address a potential enforcement problem is to prevent it from occurring. Improved education materials and information about trail use will reduce the potential for honest mistakes. Better information will also decrease instances where users will mistakenly believe a violation has occurred.

G) VIOLATION REPORTING PROCEDURES: When violations do occur, they are much more likely to be observed by trail users than agency staff. Users need good information on proper procedures for observing and reporting a violation; sheriff and agency phone numbers, as well as comment/reporting boxes at trailheads would help address this. Better reporting will increase the likelihood the information will be helpful to investigative authorities, and reduce the chances of direct conflict between users over perceived violations. Agencies should consider establishing an 800 number for reporting trail-related violations, similar to FWP's TIPMONT number. A reward for the person who reported a convicted violator would increase the incentive. This type of program could be self-supporting if the reward money was drawn from a certain percentage of the fine.

H) EXAMINE CURRENT PENALTIES: Some support exists for increased penalties for trail violations, particularly for repeat offenders. Fine schedules for trail violations should be examined to see if they are providing a sufficient disincentive for violators. Revocation of relevant permits, licenses, and stickers as part of the punishment could function as an additional disincentive for repeat violations.

I) NOISE, AIR, AND SPARK ARRESTOR CHECKS: There appears to be a need for more aggressive checking of spark arresters, and potential noise and air quality violations. Noise issues associated with motor vehicle trail use are significant in some areas. One way of ensuring compliance would be to require an inspection before stickers are issued. Random checks at trailheads are another tool that could increase compliance.

J) REDUCING ILLEGAL TRAIL USE/ CONSTRUCTION: Illegal trail use in off-limit areas (e.g., motor vehicles or mountain bikes in wilderness areas) was an issue frequently mentioned by trail users during the Plan scoping period. Managing agencies should encourage trail users to submit the license plate numbers of violators (or other identification) to authorities. Illegal off-trail use and construction of new trails is also an issue that needs greater enforcement attention. Agency staff need to work with club members to educate them about these issues, and help them work with authorities to stop illegal use and apprehend violators.

K) VEHICLE REGISTRATION: There is concern among some trail users that a significant number of snowmobile and OHV operators are failing to register their vehicles. FWP, in cooperation with the STAC, should examine this issue and—if there appears to be a serious problem—come up with a list of recommendations (e.g., more aggressive enforcement, greater publicity about the registration requirement, etc.) for improving compliance. Managing agencies and user groups should seek appropriate legislation requiring easily visible license plates on all OHVs and snowmobiles.

L) USING VOLUNTEERS TO INCREASE ENFORCEMENT PRESENCE: Because of significant public concern about enforcement issues, trail managing agencies need to cooperatively and creatively examine how this service can be improved. Hiring more staff is likely to be difficult, in many cases, but alternatives such as using volunteer trail “stewards” to patrol heavily used trails could be a partial solution in some areas. Volunteers are in no sense a replacement for professional law enforcement staff, as they can not write citations or make other law enforcement contacts.

In urban areas, neighbors and other users might be organized to patrol local trails, providing a presence and means for observing problems before they become severe. Developing a committed core of users on particular trails can increase the chances that users will largely be able to police themselves.

Ultimately, it is important that trail users of all types feel a collective responsible for what occurs on trails, taking the initiative to model good behavior as well as reporting those who are violating rules, creating conflicts, and/or causing resource damage.

M) COLLECTING DATA ON VIOLATIONS: Agencies need to develop and maintain good, standardized data bases on trail use violations, so problem areas can be targeted for additional enforcement attention and information is easy to share and compare.

N) COOPERATING WITH LAW ENFORCEMENT AGENCIES: Managing agencies need to work closely with local and state law enforcement, as well as fire departments; “cross” authority needs to be developed, allowing local law enforcement personnel to enforce state and federal regulations. Good coordination between the various branches of law enforcement is especially important during hunting season, when there is heavy activity at some trailheads.

Routine police bike patrols along popular urban trails have proven successful in a variety of

locations, and are a means for officers to maintain a presence in a relatively unobtrusive fashion.

O) PRESERVING QUALITY BACKCOUNTRY EXPERIENCES:

Montana’s backcountry trail system is one of its most valuable resources. If use of backcountry continues to grow, managers will be forced to take more aggressive management action (e.g., issuing a limited amount of camping permits for heavily used areas) to preserve the quality of the experience and protect the environment.

In many cases, the most serious impacts from heavy use will not be on the trails themselves, but secondary impacts on sites people are accessing from trails (e.g., campsites, high altitude riparian areas, etc.). Rapidly changing types of use (e.g., growth in commercially guided trail trips) will also force managers to more effectively anticipate issues before they become problematic. Well-designed public involvement programs can help determine appropriate thresholds for triggering more stringent management.

A related issue is the significant loss of backcountry areas and trails that has occurred during the past fifty years due to road building, abandonment, and other factors. Backcountry trails are only going to become more valuable as the U.S. population continues to grow and become more urbanized, particularly as these special opportunities have largely disappeared in many locations outside Montana.

8) ISSUE. USER CONFLICT AND COMPATIBILITY

GOAL: *Reduced user conflicts and increased compatibility between trail users.*

EXPLANATION: Conflict or lack of compatibility between trail uses often results when users’ expectations or goals for a particular experience are not met. In trail conflicts between two user groups, it is not unusual for only one type of user to experience most of the conflict (often, this is non-motorized users), while the other group may

not even be aware there is a problem. In addition to direct conflicts between types of users, conflicts can also be indirect (e.g., trail expectations are not met because of litter or other impacts).

If a user group experiences enough conflict on a particular trail, they may be gradually “displaced,” and move to areas where their expectations are more readily met. The degree to which conflict occurs may be partially influenced by “cross-over” between users; if a person engaged in one type of trail use on a particular day also participates in the other types of uses encountered on the trail, he or she may be less likely to experience conflict with them.

One way to reduce conflicts is to make sure that trail users have accurate information about what to expect on a trail (e.g., what other types of uses are permitted). Educating users is a good first step toward reducing conflict. On certain trails, however, serious conflicts may be unavoidable unless some type of management change is implemented. And the potential for conflict is likely to increase over time as types of uses continue to proliferate.

Managers must weigh the severity of the conflicts being experienced by users (along with possible resource damage), against the negative impacts of more complex and stringent regulations. Ultimately, trail users need to understand and accept that managing agencies will never be able to completely eliminate trail-related conflicts; part of the responsibility rests with users to reduce conflict to an acceptable level through working together.

STRATEGIES.

A) DETERMINING CONFLICT SEVERITY AND MANAGING CHANGES: Agency managers have a responsibility to accurately and fairly determine the severity of conflicts being reported on a particular trail before proposing a management action which restricts the use of particular users. Some suggestions include the following:

- 1) Complaints or suggestions from users, for example, should be accurately recorded and monitored. Trailhead boxes with comment cards are one means for encouraging user comments.
- 2) Managers need good data about the types of users on particular trails in order to help inform their management decisions. Making greater use of volunteers to administer trailhead surveys is one alternative to explore. Managers need to be aware that trail surveys will not accurately reflect the views of users who have already been displaced to other areas due to conflicts.
- 3) Restrictions on a particular kind of trail use because of conflict should be proposed only after other alternatives have been seriously examined and perhaps experimented with on a trial basis.
- 4) Trail managers at all levels of government should make an effort to develop understandable and defensible processes for making conflict management decisions, and be able to clearly explain the rationale behind their decision to the public. Managers need to actively involve the trail using public both in developing general management decision-making processes, and in dealing with particular, case-by-case issues. If there is public support and understanding of the decision-making process, there is likely to be less controversy when a particular management decision is made.
- 5) In cooperation with trail user groups, agency staff needs to work at becoming more skilled at employing a variety of conflict resolution techniques. Courses in consensus building and other methods should be essential parts of every trail managers’ continuing education; the Montana Consensus Council is one organization that may be able to provide assistance. Excellent trail management involves good people and process skills, just as much as it requires technical resource knowledge.

6) Agencies should utilize advisory committees composed of various user groups and individuals to address conflicts and other issues, and make recommendations to managing authorities. The STAC may be one forum for addressing issues at a statewide level. Managers dealing with conflicts at a local or regional level are encouraged to establish advisory committees to help make recommendations on how to address conflicts. The STAC may be able to play a role in establishing local and/or regional advisory committees.

B) INFORMATION ABOUT PERMITTED AND PROHIBITED USES: Improved signing and other information materials can play an important role in reducing conflicts. If people know in advance which types of uses are allowed on a particular trail, they are less likely to experience conflicts. It is the responsibility of the managing agency to clearly indicate at every trailhead the types of uses that are permitted and prohibited. Whenever possible, the reasons for prohibiting particular uses should be explained.

C) SEPARATING AND DISPERSING USE: Managers should consider separating or dispersing users in areas where serious conflicts are occurring. In some cases, separating non-compatible uses for the first several miles beyond a trailhead can reduce the chance of conflicts.

D) MULTIPLE USE EDUCATION: Education about safe and courteous trail use in multiple use settings is a key means for reducing conflicts. Often, conflicts are caused by ignorance or lack of courtesy.

E) FEASIBILITY OF MOTORIZED “PARKS”: Managing agencies may want to work with motorized trail users to look at the feasibility of establishing public or privately owned “parks” for high intensity motorized use, particularly near urban areas. These facilities should include training opportunities for young riders and other types of educational programs. These parks would not replace motorized opportunities on public land, but they might provide

better and more appropriate facilities for certain types of motorized recreation such as motocross training, and reduce motorized use in off-limit areas. Concentrating some motorized use in appropriate, carefully planned areas has the potential of reducing use in more sensitive areas. The State of Minnesota recently opened an OHV facility laid out in an old iron ore mine.

F) ENCOURAGING POSITIVE INTERACTIONS BETWEEN USERS: Trail managers and user groups should consider planning events which enable different types of trail users (as well as non-users) to try trail activities they do not regularly participate in. The chance to try something new and interact with other types of trail users has the potential to increase appreciation for the diversity of trail modes. While conflicts can never be entirely eliminated, positive interaction between user groups lessens the polarization that can occur when groups are isolated.

G) EFFECT OF IMPROVEMENTS ON VARIOUS TRAIL USERS: When planning improvements to a trail, managers must consider how the changes will affect the dynamics and potential for conflict between user groups. If a particular kind of work is mainly benefiting a certain user group, for example, what effect will that have on other user groups? Will they benefit, not be affected, or end up being displaced because the improvements have attracted more of the other users, increasing conflicts?

H) EVALUATE NEW TYPES OF TRAIL USE: The increasing pace of technological change is resulting in a growing number of new uses on Montana trails. Managing agencies need to take a proactive approach in evaluating the impacts of new types of trail uses before they become a problem. Just because a certain technology exists does not mean it is appropriate to be used on Montana’s trails.

I) PRESERVING MONTANA’S HUNTING HERITAGE: In recent years, there has been growing concern about the impact of motorized vehicles (ATVs, in particular), on Montana

hunting opportunities. The FWP Hunter Behavior Advisory Council released a report in 1998 that, among other things, made a number of recommendations pertaining to motorized vehicles and hunting, including the following (FWP 1998c):

- 1) Designate “walk-in,” motor vehicle and pack-in areas on hunting district maps with symbols; provide a legend.
- 2) Integrate hunter behavior and fair chase considerations into FWP’s motorized recreation programs. Create an ATV citizens’ advisory group to explore and address problem behaviors. (Note: FWP is already moving in this direction, and held an “OHV/Hunting Summit” in 2000 in order to help begin developing inter-agency educational materials on this issue.)
- 3) Encourage federal land managers to address hunter behavior and “fair chase” considerations in travel management programs.

9) ISSUE. SAFETY AND LIABILITY

GOAL: *A safe and diverse Montana trail system in which liability concerns among managing agencies and private landowners are reduced.*

EXPLANATION: Nationwide, liability and safety issues have become very important for the managers of trails and other recreational facilities, and are affecting their ability to provide services people want. The issue affects not only trails on public lands, but also trail accesses across private land, and is critical for both urban and backcountry trails.

STRATEGIES.

A) INFORMATION AND EDUCATION: One aspect of the liability issue is the extent to which managing agencies provide current information about serious hazards to trail users. Agencies should consistently use the media, newsletters, trailhead information sources, and other methods to make sure that trail users have access to important risk information in a timely manner.

Winter sports such as snowmobiling and cross-country skiing present special safety and liability concerns because of extreme weather and continuously changing trail conditions. Accurate information about avalanche conditions—such as that supplied by the avalanche warning system—is essential. Managing agencies need to work closely with winter trail users to enhance safety.

Finally, it should be made clear to trail users that unpredictable conditions can easily occur on a trail, and that they must accept a certain degree of risk themselves. Education and the promotion of self-responsibility can help reduce liability risk.

B) TRAIL SECURITY: Where crime is a problem, trail users need to know about it. Warning signs should be posted at trailheads with severe break-in problems. Agencies may want to look at volunteer monitoring or patrols in locations where there have been problems. At heavily used trailheads—particularly those near campgrounds—it may be feasible to make use of volunteer “hosts.” In addition to providing security, hosts can help provide information to users and provide managers with useful data about users, although volunteers would not be used in a law enforcement capacity.

C) HAZARD POSTING: On mechanized trails, curves, cliffs, and other potential hazards should be signed. Severe hazards should be systematically noted and, if possible, corrected when funding is available.

D) VOLUNTEER LIABILITY: The importance of voluntary trail work is likely to increase in the future. Consequently, liability concerns affecting volunteers need to be thoroughly addressed to ensure that use of this critical resource can be maximized. The development of standardized, inter-agency liability statements for common trail work practices might help agencies deal with this issue more efficiently.

E) EMERGENCY RESPONSE PROCEDURES: It is recommended that trail managing agencies—in cooperation with county search and rescue organizations and other entities—produce and frequently update a trails emergency services plan if one does not already exist. Response procedures and lines of authority must be clearly understood to assure rapid response to trail emergencies, particularly those that occur away from roads. Procedures should be tested periodically in the field.

F) LIABILITY LEGISLATION AND WAIVERS: Trail managers and users need to work cooperatively to support legislation that limits liability to both public and private landowners along trail corridors. On backcountry trails where permits are required, requiring hikers or climbers to sign a liability waiver might be considered. Accurate and concise information on liability issues and law should be available to trail users, landowners, and other interested parties.

G) DESIGN AND MAINTENANCE: Utilizing good design and maintenance standards can help reduce the liability problem. A consistent system of standards for each level of development and maintenance—which are communicated to users—can give people a better idea of what to expect and reduce the chance that they will mistakenly get into situations they are not prepared for.

10) ISSUE: COMMUNICATION, COORDINATION, INFORMATION AND EDUCATION

GOAL(S): *1) Improved trail-related communication, coordination, and mutual understanding within and between trail managing agencies, trail users, local governments, private landowners, tourism agencies, and other organizations and groups; 2) Trail users have ready access to trail-related information, maps, and signs; 3) Improved trail-related training and education opportunities in order to diminish conflicts, reduce resource impacts, and improve ethics and safety.*

EXPLANATION: The need for improved communication and coordination was an issue that was mentioned frequently during the Trails Plan scoping period. Because of the large number of agencies, diverse user groups, and varied issues connected with trails in Montana, good communication and coordination is critical, especially when managing agencies such as the Forest Service are under severe budget constraints. Cooperative agreements have already proven effective at maintaining and creating access to public land and creating trails and trail opportunities.

Trail-related information, maps, and signs are a key factor shaping user safety and enjoyment of the Montana trail network. If people have a good idea about how to find a trail and what to expect once they get on it (e.g., type of terrain, degree of difficulty, permitted uses, other recreational opportunities, etc.), the chances that they will have a rewarding experience are enhanced. The amount of information available on particular trails will necessarily vary, in order to help provide a diversity of experiences for users. A remote, little-known wilderness trail, for example, is likely to attract users who require relatively little information to have a rewarding experience.

It is important that managing agencies and groups work with local governments, chambers of commerce organizations, tourism groups, and policy makers to promote the social and eco-

conomic benefits of trails. Trails are an important component of Montana's tourism industry, and the benefits they provide need to be documented and discussed, in order to help increase support and funding for trails. Recreational resources need strong constituencies who know how to communicate to decision-makers.

An excellent trail system can have a powerful positive influence on an area's quality of life. Agencies and users can not afford to take for granted that everyone fully understands and appreciates the significant positive impact trails have on the social, economic, and environmental vitality of Montana's cities and regions, and the state as a whole. Managing agencies, user groups, local governments, social and health organizations, and other interested parties need to work more effectively together to ensure that the social and economic benefits of trails are documented, discussed, widely distributed, and publicized.

Managing agencies and user groups should work together to improve trail-related ethics and behavior for all types of trail use through education. Education can be an effective tool to reduce behavior problems, which sometimes result in user conflicts, vandalism, and environmental impacts. At an early age, in particular, education can have an important influence on forming a code of ethics among young trail users that will help reduce conflicts. Where information and education are not effective, improved enforcement may be necessary.

STRATEGIES.

COMMUNICATION AND COORDINATION STRATEGIES

A) ORGANIZING AND ASSISTING TRAIL GROUPS: The State Trails Advisory Committee (STAC) and trail managing agencies should continue to assist trail user groups when requested, particularly those which are poorly organized in Montana. Local and regional groups are important vehicles for monitoring trail issues in an area, and provide an organized body

that managing agencies can work with, in addition to interested and active individual trail users. An additional advantage of local groups is that they are a useful means for organizing volunteers.

In addition to a strong base of local and regional trail groups, organizing a statewide coalition of trail organizations would be beneficial. This coalition could help resolve conflicts, establish priorities, and otherwise work cooperatively with managing agencies towards improving trails and addressing key local, statewide, and national trail issues.

B) COMMUNICATION BETWEEN TRAIL GROUPS AND AGENCIES: Trail user organizations need to be routinely updated on the status of Montana's trail system, and the important issues affecting it. The STAC is an existing vehicle that should continue to provide leadership in efforts to improve communication between different trail user groups, and between agencies and groups. The STAC needs to continue informing local groups about trail issues of state and national importance, and involve them in campaigning for improved trails funding.

The STAC should also help coordinate the inter-agency implementation of the State Trails Plan. In combination with the STAC, it would be useful to establish a permanent inter-agency trails committee, similar in composition to the Trails Plan/PEIS Technical Advisory Committee. Periodic joint meetings between these two committees would be useful in establishing and addressing a priority agenda for statewide trail issues, and specific trail programs and projects.

The composition of the STAC will be periodically reviewed to ensure that it is adequately representing Montana's trail users, including the disabled.

C) COOPERATION ACROSS ADMINISTRATIVE BOUNDARIES: Communication within and between agencies is especially important where trails cross agency or regional boundaries. Managing agencies should strive to

provide users with seamless and coherent trail experiences that are not disrupted by administrative boundaries. Agencies may want to establish a committee to review existing policies and practices, and investigate whether more standardization in trail design, signing, maintenance, regulations, and management throughout the state would produce benefits without making the system too homogenized. An important aspect of this issue is defining the role and responsibilities of managing agencies to ensure efficient use of trail resources and avoid creating inter-agency conflicts.

D) TRAIL USER DATA COLLECTION:

Managing agencies must continually work to improve the mechanism (e.g., trailhead registers, surveys, etc.) through which trail users communicate with them. Collectively, users have the most detailed and comprehensive knowledge of what is happening on trails. A statewide database to consolidate data that is now dispersed across a number of agencies, departments and individuals could tap this rich source of knowledge.

E) PUBLIC INVOLVEMENT: Involving area residents, businesses, trail users, affected local governments, and other organizations are an important part of trail planning and management. Managing agencies should continually work to refine and expand their trails-related public involvement program. Involvement processes should be designed to solicit public input in a meaningful way, rather than merely meet minimum legal requirements.

F) TRAILS NEWSLETTER AND CONFERENCE: The State Trails Newsletter and Trails Conference (part of FWP’s Trails Program) are one of the few avenues for exchanging Montana trail information between groups. The newsletter should be expanded and more widely distributed. Ideally, the Trails Conference should be held at least once every two years. Incorporating periodic updates from trail groups and managers on notable projects, funding sources, and other issues from around the state in both these venues might be a good way to help share information and experiences.

G) SPECIAL EVENTS: Managers and trail groups are encouraged to cooperate in holding special events. These can be a very effective method for making people more aware of trails, generating funds, and bringing diverse groups of trail users together. For example, National Trails Week could be promoted statewide by a coalition of agencies and organizations.

INFORMATION STRATEGIES

A) DIRECTORY OF TRAIL ORGANIZATIONS:

Produce and periodically update a comprehensive directory on trail organizations, groups, and managing agencies. The directory should include contact names, addresses, and phone numbers; it would be a source people could turn to when they need more information about Montana trails and trail-related matters, including how to volunteer or “adopt” a trail. The directory would also include contact names and numbers to report trail-related issues such as bear problems, vandalized signs, illegal trail use, etc.

The directory, or some other related publication, could also contain basic contact information about who local trail groups should consult when they are interested in working to establish a trail, perhaps with some basic guidelines on how to get started. The directory could be published on a periodic basis as part of the State Trails Newsletter, or distributed in some other manner.

B) TRAIL MAPS: Managing agencies at all levels of government should strive to produce accurate maps of significant trails and/or trail systems; information about how to find trailheads is also important. In addition, managing agencies should consider the following:

- 1) To the extent possible, managing agencies and especially regions within the same agencies should strive to produce consistent, standardized maps and other trail information (e.g., similar map symbols, terminology, etc.) to avoid confusing trail users. All maps should be dated so that users know how

current the information is. Agencies should make sure that all marked trails exist as indicated.

- 2) Work to ensure that a map of the trail or trail system is posted at major, high-use trailheads, along with other pertinent information (e.g., closures, hazards, degree of difficulty, additional recreation opportunities, etc.). Posting a topographic map of the area would also be of value to trail users.
- 3) Managing agencies should work to improve the extent to which property boundaries and private lands are identified on maps and along trails. In order to reduce trespassing and other private property impacts, trail users need to know where public-private boundaries are located.
- 4) It is important that primitive areas without established, signed or publicized trails continue to be available for users who prefer a more primitive experience or to find their own routes through the backcountry. However, this does not condone illegally established roads or trails, or illegal off-road or off-trail uses.
- 5) In some cases, there may be a need for more user-specific maps, in part because the increasing amounts of information on USFS travel plan maps.

C) PUBLIC INFORMATION GAPS: Agencies, user groups, and tourism officials should work to improve information and maps for trail activities that presently lack material available. Horseback riding, bicycling, cross-country skiing, ATV riding, off-road motorcycling, and 4WD use, in particular, are activities which should be considered for improved information. Currently, people can plan backroad 4WD trips, for example, using USFS travel plans and other agency maps, but there is a lack of more general statewide information. Promoting private sources of educational material would reduce costs for public agencies.

D) COMPUTER TECHNOLOGY: Managers should work with each other and other groups to better utilize new technology such as the Internet and geographic information systems (GIS) to help provide information for trail users. Development of a Montana State Trails Web site could be an excellent means for linking geographically dispersed trail users with many different interests; it could include a variety of trail-related information, including closures, educational materials, and grant applications. The site could also be a vehicle for users to discuss and comment on trail-related matters, and relay comments and concerns on to managers. Trails GIS data could also be made available on the Internet.

An additional technology is a system of computerized, tourism information kiosks developed by Travel Montana. The system has the capability of quickly providing a wide range of information about various recreation opportunities and tourist attractions, including maps, photos, descriptions, and other attributes. The kiosks are located at key tourist information centers around the state.

E) TRAIL SIGNING: Trail users expressed a strong interest in improved trail signing during the Plan scoping process. Some of the sign-related issues trail users would like to see addressed include the following:

- 1) Better signs along roads marking trailhead locations.
- 2) More consistent, standardized signs.
- 3) Improved interpretive signing, on a range of topics from history to wildlife.
- 4) Include mileage, closures, permitted uses, and degree of difficulty on trailhead signs. Also, in some cases there is a need for more signing marking the boundary between public and private lands.
- 5) Improved sign maintenance.
- 6) A rating system indicating degree of difficulty on trailhead signs.

- 7) Agencies might explore working with high school shop classes, prisons, volunteer groups, or other organizations to produce certain types of signs. In particular, working with high school students in areas where there are sign vandalism problems could be a way of helping make young people more aware of this issue.
- 8) Managing agencies need to make an effort to raise the consciousness among staff about the importance of both urban and backcountry trail signs, and the need to routinely evaluate the adequacy and condition of signs when they visit sites. Similarly, users need to contact agency personnel when they see inadequate or damaged signs, or have suggestions about new signing needs. Periodic trailhead surveys can be used to help determine what types of improvements—if any—are desired by trail users.

F) OTHER TRAIL INFORMATION: Trail managing agencies need to work closely with Travel Montana and the various “tourism countries” to ensure that trail information in tourist publications is accurate and regularly updated. Highway rest areas and tourist information centers are other places where information on trails could be made more widely available.

Managing agencies and tourism officials can cooperatively use tourism information as a management tool (e.g., to disperse use, provide information about socially and environmentally responsible behavior, ensure that heavily-used or environmentally sensitive trails are not promoted, etc.).

Managing agencies, tourism organizations, and user groups should consider jointly producing and funding trail-related maps and information materials to reduce redundancy, increase efficiency, and improve quality.

G) PROMOTING THE BENEFITS OF TRAILS: Trail managers need to work more closely with local governments, social and health organizations, tourism offices, and chambers of commerce to increase awareness of the important economic and social roles urban and backcountry

trails play. Managers and advocates alike need to do a better job of advocating trails and adequate levels of funding and support. The STAC, FWP, and other managing agencies should continue to use the State Trails Newsletter, the annual Trails Conference, and National Trails Day as forums for increasing awareness about the positive quality of life and economic impact of trails in Montana. More active, broad-based citizen and political support for Montana’s urban and backcountry trails would be a powerful force for preserving and improving the system. Because the quality of Montana’s trail system is heavily dependent on Forest Service budgets, Montana trail users and organizations—along with their counterparts across the country—need to better advocate the importance of trails-related funding to members of Congress. The issue transcends funding however; it is critical that the importance of trails is adequately recognized when decisions involving natural, recreation, and transportation resources are made.

EDUCATION STRATEGIES

A) REVIEW AND COORDINATION OF EDUCATION MATERIALS: Establish a committee with a diversity of representation to review existing information and education programs to determine gaps, overlaps, and recommend improvements and ways to standardize the information. Topical areas to look at should include (but not necessarily be limited to) the following: backcountry and urban trail safety education; low impact trail use; weed education; fire prevention; vandalism; access issues; reducing conflicts on multiple use trails; trails etiquette and courtesy; wildlife; and sanitation and waste disposal.

In some cases, well-developed existing information programs (e.g., the USFS and BLM “Leave No Trace” and “Tread Lightly” campaigns) might be adopted by other agencies which lack such educational campaigns. Courses on some of these topics are already available through facilities such as the USFS Ninemile Wildlands Training Center. Opportunities for coordination and cooperation should be explored; having

several partners share education program and facility costs is an excellent way to demonstrate cooperation and produce better results more efficiently.

Trail managing agencies should work closely with clubs, schools, and other groups and organizations interested in trails to promote good trail behavior through education, particularly with young users. Staff should work to integrate trail information (e.g., trail ethics, courtesy, etc.) into other natural resource education programs. Education efforts in schools should be coordinated through the State Office of Public Instruction. National Trails Day provides a useful vehicle for various trail-related educational programs.

B) EDUCATIONAL MATERIALS AT PROBLEM AREAS: Trail managing agencies should develop systematic methods to track areas which have high levels of behavior-related complaints and conflicts, and target them for additional educational materials at trailheads and other appropriate locations.

C) DISPUTE RESOLUTION TRAINING: Trail managers and other resource specialists and planners should pursue dispute resolution and consensus building training. Managers may also want to work with educators to investigate offering dispute resolution courses in public schools. Resource managers and other affected parties could be brought in as guest speakers to discuss successful case studies in which diverse groups worked together to solve problems. Demands on trails and other resources will likely be even more acute in the future. Students will have a better chance of resolving resource conflicts if they are exposed to these important tools at an early age.

11) ISSUE: NEW LINEAR CORRIDOR ALTERNATIVES (e.g., rail trails, etc.)

GOAL: *More effective trail-related use of Montana's existing linear corridors (e.g., rail trails, utility corridors, etc), which were originally laid out for non-recreational purposes.*

EXPLANATION: Across the country, there has been an explosion of interest in utilizing old rail grades for trails, with thousands of miles of old rail bed converted to trail use over the last 10 years; the rails-to-trails movement has become one of the most notable trail success stories in the country. Unfortunately, Montana has lagged behind the leading rail-to-trail states, and has lost some exceptional opportunities as key rail lines have reverted to private use. Montana needs an inter-agency mechanism and funding source that can react quickly to abandonments; the window of opportunity for preserving old rail lines for public use is often very narrow. In addition to abandoned rail lines, using selected utility corridors, dike/irrigation systems, and other creative opportunities offer additional options for expanding and improving Montana's trail system.

STRATEGIES.

A) RAIL-TRAIL MAPPING AND DATA COLLECTION: User groups, managing agencies, and other interested parties need to work together to compile, produce, and periodically update a publicly available map and descriptive information of existing and planned Montana rail trails (a list of potential options is include elsewhere in this plan). A joint publication with neighboring Western states might also be worth pursuing.

B) PLANNING FOR RAIL ABANDONMENT: Work to assemble an inter-agency plan which can help interested parties assess the viability of utilizing various types of linear corridors for trail use, including unused or rarely used rail lines, with a particular focus on those likely to be abandoned in the future.

As the agency responsible for multimodal transportation planning in Montana, MDT monitors rail line abandonment issues and routinely provides information to interested parties. Beyond this, however, it would be useful to establish an inter-governmental committee to periodically review and make recommendations on potential rail trails, including mapping and analyzing rail routes (as well as other linear land ownership and land use patterns) for possible trail use.

C) RAIL-TRAIL ORGANIZATIONS: Various groups have formed around the state to address rail-trail issues at local and/or regional levels. It would be helpful for the STAC or some other group to work with these groups and other interested parties more actively, and select representatives to form a larger steering committee or group that can deal with statewide rail-trail issues.

A coordinated statewide effort to communicate and collaborate with existing railroad and utility companies is recommended. Trail groups working collectively with companies and utilities which own linear corridors will accomplish more than an individual group working toward the same end.

D) UTILITY CORRIDORS AND OTHER RIGHTS-OF-WAYS: Utility corridors and other linear routes such as irrigation ditches offer some potential as trails, although these rights-of-ways were often established for very specific purposes, and may be unavailable for recreational use. In spite of their overall limited utility for trail purposes, these routes may offer options for completing vital connecting links, in cases where nothing else is available. Assembling maps of utility corridors and ditches and assessing them for trail potential would be a useful initial step in understanding how these rights-of-ways might benefit Montana's trail system. Most of the required maps have probably been produced by utilities and irrigation ditch companies and associations.

E) STATE RAIL-TRAIL SYSTEM: Managing agencies and trail organizations should explore the long-term possibility of establishing a state-managed rail-trail system. While cities, counties, or federal agencies may be in a position to manage trails that fall entirely within their boundaries, longer trails passing through a number of jurisdictions may need a different kind of state-coordinated management. Successful models for this type of management exist in other states, where some rail-trails are managed as linear units of the state park system.

12) ISSUE. ALTERNATIVE TRANSPORTATION

GOAL: *More non-motorized transportation trails, especially in urban areas. Trails need to be regarded as essential to a community's infrastructure as roads and sewers, not a luxury to be addressed after everything else is completed.*

EXPLANATION: Montana is a large state, and non-motorized transportation over vast distances is not a viable option for most people. Nonetheless, there are still significant opportunities for improving non-motorized transportation opportunities within and between Montana's communities; trails are both recreation and transportation infrastructure. The incorporation of trails along road corridors helps communities connect with alternative transportation options. Bike and pedestrian transportation provides significant personal and social benefits such as improved health, reduction of fossil fuel consumption, reduced air pollution, and diminished traffic congestion. Urban trails can be an important element in community spirit and revitalization. Montanans are strongly in favor of urban trails, especially rail-trails, as well as trails linking urban areas with the more primitive trail networks which often surround Montana cities.

Non-motorized transportation can be a dangerous undertaking in Montana and throughout the country. According to a recent study by the Alternative Energy Resources Organization (AERO), 144 pedestrians and bicyclists were killed by cars in Montana between 1989 and

2000, while more than 3,695 were injured (Helena IR 2000b). According to a national study by the Surface Transportation Policy Project (STPP), pedestrians in the United States are 36 times more likely to die in a collision than drivers, based on per mile traveled. Although Americans take less than six percent of their trips on foot, thirteen percent of all traffic deaths are pedestrians. While driving in the U.S. continues to increase, the number of trips taken on foot has declined by 42 percent in the past 20 years—in part because walking has become dangerous and inconvenient—contributing to growing congestion on roads and poorer health. Overall, states use less than one percent of all federal transportation dollars for pedestrian facilities. Based on these trends, the STPP recommended the following in their report (STTP 2000):

- Spend on pedestrian safety in proportion to pedestrian deaths.
- Retrofit new streets with traffic calming devices.
- Design new streets and neighborhoods for walking.
- Collect more information on pedestrian safety.

During the last 10 years, MDT and many local transportation agencies have begun to place more of an emphasis on making roads safer for bicyclists and pedestrians (e.g., adequate shoulders, sidewalks, rumble strips which don't interfere with cyclists, etc.). Many of Montana's major highways were reconstructed decades ago, and the present network is the result of hundreds of construction projects, completed over many years. These projects were built according to standards and policies at the time; in most cases, these standards and policies didn't take into account bicycle and pedestrian facilities because the demand for them didn't exist. More fully integrating the needs of bicyclists and pedestrians into Montana's transportation infrastructure will necessarily be an incremental process, based on the demand for these facilities, the programming of projects based on transportation demands and priorities, and the availability of transportation funding.

STRATEGIES.

A) TRAILS, TRANSPORTATION, AND LAND USE PLANNING: Trails and trail-related issues need to be fully integrated into local and state-wide transportation plans, subdivision and development plans, and comprehensive planning. Improvements to non-motorized transportation need to be incorporated into the analysis of transportation project benefits. There needs to be an emphasis on making streets and roads safer for bicyclists and pedestrians. At a local level, planners should be working with developers to ensure that necessary trail connections can be incorporated into designs before construction. In congested areas, more attention needs to be paid to making trails safer by constructing underpasses or bridges across busy thoroughfares, as well as less costly techniques.

B) MARKETING AND INCENTIVES FOR NON-MOTORIZED COMMUTING: Trail managing agencies and user groups need to work with MDT and local transportation agencies to promote the benefits of non-motorized commuting; better incentives are needed to encourage people to try it. Good information on safe non-motorized commuting opportunities needs to be made available through a well-designed information campaign, including programs for schools. The State Office of Public Instruction should be used as a partner in helping develop educational materials for schools.

Various programs exist to fund projects that reduce automobile commuting, air pollution, and traffic congestion at the state and local level. Offering information and incentives should be an element of these programs. The MDT can provide technical assistance for helping design projects and applying for funding.

C) EARLY PLAN REVIEW AND COORDINATION: Trails advocates and managers need good mechanisms to enable early review of all street, highway, bridge, and subdivision plans to assure that trail opportunities are considered before it's too late in the planning process to make changes. Where possible, trail managing

agencies should investigate coordinating trailhead and other recreation improvements such as grading, paving, and signing with programmed transportation projects in the adjacent area. If MDT or other public works departments are planning a highway resurfacing project at about the same time the USFS needs work done on a trailhead parking lot, for example, it is possible that a combined project would be more economical, efficient, and better designed than if the work had been done separately. MDT and metropolitan planning organizations (MPOs) provide advance notice of upcoming projects through efforts such as the annual update to the Statewide Transportation Improvement Program (STIP) and the Transportation Improvement Program (TIP), offering an opportunity to coordinate interagency planning efforts. Transportation agencies, and local and statewide planning and licensing agencies (e.g., county planning boards, Montana Department of Environmental Quality, etc.) need to be involved in order to inform trail planners and advocates of new projects with the potential to affect the trails system.

13) ISSUE. DISABLED AND ELDERLY ACCESS/TRAILS

GOAL: *A Montana trail system which offers a diversity of trail options for elderly and disabled trail users, with good information available on the opportunities.*

EXPLANATION: The federal Americans With Disabilities Act (ADA) has focused attention on providing opportunities for a portion of the population which previously was often not considered during facility planning. Trail managing agencies have been in the process of implementing ADA for a number of years, resulting in some notable improvements in accessibility. Standards relating to accessibility have been developed by the Forest Service, the National Park Service, the American Association of State Highway Transportation Officials (AASHTO), and other groups and agencies.

In some locations, there is a need for more trails accessible to elderly and disabled trail users. It is essential that managers recognize that providing for people with disabilities means more than simply making trails accessible to wheelchairs: Mobility impairment is only one of a number of types of disabilities (e.g., sight, hearing, etc.) that must be considered. A related issue is facilities for elderly people; a large, aging baby-boom population will increase the importance of planning for elderly needs in the future. It is worth noting that not all trails can or should be accessible to all users. Agencies have a degree of flexibility as to how and where they provide for disabled access, and need to carefully evaluate comparative demand for these facilities at different sites.

STRATEGIES.

A) ACCESSIBLE TRAIL GUIDE: Compile an inter-agency, statewide guide to disabled/elderly accessible trails opportunities, with location maps and brief route descriptions. The guide should be available at key locations, at agency offices, and through Travel Montana.

B) ACCESSIBLE TRAIL PLANNING: Even though not all trails are suitable for the elderly or disabled, trail managers should routinely consider how to incorporate the needs of this part of the population into their trail planning. Accessible trail opportunities should be available in every portion of the state.

Coordinated interdisciplinary planning can help maximize accessible trail opportunities. At fishing access sites along the Jemez River in New Mexico, for example, the Santa Fe National Forest has incorporated accessible fishing platforms into trail design; staff worked with fisheries biologists to create habitat improvements in the river adjacent to the platforms, enhancing opportunities for successful fishing at these accessible sites.

C) ACCESSIBLE TRAIL SIGNING AND INFORMATION: Trail managing agencies should investigate how they can more effectively sign trails that are suitable for the disabled or elderly. Users should be able to determine the degree of accessibility of a particular trail before they leave the parking lot, and not have to find out for themselves part way through that a trail that looked accessible when they started is in fact not. The type and degree of accessibility should be noted at the trailhead, and in any additional information such as brochures. Trail managers need to work closely with different groups of elderly and disabled trail users to determine what kind of information is most useful.

D) SPECIAL ACCESSIBILITY EVENTS: User groups and trail managers may want to work together to sponsor more special days and events oriented around trail activities for people with disabilities. There may be opportunities to integrate more trail-related activities into the State Special Olympics.

E) DONATIONS FOR IMPROVING ACCESSIBILITY: Managers and user groups could work to design mechanisms for estate giving and bequests from elderly trail users which would be used to help improve accessibility for older and disabled trail users. This program could be a special component of a new, statewide trails trust fund. The American Association of Retired Persons (AARP) and similar groups should be involved.

14) ISSUE: TRAILHEADS

GOAL: *A Montana trail system which is marked by a strategically located and well-designed trailhead network, in which development is appropriate to the type and volume of use.*

EXPLANATION: Appropriately designed and located trailheads are an essential part of Montana's urban and backcountry trail system. In general, the primary purpose of a trailhead is to provide a place where trail users can transfer

from one mode of transportation or experience to another. Trailheads are access areas, first of all, but they can also key points for disseminating trail and resource information. What is appropriate for a trailhead will vary substantially from site to site, depending on the amount and type of use.

STRATEGIES.

A) TRAILHEAD DATA COLLECTION: Work to ensure that there is sufficient data collection at sites to accurately estimate the type and amount of use; in some cases, volunteers can help collect this information. The provision of facilities such as outhouses, water, and additional parking should be solidly grounded on user data collection and use projections. In some cases, limits may be placed on specific forms of development (e.g., parking) to intentionally manage use.

B) PARKING: Where necessary, improve parking at trailheads. Vehicles occasionally have trouble turning around at trailheads, for example, especially if they are pulling a trailer. Parking problems can occur when a trailhead is simply a locked gate across a road, with little space to pull off. Managers need to utilize basic trailhead use data to help design turnarounds that are appropriate to the type of use (e.g., trailheads which receive heavy horse use may need more turn-around space than areas which are primarily used by hikers).

C) ROADWAY SIGNING: Every trail managing agency needs to pay close attention to whether trailhead locations are properly signed from roadways. When trail users have difficulty finding a trailhead or feel a trailhead is otherwise poorly signed, they should notify the managing trail agency.

D) TRAILHEAD INFORMATION AND MAPS: Accurate information about trail conditions, closures, animal problems, weed control, and permitted uses needs to be routinely posted at trailheads and kept current. Maps of the trail or

trail system should also be posted and updated. Good information can help users select the opportunities that are most appropriate for them, increasing the likelihood of an enjoyable experience, minimizing agency liability risk, and reducing the chance of conflict. Phone numbers for agency contacts should be posted. Comment boxes would be useful additions to all heavily used trailheads. Managers should try to reply to all comments—however briefly—where a response is warranted.

E) WINTER PLOWING: Managing agencies should work with users and state and local transportation authorities to improve plowing at selected winter use trailheads. A pay-to-park plan or some other type of user fee could be used to help pay for plowing.

15) ISSUE. RESEARCH, PLANNING AND DESIGN

GOAL(S): *1) Research and data collection systems which efficiently gather and provide pertinent, timely, and accurate facts about trail use, conflicts, user preferences, environmental conditions, and other important information to the people who can utilize it; 2) Trail networks which are planned and designed to be interesting to travel, integrated with each other, and offer access to a wide range of other trail-related outdoor recreation activities, in geographically varied settings. Where practicable, trails should be integrated with interpretive and educational opportunities, and made accessible to the elderly and disabled (see accessibility section for more details).*

EXPLANATION: Trail research, planning, design, construction, and monitoring are part of an on-going process, involving both users and managers. The effectiveness of this process can powerfully shape the quality of the experience people have on trails. Excellent data collection systems are essential if trail managers are to adequately monitor environmental impacts, provide for current trail uses, and plan for the future. Agencies need to routinely share data, and devise collaborative mechanisms to increase

data collection efficiency. Key elements of the data collection systems need to be simple and adaptable enough to be readily used by volunteers.

Part of the challenge for trail managers is that recreational technology is changing rapidly; types of trail uses, which are unheard of today, may be common in 20 years. Managers need to stay abreast of trends, monitor impacts, and—with accurate supporting information—be able to evaluate and react more quickly to new trends than they have in the past. In addition to information about changing technology and types of uses, managers need to monitor basic demographic information, to help ensure that trail systems provides a well-balanced set of opportunities, and management reflects changes in demand.

Another issue is user displacement: In some areas, particular kinds of users may gradually decide to avoid certain areas because of conflicts with other users. These users will not show up on trailhead surveys because they have gone elsewhere, but it is important that managers devise methods to determine when and where this might be occurring.

Montanans want a diverse and interesting backcountry and urban trail system. Many trail users are interested in participating in other outdoor recreation activities while using trails; for some trail users, trails are a means to another end. Wildlife viewing, hunting, fishing, natural and cultural resource interpretation, camping, photography, and other activities are all closely connected to trail use for many people. Good trail design and management needs to consider the other activities which people participate in while using trails. Conversely, the design and management of other recreational facilities (e.g., campgrounds, day use sites, etc.) must consider trails and trail issues.

For some trail users, simply having some kind of “destination” (e.g., scenic waterfall, a lake, historical site) at the end of the trail adds significantly to their enjoyment. In addition, trail layout and design can have an important impact



on how interesting the trail is for users, and how easily they can engage in other activities. It is important that Montana's trail system be varied enough to meet a wide range of abilities, and enable residents and visitors to explore all of the state's environments, from alpine tundra, to river valley, to eastern Montana grasslands, to urban greenways.

STRATEGIES.

A) RESEARCH AND DATA COLLECTION:

Agencies need to design data collection systems which provide good, current information on user preferences, participation rates, and other topics. Each trail managing agency should periodically examine how it is collecting trail use data, and determine whether the type and extent of data collection are adequate. In some instances, it may be helpful to establish baseline standards, against which changing conditions might be monitored and compared (e.g., Limits of Acceptable Change, etc.).

Regular access to statewide and national trail data is also important. It would be helpful if managing agencies would collaborate on a statewide trail user survey every five years. Similarly, a statewide study on the economic impacts of Montana trail use (similar to the one done for snowmobiling in 1995) would be beneficial.

B) COMMUNICATING INFORMATION:

Improve communication between trail managers throughout the state, so that key trail research and data collection results are widely disseminated across regional and agency boundaries, and reaches trail crews and other staff who can use it. In addition, agencies need to effectively communicate to the public key research and trends, so that the rationales for management decisions are more clearly understood. The Internet will become an increasingly important tool for managers to share research results with the public.

C) INPUT FROM TRAIL USERS: It is essential that trail users communicate to managers significant things they are observing (e.g., particular kinds of resource damage, weed infestations, overflowing parking lots, new types of uses). While managers are not in a position to change management every time they receive a comment or suggestion, frequent input from users is essential if managers are to provide and maintain an excellent trail system. Installing a comment box at more trailheads might be one way of soliciting more user comment. Implementing a free 800 number and using the Internet for trail-related comments are other options.

D) COMPUTERIZED GEOGRAPHIC INFORMATION:

Managing agencies at all levels of government should investigate establishing a jointly funded, statewide trails geographic information system (GIS), which eventually would be accessible through the Internet. The statewide trails GIS would be a comprehensive trails database and mapping tool, which would help improve inter-agency coordination and provide better information to trail users. Much of the data needed for the GIS has already been collected by the individual agencies; the state trails inventory compiled by the University of Montana in 1994 is another data source that could be added to the system. As part of this effort, selected abandoned trails, old logging roads, primitive roads, possible rail trails, utility corridors, and other routes should be identified, mapped, and assessed for potential future trail use in high priority areas where additional mileage or linkages are needed. Because of the importance of urban trails, local governments need to ensure that trails are well integrated into all statewide data collection and planning efforts.

E) CULTURAL INTERPRETATION: Montanans have a strong interest in their history and culture, and trails are often an excellent vehicle for connecting and interpreting sites (e.g., Native American, European settlement, etc.). Agency trail managers need to be aware of the connection between trails and culture, both in terms of using historic trails for interpretive and educational purposes, and using trails to interpret particular sites or events. Conversely, in some cases trail

access to particular historic or cultural sites should be avoided to reduce the potential for impacts such as vandalism.

F) NATURAL RESOURCE INTERPRETATION: Using trails for natural resource interpretation and education is not a new concept, but it may be one which could receive even more emphasis from trail managers. Wildlife viewing, for example, is a very popular activity among trail users, and well-designed interpretive information can enhance the experience. Designing trails in a manner that affords trail users an opportunity to view wildlife in a non-disruptive manner is also important. Signs stating trail use restrictions (e.g., seasonal restrictions in elk calving areas, grizzly bear recovery areas, etc.) are likely to be more effective if they also attempt to educate users about the reason for the rules.

G) LANDSCAPE DIVERSITY: Montana's trail system should fully utilize the state's varied landscapes. While many users tend to focus on trails in the mountainous, western part of the state, the eastern portion of Montana affords some interesting trail opportunities, and has the potential to offer much more. Urban and backcountry trails alike can and should be a way of exposing trail users to the distinctive geographic regions of the state, fostering a greater appreciation and understanding of Montana's natural and cultural diversity. Trail managers and designers need to carefully integrate trails into the natural and cultural environment, so that resources are protected, yet part of the overall trail experience.

H) TRAIL VARIETY: Many trail users (both motorized and non-motorized) like a wide range of terrain types and challenges along a trail. Montana's trail managers need to work to ensure that individual trails are interesting and varied, and adequately reflect user needs and interests. While not all trails can or should offer something for every type of user, the system as a whole should offer opportunities for all types of users, from expert to beginner, motorized to non-motorized, developed facilities to primitive, horse use to wheel chair accessible.

I) DESTINATIONS AND CONNECTIONS: Many trail users like to have the feeling that they have "gotten somewhere," either as part of a loop or one-way trail system. Some of the best trails are linear corridors that connect a series of interesting places or features such as overlooks, campsites, or ghost towns. In urban areas, trails can be used to connect parks, playgrounds, museums, schools, and other features which otherwise would be isolated from each other. Utilizing abandoned rail corridors for trail routes can be an excellent way to connect towns. Managers need to think of trails not only in terms of their inherent characteristics (e.g., grade, topography, surface), but as recreational and transportation routes which connect places in an interesting, safe, and enjoyable manner.

J) THEMATIC TRAIL INFORMATION: It is important that people are able to find trails and obtain accurate information about them. Trail managing agencies should work together, and with tourism organizations, tour operators, outfitters, and other groups, to produce information on thematic types of trail opportunities (e.g., historical trails, wildlife viewing, geology, etc.) so that people with particular kinds of trail interests know where to go. Care needs to be taken to not duplicate what is already available through the private sector and other venues.

K) TRAIL PLAN UPDATES: In order to remain current, the State Trails Plan will need to be updated. Ideally, updates will occur every five years; ten years should be the absolute limit on the time between updates.

L) 4WD ROUTE PLANNING: Agencies and user groups should explore the advisability of doing a future statewide plan focused exclusively on backcountry 4WD use. This type of recreational activity is different enough from the other types of trail uses discussed in this Plan to warrant some additional, in-depth analysis, in part because much 4WD use occurs on primitive roads rather than trails. Much of the needed information is already available in USFS Travel Plans.



Agencies may also want to consider a special designation for certain outstanding 4WD routes of varying lengths, possibly using the BLM's "backcountry byways" model. Such routes would not involve new trails or roads, but would mainly link together existing primitive roads (where 4WD use is currently legal) in a more coherent fashion. These routes would be designed to offer a variety of user experiences, including opportunities for camping, fishing, hiking, and other activities, and would be carefully designated to minimize social and environmental impacts.

M) RIVER RECREATION CORRIDOR

PLANNING: In Montana, rivers are often used as linear corridors for camping and day trips, in much the same way that land-based trails are used. Water corridors, in particular, are outside the scope of State Trails Plan, but water trails are an important issue that should be addressed under a different context. It is recommended that Montana resource agency staff begin a statewide water corridor recreation plan, in order to better coordinate management and the provision of access, campsites, and other amenities. The 1999 legislature granted the FWP Commission authority to manage social conflicts on Montana Rivers, increasing the need for river recreation planning.

Final Thoughts

There is considerable information and many ideas in the Trails Plan. It is up to trail users, organizations, and managers to sort through what is presented, and apply recommendations they feel will be helpful. From the perspective of FWP's involvement in trails, the main implementation vehicle for the plan is the State Trails Grant Program; based on what is in this plan, recommended changes to the Program are detailed in the Trails Program PEIS. Ultimately, trail projects must be socially, fiscally, and environmentally sustainable over the long-term, and commensurate with FWP's resource conservation and protection responsibilities.

When all is said and done, there are a number of themes woven through the plan that are worth explicitly stating here. It is worth remembering that, in spite of their differences, trail users will accomplish far more working together than separately. It is also worth reiterating that all trail users have a place somewhere on the system. We must accept that every use won't necessarily be allowed everywhere, but that all the uses covered by this plan are legitimate trail-related activities. There are a growing number of trails success stories throughout Montana; be inspired by what others have done, and build on their good work in your area.

Finally, don't ever forget that trails are supposed to be fun, and that trail users of all types, sizes, and shapes are generally fun people to be around, and are on the trail for many of the same reasons you are. Go out and enjoy Montana's great trails!

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VIII: GLOSSARY OF ACRONYMS

AARP: American Association of Retired Persons

ADA: Americans with Disabilities Act

ATV: All-terrain Vehicle

BLM: Bureau of Land Management

CARA: Conservation and Reinvestment Act

CMAQ: Congestion Mitigation and Air Quality Improvement Program

CTEP: Community Transportation Enhancement Program

DNRC: Department of Natural Resources and Conservation

EIS: Environmental Impact Statement

4WD: Four-wheel Drive Vehicle

FWP: Montana Fish, Wildlife & Parks

FY: Fiscal Year

GIS: Geographic Information Systems

GPS: Global Positioning System

ISTEA: Intermodal Surface Transportation Efficiency Act

LWCF: Land and Water Conservation Fund

MDT: Montana Department of Transportation

MEPA: Montana Environmental Policy Act

MOU: Memorandum of Understanding

MPO: Metropolitan Planning Organization

NEPA: National Environmental Policy Act

NPS: National Park Service

NRTA: National Recreational Trails Act

OHV: Off-highway Vehicle (includes ATVs, off-road motorcycles, and off-road 4x4 use)

ORV: Off-road Vehicle (same as above)

PEIS: Programmatic Environmental Impact Statement

RTP: Recreational Trails (grant) Program

STAC: State Trails Advisory Committee

STIP: Statewide Transportation Improvement Program

TIIP: Tourism Infrastructure Investment Program

TIP: Transportation Improvement Program

TIPMONT: Turn in Poachers—Montana

USFS: United States Forest Service

USFWS: United State Fish and Wildlife Service

APPENDICES

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- B. CASE STUDY OF A SUCCESS STORY: MISSOULA'S TRAIL SYSTEM
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- E. TRAIL CONSTRUCTION CRITERIA



APPENDIX A.

ORGANIZATION AND LIST OF MEMBERS, FWP TRAIL PROGRAM COMMITTEES



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APPENDIX B.

CASE STUDY OF A SUCCESS STORY. MISSOULA'S TRAIL SYSTEM



Missoula's Trail System: A Case Study of a Trails Success Story

Missoula's trail system spans a broad range of landscapes and offers myriad opportunities for outdoor recreation and alternative transportation, accessing city parks, open space along the Clark Fork Riverfront, and connecting to the Lolo National Forest.

The Missoula Trails Project began in 1990 and eventually spawned the *Feet First Non-Motorized Transportation Program*. The program is guided by the Missoula Non-Motorized Transportation Steering Committee, which meets monthly with the Project Manager. This group represents the public interest, and is made up of a representative from the sponsoring agencies, along with staff from City and County departments such as Engineering, Transportation and Land-Use Planning. Sponsors of the Feet First Program include the City of Missoula, the Missoula Redevelopment Agency, and the University of Montana (Missoula), with support from FWP's Region 2 staff and the Lolo National Forest. An Oversight Committee comprised of the mayor and agency heads meets several times a year for updates and direction setting.

The program focuses on implementing the Non-Motorized Plan, securing funding, acquiring rights-of-way, and constructing trails with volunteers and/or contract labor and services. Also, the Committee reviews developments and subdivisions for impacts on trail planning, and encourages development of trail segments as part of the infrastructure of all developments. The City is in the process of adopting a system of trails standards, as well, to address different levels of development and the standards for each level, based on the amount and types of use. Beyond the City limits, the County Surveyor has established standards for projects the County supervises. The ultimate goal is the realization of an area-wide non-motorized circulation system. Additionally, the community would like to improve disabled access.

Trail-related land use conflicts are being addressed via land stewardship and management programs, which are being developed by the Planning Department and other interested parties, particularly the Open Space Advisory Committee. Existing ordinances will be adapted to address the level of trail access needed for various user groups, as well as to protect sensitive resources. Educational efforts are a key component of trail-related resource protection.

Public involvement has been integral to the success of the program. Project proposals are first submitted by interested groups and individuals, then rated by the Steering Committee using a variety of criteria. Each project is coordinated by the Feet First program, and is a cooperative effort between local government agencies and various private partners. The public is involved in each stage of the process, from conceptualization to project completion.

The City passed an Open Space Bond in 1995. The funds were intended to help finance the planned Bicycle Commuter Network, in addition to the purchase of hundreds of acres on Mt. Jumbo, a landmark resource area near downtown (this has been accomplished). The Bicycle Commuter Network is intended to connect Missoula's major east-west and north-south arterials.

Mount Jumbo's major resource value is open space and habitat preservation, but there are many opportunities for hiking (especially informal hiking opportunities).

The Missoula Parks and Recreation Department incorporates trail maintenance into its regular activities, including winter snow removal on trails and sidewalks. Street Department personnel and equipment are sometimes enlisted for trails-related work beyond the scope of the Parks and Recreation Department's ability. The City also instituted an Adopt-a-Trail Program in the fall of 1996. Several local groups already maintain local trails on an informal basis under the direction of the Parks and Recreation Department. Law enforcement is handled by the City and County police departments. Transient camps along remote areas of some trails are the worst problem.

Another group involved with the City's trail system is the Missoula Neighborhood Network, which is an affiliation of neighborhood councils. This group and similar groups in the county maintain close communication with the Feet First Program regarding their interests and goals. Additionally, the Montana Conservation Corps has been a vital partner, providing both paid and volunteer labor for trail construction, maintenance, tree planting, and coordinating student work groups in the classroom and at trail sites. Returned Peace Corps volunteers and folks from the Retired Senior Volunteer Program (RSVP) also play important roles, as do schools and private corporations.

A diversity of funding sources are used for the Missoula trail system, including donations of labor and materials, corporate sponsorships, lease fees for private use of public land, the fuel tax, state administered grant programs, Missoula Redevelopment Agency tax increment funds, and a small trails fund established by a local donor.

(Note: Special thanks to Mary Jean Gillman with Missoula's Feet First for help putting this profile together.)

APPENDIX C.

SUMMARY OF PLAN/PEIS PUBLIC COMMENTS

MONTANA STATE TRAILS PLAN/PEIS:

SUMMARY OF DRAFT PUBLIC REVIEW PERIOD

COMMENT PERIOD

The public comment period on the Draft Trails Plan/PEIS started August 1, 2000 and ran through September 25. Based on two requests for an extension, the comment period was subsequently extended until October 10.

Mid-way through the comment period, public open houses were held in Helena, Great Falls, Bozeman, Billings, Miles City, Kalispell, and Missoula. Attendance at the open houses was generally light, with total attendance of approximately fifty people, more than half of which attended the Billings meeting. Attendance may have been affected by the worst forest fire season in decades, in part because the fires were getting much of the media attention.

The public comment period and open houses were publicized through press releases, legal notices, and the Montana Trails Newsletter, which is circulated to more than 600 individuals and groups with an interest in trails. In addition to newspaper articles and notices generated by the press releases, there was some radio and television coverage as well. Copies of the Plan/PEIS were also mailed directly to individuals, organizations, and agencies with an interest in trails. Finally, executive summaries of both the Plan and PEIS were posted on the FWP web page, with a notice about the document appearing on the State Electronic Bulletin Board.

A total of 325 comments were received from individuals, organizations, and other agencies (not including internal FWP comments). A summary of the substantive issues raised by the comments along with FWP's responses is included in the PEIS Appendix. The complete set of comments on the drafts are available from FWP upon request.

SUMMARY OF COMMENTS RECEIVED

Public and Organization Comments

Comments were received through the mail, electronically, by fax, and over the phone; the majority of comments were received through e-mail. Comments from individuals and non-profit organizations totaled 319. In general, these comments were highly polarized around motorized/non-motorized trail use. Of the total, approximately 215 (67 percent) reflected a non-motorized perspective, 92 (29 percent) a motorized perspective, and 12 (4

percent) were generally neutral. It is worth emphasizing that public comments are not considered to be a vote or scientific survey of public opinion, and the number of comments from a particular perspective is much less important than the substantive issues and new information raised.

The majority of the comments received were either form letters or adaptations of form letters. From the non-motorized perspective, 191 comments (or 89 percent of the non-motorized total) appeared to be based entirely or in part on a form letter circulated by the Montana Wilderness Association (MWA).

All of the substantive information in this set of comments was contained in MWA's (headquarters office) comments. As was the case with the other form letters, it appeared that many individuals submitting comments were not familiar with the documents, but were merely repeating statements from the form letter template, without specific references to the Plan/PEIS or the addition of new information.

Most of the comments reflecting a motorized perspective were also based on form letters (88 form letter comments, or 96 percent of the motorized total). However, there were three different form letter templates used to reflect motorized perspectives, each organized somewhat differently.

Organizations that submitted comments included the following:

- Montana Wilderness Association (Helena Headquarters)
- Montana Wilderness Association (Wild Divide Chapter)
- Montana Wilderness Association (Eastern Wildlands Chapter)
- Orion—The Hunters' Institute
- Orion Enterprises
- Montana 4x4 Association, Inc.
- Predator Conservation Alliance
- Backcountry SnowSports Alliance
- Deerlodge Forest Defense Fund
- Montana Wildlife Federation
- National Off-Road Vehicle Coalition
- The Ecology Center, Inc.
- North Fork Hostel
- Flathead Audubon Society
- Friends of the Bitterroot
- Backcountry Skiers Alliance
- Native Forest Network's Last Refuge Campaign
- Montana River Action Network
- The Cabinet Resource Group
- Montana Parks Association
- Greater Yellowstone Coalition

Agency Comments

Written comments on the public review drafts were received from a number of government agencies, including the following:

- U.S. Forest Service, Region 1
- Helena National Forest
- Montana Department of Transportation
- Missoula Parks and Recreation Department
- Missoula Office of Planning and Grants
- Butte-Silver Bow Planning Board

Overall, agency comments contained factual corrections or updated information, rather than requests for major changes.

Prior to public review, written comments on agency review drafts of the Plan/PEIS were received from the Forest Service Region 1 Headquarters in Missoula, the BLM's Montana State Office in Billings, Glacier National Park, and the State Historical Preservation Office; these comments were incorporated into the public review draft. Phone conversations with staff from some of these agencies during the public review period indicated they did not feel a need to submit additional comments during the public review period.

State Trails Advisory Committee Review (STAC)

All members of the STAC were sent copies of the Plan/PEIS at the beginning of the comment period. Part way through the comment period, the STAC met to discuss the documents. In addition, some members of the STAC submitted comments in writing after the meeting, which were added to the record. Substantive issues raised by STAC members either collectively or individually are included as part of the PEIS Appendix.

FWP Comment and Review

Copies of the Plan/PEIS were made available to staff throughout the agency, and were circulated directly to members of the interdisciplinary FWP Trails Advisory Committee, which had considerable responsibility for reviewing earlier drafts of the documents. Following the public review period, a summary of the public comments was distributed to the Advisory Committee for review and discussion. The Advisory Committee was responsible for helping review substantive public comment, and recommending potential changes to the documents. The documents were revised based on direction given by the Parks Administrator. Comments on the public review drafts made by FWP staff are included with the public comment summary in the PEIS Appendix.

SUMMARY OF WRITTEN AND SCOPING MEETING COMMENTS

Summary of Written Public Comments

A total of 315 written comments were received during the public comment period. A report is available from FWP that summarizes scoping period comments in much greater detail than is included here. A large number of form letters were received regarding certain issues (e.g., number 2 under statewide issues). The number of comments refers to the number of times a particular issue was mentioned. The twelve most frequently mentioned statewide and local issues are listed below.

Statewide Trail Issues # of Comments

1. Quiet non-motorized trails	216
2. Federal environmental review laws apply to <i>State Trails Plan</i>	76
3. Commercial motorized park(s) as alternative to motorized trail use	72
4. Trail funds should go to rehabilitating ORV trails	72
5. Improve funding for trails	36
6. Reduce resource damage and control noxious weeds	18
7. Better trail/trailhead facilities	17
8. Increase availability of trails	17
9. Need connecting trails, loops, and linkages	16
10. Provide multiple use trails	15
11. Address diminishing access	12
12. Improve trail-related law enforcement	12

Local Trail Issues

1. Expand trail supply, availability for all users	26
2. More quiet non-motorized trails	24
3. Expand/improve funding	22
4. Improved trail and trailhead maintenance	16
5. Resolve trail conflicts	16
6. Address trail closure issue	11
7. Reduce resource damage and control noxious weeds	11
8. Provide multiple-use trails	10
9. Need connecting trails, loops, and linkages	8
10. Trail education	6
11. Increase enforcement of trail regulations	5
12. Address loss of trails due to development	5

APPENDIX D.
TRAIL ACRONYMS AND GLOSSARY



TRAIL ACRONYMS

The following list of commonly used acronyms can assist trails and greenway managers and advocates decipher the "alphabet soup" of trails.

4X4	Four-Wheel Drive Vehicle
AT	American Trails
ATV	All Terrain Vehicle
ASSHTO	American Association of State Highway and Transportation Officials
ACSA	American Council of Snowmobile Associations
ADA	Americans with Disabilities Act
AHS	American Hiking Society
BCHA	Back Country Horsemen of America
BCHM	Back Country Horsemen of Montana
BLM	Bureau of Land Management
CCC	Civilian Conservation Corps
CDNST	Continental Divide National Scenic Trail
CE	Categorical Exclusion (NEPA & MEPA process)
CFR	Code of Federal Regulations
CTEP	Community Transportation Enhancement Program
CORPS	United States Army Corps of Engineers
DNRC	Department of Natural Resources and Conservation
DOI	Department of Interior
EA	Environmental Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
FWP	Fish, Wildlife & Parks
FY	Fiscal Year (Federal FY is from October 1 to September 30)
GIS	Geographical Information System
GPS	Global Positioning System
IMBA	International Mountain Bicycling Association
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
LCNHT	Lewis and Clark National Historic Trail
LWCF	Land and Water Conservation Corps
MCC	Montana Conservation Corps
MEPA	Montana Environmental Policy Act
MIC	Motorcycle Industry Council
MUTCD	Manual of Uniform Traffic Control Devices
MDOT	Montana Department of Transportation
MOU	Memorandum of Understanding
MSA	Montana Snowmobile Association
MTVRA	Montana Trail Vehicle Riders Association
MUTCD	Manual on Uniform Traffic Control Devices
NASTA	National Association of State Trail Administrators
NEPA	National Environmental Policy Act
NHT	National Historic Trail
NOHVCC	National Off Highway Vehicle Conservation Council
NPNHT	Nez Perce National Historic Trail
NPS	National Park Service
NRT	National Recreation Trail
NTD	National Trails Day

NTSA	National Trails System Act, 16 USD 1241 et seq.
OHV	Off-highway vehicle
ROD	Record of Decision (NEPA & MEPA process)
ROS	Recreation Opportunity Spectrum
ROW	Right-of-way
RTC	Rails-to-Trails Conservancy
RTCA	Rivers, Trails and Conservation Assistance Program of the National Park Service
SCORP	Statewide Comprehensive Outdoor Recreation Plan
SHPO	State Historic Preservation Office
STIP	Statewide Transportation Improvement Program
STP	Surface Transportation Program
TEA-21	Transportation Equity Act for the 21 st Century
TIP	Transportation Improvement Program
USDA	United States Department of Agriculture
USDI	United States Department of the Interior
USFS	United State Forest Service
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UTAP	Universal Trail Assessment Process

GLOSSARY OF TRAIL TERMS

Abutment: Structure at either extreme end of a bridge that supports the superstructure (sill, stringers, trusses, or decks) composed of stone, concrete, brick, or timber.

Access Trail: Any trail that generally connects the main trail to a road or another trail system.

Accessible: A term used to describe a site, building, facility, or trail that complies with the ADA Accessibility Guidelines and can be approached, entered, and used by people with disabilities.

Adopt-A-Trail: A program in which groups or businesses “adopt” trails, providing volunteer work parties at periodic intervals to help maintain the trail. Though no special trail privileges are granted, the trail manager generally acknowledges that a trail has been “adopted” by erecting signs saying the trail is part of an Adopt-A-Trail program and including the name of the adopter.

Alignment: The layout of the trail in horizontal and vertical planes. This is to say, the bends, curves, and ups and downs of the trail. The more the alignment varies, the more challenging the trail.

Americans with Disabilities Act of 1990 (ADA): A federal law prohibiting discrimination against people with disabilities. Requires public entities and public accommodations to provide accessible accommodations for people with disabilities.

Americans with Disabilities Act Accessibility Guidelines (ADAAG): Design guidelines for providing access to a range of indoor and outdoor settings by people with disabilities.

Angle: Angle is measured with a straight vertical as 90° and a straight horizontal as 0°. A grade of 100% would have an angle of 45°.

Apron: One of the three main elements of a waterbar. It catches water running down the trail and directs it off. Apron is also the transition area on a switchback (also called the “landing”).

Archaeological Resources: Any material of past human life, activities, or habitation that are of historic or prehistoric significance. Such material includes, but is not limited to, pottery, basketry, bottles, weapon projectiles, tools, structures, pit house, rock paintings, rock carving, graves, skeletal remains, personal items and clothing, household or business refuse, or any piece of the foregoing.

Archaeological Site: A concentration of material remains of past human life or activities that is of historic or prehistoric significance and that has been surveyed by a qualified archeologist.

Armoring: Reinforcement of a surface with rock, brick, stone, concrete, or other “paving” material.

Asphalt (Macadam): Petroleum-based surface material that provides a smoothly paved surface that is suitable for bicycles and in-line skates. It is preferred in urban areas where trails are often used for commuting to and from work or school.

All-Terrain-Vehicle (ATV): A small four-wheeled vehicle equipped with low-pressure balloon tires and intended for off-highway use only.

At-Grade Crossing: A trail crossing a roadway on the same plane.

Backslope: The cut bank along the uphill side of the trail extending upward from the tread. Usually sloped back by varying degrees, depending on bank composition and slope stability.

Ballast: Stone, cinders, gravel, or crushed rock fill material used to elevate a railroad bed above the surrounding grade, to provide proper drainage and a level surface for the ties and rails.

Barrier-Free Design: A trail design that promotes the elimination of physical barriers that reduce access to areas by people with disabilities.

Base: The primary excavated bed of a trail upon which the tread, or finished surface lies.

Base Course: The layer or layers of specified material of designed thickness placed on a trailbed to support surfacing.

Bed: The excavated surface on which a trail tread lies.

Bench Cut: A relatively flat, stable surface (tread) on a hill side occurring naturally or by excavation. When excavated often referred to as full or half bench.

Berm: The ridge of material formed on the outer edge of the trail which projects higher than the center of the trail tread.

Blaze: A trail marker. Blazes can be made on a tree by chipping away a piece of the bark and painting the chipped out part with a 2-inch by 6-inch, vertical rectangle. Plastic triangles or diamonds (known as blazers) with the name of the trail or a directional arrow imprinted can be purchased and nailed to trees to mark a trail route.

Boardwalk: A fixed planked structure, usually built on pilings in areas of wet soil or water to provide dry crossings.

Bog: A wetland typified by wet, spongy ground that is poorly drained with vegetation including sedges, sphagnum, and other wetland species.

Bollard: A barrier post, usually 30 to 42 inches in height, used to inhibit vehicular traffic at trail access points.

Bridge: A structure, including supports, erected over a depression (stream, river, chasm, canyon, or road) and having a deck for carrying trail traffic. If the structure is two feet above the surface the bridge should have railings.

Brushing: To clear the trail corridor of plants, trees, and branches which could impede the progress of trail users.

Brushing-In (Obliteration): To pile logs, branches, rocks, or duff along the sides of the tread to keep users from widening the trail, or to fill in a closed trail with debris so that it will not be used.

Buffer Zone: Natural area or open space used between the trail and adjacent lands to minimize impacts (physical or visual).

Bushwhack: Off-trail travel.

Cairn: A constructed mound of rock located adjacent to a trail used to mark the trail route. Used in open areas where the tread is indistinct.

Carrying Capacity: The number of recreationists that can be accommodated in a specific area based on ecological, physical, facility, and/or social factors.

Categorical Exclusion (CE): A technical exclusion for projects that do not result in significant environmental impacts. Such projects are not required to prepare environmental reviews.

Check Dam: Log, rock, or wood barrier placed in deeply eroded trails or erosional channels to slow the flow of water to allow accumulation of fine fill material behind it.

Clearing: Removal of windfall trees, uproots, leaning trees, loose limbs, wood chunks, etc. from both the vertical and horizontal trail corridor.

Clearing Height (Vertical Clearance): The vertical dimension which must be cleared of all tree branches and other obstructions that would otherwise obstruct movement along the trail.

Clearing Width (Limit): The outer edges of clearing areas (cleared of trees, limbs, and other obstructions) as specified by trail use.

Climbing Turn: A turn which is constructed on a grade of 20% or less when measured between the exterior boundaries of the turn and follows the grade as it changes the direction of the trail 120 to 180 degrees.

Collector Ditch: A drainage structure that intercepts water flowing toward a trail and usually channeled underneath the trail through a culvert.

Concrete: A composition of coarse and fine aggregates, portland cement, and water, blended to give a hard, unyielding, nearly white pavement which can be finished to any degree of smoothness.

Connectivity: The ability to create functionally contiguous blocks of land or water through linkage or similar ecosystems or native landscapes; the linking of trails, greenways, and communities.

Construction: Building a trail where no trail previously existed.

Contour, Lines: A line on a topographic map connecting points of the land surface that have the same elevation.

Contour Trail: Trail constructed such that it follows a contour, with its elevation remaining constant.

Corduroy: A rustic form of puncheon using native logs (3 to 5' in length) laid parallel on wet saturated ground and covered with a tread of soil. Corduroy typically rots out quickly.

Corridor, Scenic: Land set aside on either side of a trail to act as a buffer zone protecting the trail against impacts such as logging or development which would detract from the quality and experience of a trail.

Corridor, Trail: The full dimensions of a route, including the tread and a zone on either side (usually three feet) and above the tread from which brush will be removed.

Course: An even layer of stones, similar to a course of bricks, that form a foundation, intermediate layer, or cap stone layer in a stone wall.

Cribbing (Cribwall, Retaining Wall): Rock or log reinforcement structure to support trail tread or retain backslope along steep trails that are at risk from erosion.

Cross Section (Typical Cross Section or Typical): Diagrammatic presentation of a trail or path profile which is at right angles to the centerline at a given location.

Crowned Trail: A trail bed built up from the surrounding area (and sloped for drainage) usually by excavating trenches parallel to the trail.

Crusher Fines (Crusher Run, Crushed Stone): Refers to any limestone, granite, or gravel that has been run through a crusher that is used to form a hard tread surface which once wetted and compacted creates a smooth trail surface for high-use areas.

Culvert, Cross Drainage: Pipelike or boxlike construction of wood, metal, plastic, or concrete that passes under a trail to catch surface water from side ditches and direct it away from a trail.

Culvert, Stream Bed: Pipelike or boxlike construction of wood, metal, plastic, or concrete that passes under a trail to convey a stream under a crossing without constricting waterflow.

Cushion Material: Native or imported material, generally placed over rocky sections of unsurfaced trail to provide a usable and maintained traveled way.

Cut and Fill: The process of removing soil from one area and placing it elsewhere to form a base for any given activity.

Deadfall: A tangled mass of fallen trees or branches.

Decking (Flooring): That part of a bridge, puncheon, or boardwalk structure that provides direct support for trail traffic.

Designated Trail: A trail that is approved and maintained by an agency.

Difficulty Rating: A subjective rating of trail difficulty based on an average user with average physical abilities. For example the US Forest Service uses Easy, More Difficult, Most Difficult. Many other agencies use the following:

- Easy is defined as relaxing, posing minimal difficulties and able to be traveled with little physical effort.
- Moderate is defined as not requiring excessive or extreme physical effort.
- Difficult is defined as physically strenuous requiring excessive or extreme physical effort.

Digging-Tamping Bar: A long bar with a small blade at one end for loosening compacted or rocky soil and a flattened end for tamping.

Dike (Tramway, Tram, Levee): An embankment or dam made to prevent flooding by the sea, a river/stream, or lake. The embankment is often used for a trail.

Dispersed Recreation: Recreation activities that occur outside of developed recreation facilities away from traveled roads. Also referred to as *backcountry recreation*.

Ditch: A long, narrow trench used to improve drainage.

Destination Trail: A trail that connects two distinct points (A to B) rather than returning the user to the original beginning point.

Ditching, Sidehill: A ditch which parallels the treadway on the uphill side to collect water seeping into the trail, usually ends in a drainage ditch which allows the water to cross the trail.

Double-Track Trail: A trail that allows for two users to travel side by side or make passes without one user having to yield the trail. Double-track trails are often old forest roads.

Downslope: The downhill side of the trail. Avoid damaging downslope vegetation that is stabilizing hillside soil.

Drainage, Cross: Running water in swamps, springs, creeks, drainages, or draws that the trail must cross.

Drainage, Sheet: Desirable condition in which water flows in smooth sheets rather than rivulets; shower flow and less concentration results in less erosion.

Drainage, Surface: Rain or snow runoff from the surface of the tread.

Drainage Dip: An erosion-control technique that reverses the grade of a trail for a distance of 15-20 feet before returning to the prevailing grade. The abrupt change in grade forces water to run off the trail tread, rather than gaining additional velocity.

Easement, Conservation: Places permanent restrictions on property in order to protect natural resources.

Easement, Construction: An additional area or corridor needed to construct a trail or facility.

Easement, Maintenance: An additional area or corridor (not open to the public) needed to maintain trail drainage, foliage, and recurring maintenance needs.

Easement, Recreation: Provides public access to private property while limiting or indemnifying the owner's public liability.

Easement, Scenic: Places permanent restrictions on a property in order to protect the natural view.

Elevation: The height of a place above sea level.

Enhancement Funds: Under TEA-21, independent funds for bicycling and walking facilities, rail-trails, and eleven other activities.

Environmental Assessment (EA): A document prepared early in a planning process that evaluates the potential environmental consequences of a project or activity. An assessment includes the same topical areas as an EIS, but only assesses the effects of a preferred action, and in less detail than an EIS. An EA results in a decision, based on a assessment of the degree of impact of an action, that an EIS is necessary, or that an action will have no significant effect and a finding of no significant impact (FONSI) can be made.

Environmental Impact Statement (EIS): An EIS is a full disclosure, detailed report which establishes the need for the proposed action, identifies alternatives with the potential to meet the identified need, analyzes the anticipated environmental consequences of identified alternatives, and discusses how adverse effects may be mitigated. An EIS is prepared in two stages: a draft statement which is made available to the public for review and a final statement which is revised on the basis of comments made on the draft statement.

Erosion: Natural process by which soil particles are detached from the ground surface and moved downslope, principally by the actions of running water. The combination of water falling on the trail, running down the trail, and of freezing and thawing, and the wear and tear from traffic create significant erosion problems on trails.

Erosion, Sheet: The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and runoff water.

Fall Line: Direction water flows down a hill. A high use trail should never be constructed on the fall line of a hill.

Fines, soil: Smallest soil particles important for binding the soil together; silt; fines are often the first particles to move when erosion takes place.

Fiscal Year (FY): Annual schedule for keeping financial records and for budgeting funds. The state fiscal year runs from July 1 - June 30 while the federal fiscal year is October 1 – September 30.

Flagline: Flagging tied to trees indicating the intended course of a trail prior to construction.

Floodplain: The flat, occasionally flooded area bordering streams, rivers, or other bodies of water susceptible to changes in the surface level of the water.

Flora: The plant populations and species of a specified region.

Ford: A natural water level stream crossing improved (aggregate mix or concrete) to provide a level low velocity surface for safe traffic (mainly saddle or pack animal) passage.

Geographic Information System (GIS): A spatial database mapping system that can be used to contain location data for trails and other important features.

Geotextile (Geo-synthetics, Geofabrics): A semi-impervious nonwoven petrochemical fabric cloth that provides a stable base for the application of soil or gravel. Most common use is in the construction of turnpikes.

Global Positioning System (GPS): A system use to map trail locations using satellites and portable receivers. Data gathered can be downloaded directly into GIS database systems.

Grade: Slope expressed as a percentage (feet change in elevation for every 100 horizontal feet, commonly known as “rise over run”). A trail that rises 8 vertical feet in 100 horizontal feet has an 8% grade. Grade is different than angle; angle is measured with a straight vertical as 90° and a straight horizontal as 0°. A grade of 100% would have an angle of 45°.

Grade, Maximum: The steepest grade permitted on any part of a trail.

Grade, Sustained: The steepest grade permitted over the majority of the trail length.

Grade Dip, Rolling (Coweta Dip): A reverse in the grade of the trail accompanied by an angling outslope that will divert water off the trail.

Grade-Separated Crossing: Overpasses or tunnels that allow trail users to cross a railroad right-of-way or street at a different level than trains or traffic.

Greenbelt: A series of connected open spaces that may follow natural features such as ravines, creeks, or streams. May surround cities and serve to conserve and direct urban and suburban growth.

Hardening: The manual, mechanical, or chemical compaction of the trail tread resulting in a hard and flat surface that sheets water effectively and resists the indentations that are created by use.

Headwall: Support structure at the entrance to a culvert or drainage structure.

Hydrology: The properties, distribution and circulation of water on the surface of the land, in the soil and underlying rocks, and in the atmosphere.

Intermodal: A mode is a particular form of transportation, such as automobile, transit, bicycle, walking. Intermodal refers to connections between modes.

Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA): Federal legislation authorizing highway, highway safety, transit, and other surface transportation programs from 1991 through 1997. It provided new funding opportunities for sidewalks, shared use paths, and recreational trails. ISTEA was superseded by the Transportation Equity Act for the 21st Century (TEA-21).

Interpretation: Communicating information about the natural and/or cultural resources and their associated stories and values found at a specific site or along a trail. Tours, signs, brochures, and other means can be used to interpret a particular resource.

Invasive Exotic: Non-native plant or animal species that invades an area and alters the natural mix of species.

Invitee: A person who has been invited to use the property by the owner for the mutual benefit of the owner and invitee.

Kiosk: A structure housing informational or interpretive displays.

Leave No Trace (LNT): Educational program designed to instill behaviors in the outdoors that leave minimum impact of human activities or occupation.

Licensee: Person using a property with the implied or stated consent of the owner but not for the benefit of the owner.

Limits of Acceptable Change (LAC): A planning framework that establishes explicit measures of the acceptable and appropriate resource and social conditions in wilderness settings as well as the appropriate management strategies for maintaining or achieving those desired conditions.

Loop Trails: Designing trail systems so that the routes form loops, giving users the option of not traveling the same section of trail more than once on a trip.

Maintenance: Work that is carried out to keep a trail in its originally constructed serviceable standard. Usually limited to minor repair or improvements that do not significantly change the trail width, surface, or trail structures.

Measuring Wheel (Cyclometer): An instrument that measures circular arcs. A device that records the revolutions of a wheel and hence the distance traveled by a wheel on a trail or land surface.

Memorandum of Understanding/Agreement (MOU or MOA): A signed, written agreement entered into by various governmental agencies and nonprofit groups to facilitate the planning, coordination, development, and maintenance of a trail or trails system.

Mitigate: Actions undertaken to avoid, minimize, reduce, eliminate, or rectify the adverse impact from a management practice or impact from trail users.

Monitor: Check systematically or scrutinize for the purpose of collecting specific data in relation to a set of standards.

Montana Environmental Policy Act (MEPA): The Act was passed in 1971 and sets out requirements for state agencies to coordinate state plans, functions and resources that have impact on the human environment. NEPA is the counterpart at the federal level.

Multimodal: Facilities serving more than one transportation mode or transportation network comprised of a variety of modes.

Multiple Use Area: A land management objective seeking to coordinate several environmental, recreational, economic, historical, cultural and/or social values in the same geographic area in a compatible and sustainable manner.

Multiple-Use (Multi-Use) Trail: A trail that permits more than one user group at a time.

National Environmental Policy Act (NEPA): Established by Congress in 1969, NEPA requires public involvement and assessment of the biological and cultural resources in the location of the proposed activity. Any ground-disturbing activity on Federal land will require a NEPA analysis of some kind.

National Historic Trail: Extended trails which closely follow original routes of nationally significant travel (explorers, emigrants, traders, military, etc.). The Iditarod, the Lewis and Clark, the Mormon Pioneer, and the Oregon trails were the first to be designated as National Historic Trails.

National Recreation Trail: Existing local trails (over 800) recognized by the federal government as contributing to the National Trails System.

National Scenic Trail: Extended trails that provide for the maximum outdoor recreation potential and for the conservation and enjoyment of the significant qualities of the areas through which they pass. The Appalachian and the Pacific Crest trails were the first to be designated as National Scenic Trails.

National Trails System: A network of trails (National Scenic, Historic, or Recreation) throughout the country authorized by the National Trails System Act (16 U.S.C. 1241-51).

Negative Grade: Trail runs downhill.

Off-Highway Vehicle (OHV): A self propelled vehicle used for recreation or cross-country travel on public lands, trails, easements lakes, rivers or streams. The term includes but is not limited to motorcycles, quadricycles (ATVs), dune buggies, amphibious vehicles, air cushion vehicles, and any other means of land transportation deriving motive power from any source other than muscle or wind".

Outslope (Outsloping): A method of tread grading that leaves the outside edge of a hillside trail lower than the inside to shed water. The outslope should be barely noticeable—usually no more than about one inch of outslope for every 18 inches of tread width.

Pedestrian: Any person traveling by foot or any mobility-impaired person who uses a wheelchair, whether operated manually or motorized.

Pitch: An increase in the prevailing grade of a trail, used during construction to avoid an obstacle, to catch up with the intended grade, or to meet a control point.

Positive Grade: Trail runs uphill.

Puncheon (Bog Bridge): A log or timber structure built on the ground for the purpose of crossing a boggy area. Usually consists of sills, stringers, decking, and often a soil or loose gravel tread laid on top of decking.

Radius: An arc or curve which connects two straight trail segments in order to provide smooth horizontal and vertical alignment.

Rail Corridor: The path of a railroad right-of-way, including the tracks and a specified tract of land on either side of the tracks (generally one hundred feet wide).

Rail-Trail (Rail-to-Trail): A multi-purpose public path (paved or natural) created along an inactive rail corridor.

Rail-with-Trail: A trail which shares the same corridor with active rail traffic.

Railbank(ing): Retaining a rail corridor for future railroad uses after service has been discontinued. The National Trails System Act, Sec. 8d, provides for interim public use of the corridor, allowing the establishment of recreational trails.

Realignment: The process of moving a portion of an existing trail to alleviate maintenance problems or resource impact.

Reconstruction: Building a trail on a new location to replace an existing trail.

Record of Decision (ROD): Also called a decision memo. The portion of a Final Environmental Impact Statement that identifies the proposed action, signed by the appropriate deciding officer.

Recreation Opportunity Spectrum (ROS): A means of classifying and managing recreational opportunities based on physical, social, and managerial settings.

Recreational Stock: Pack and saddle stock used primarily for transporting recreationists and their gear. Both commercial pack stock and individual stock are included. Usually horses and mules, but may also be llamas or goats.

Recreational Use Statue: State laws designed to limit the liability of public organizations, easement donors, landowners, and others who open their lands for public recreation use.

Rehabilitation: All work to bring an existing trail up to its classification standard on the same location, including necessary relocation of minor portions of the rail.

Relocation (Relo): Construction of a new section of trail to replace an old stretch—to avoid problems of erosion or impact, or due to landowner or management constraints.

Renovation: Activities that will significantly change the trail width, surface, or trail structures.

Reroute: To alter the path of a trail to better follow land contours, avoid drainage sites, bypass environmentally sensitive areas, improve views, or for other reasons.

Retaining Wall (Revetments, Cribbing): Structure used at a grade change to hold the soil on the up-hillside from slumping, sliding, or falling, usually made of log or stone. Also used to provide stability and strength to the edge of a trail.

Right-of-Way: A strip of land held in fee simple title, or an easement over another's land, for use as a public utility for a public purpose. Usually includes a designated amount of land on either side of a trail that serves as a buffer for adjacent land uses.

Riparian Zone: The land and vegetation immediately adjacent to a body of water, such as a river, lake, or other natural perpetual watercourse.

Riprap: Stones placed randomly on a bank to provide support.

Rise and Run: A measurement of grades and slopes, expressed as a proportion of the amount of vertical rise in a given horizontal run. For example, "1:4" means that the grade or slope rises 1 unit for each 4 units of horizontal run. Taking this one step further, 1:4 is a 25% grade or slope, where 25% is obtained by dividing 1 by 4 and expressing the result as a percentage.

Road, Level 1, U.S. Forest Service: Level 1 roads are typically not open for traffic. Road maintenance includes basic custodial care to protect resources, maintain drainage and runoff patterns.

Road, Level 2, U.S. Forest Service: Level 2 roads are open for limited passage of traffic. Traffic normally minor and composed of one or a combination of administrative use, permitted use or specialized traffic. Road maintenance includes basic custodial care to protect resources, maintain drainage and runoff patterns, logging out and brushing out as necessary to provide passage.

Shared Use: The shared use concept contends land managers and trail user groups work together to identify common goals and share in the process to achieve them. It means sharing of knowledge, tools, trailheads, grant funds, labor, and other resources in an area. In some instances it means sharing the same trail, but doesn't always require multiple-use trails.

Side Trails: Dead-end trail which access features near the main trail.

Sidehill: Where the trail angles across the face of a slope. The tread is often cut into the slope.

Sideslope: The natural slope of the ground measured at right angles to the centerline of the trail, or the adjacent slope which is created after excavating a sloping ground surface for a trailway, often termed a cut-and-fill-slope, left and right of the trail tread.

Sign, Kiosk: A freestanding bulletin board consisting of three to five sides.

Single-Track Trail: A trail only wide enough for one user to travel and requires one user to yield the trail to allow another user to pass.

Single Use Trail: One that is designed and constructed for only one intended user (i.e. hiker use only).

Slope, Cross: The slope that is perpendicular to the direction of the trail.

Slope, Percent: Number of feet rise (vertical) divided by feet of run (horizontal) times 100 to get percent slope; example: 15-feet of rise over 100-feet of run is a 15% slope.

Social Trail (Wildcat, Way, Informal): Unplanned/unauthorized trails/paths that developed informally from use and are not designated or maintained by an agency.

Soil Cement (cement-treated base): A mixture of pulverized soil combined with measured amounts of portland cement and water and compacted to a high density. As the cementing action occurs through hydration, a hard, durable semi-rigid material is formed. It must have a seal coat to keep out moisture and a surface that will take wear.

Soil Profile: Site specific arrangement of soil layers from surface to bedrock.

Soil Stabilizer: Material, either natural or manufactured, used to hold soil in place and prevent erosion from water, gravity, or trail users. Stabilizers include soil cement, geogrid, etc.

Spine Trail: A regional trail that acts as a "backbone" to a regional trail system.

Spur Trail: A trail that leads from primary, secondary, or spine trails to points of user interests—overlooks, campsites, etc.

Stile: A step or set of steps for passing over a fence or wall for hikers without allowing livestock to get out.

Surfacing: Material placed on top of the trailbed or base course that provides the desired tread. It lessens compaction of soil, provides a dry surface for users, and prevents potential erosion and abrasion.

Sustainability: Community use of natural resources in a way that does not jeopardize the ability of future generations to live and prosper.

Switchback: A sharp turn in a trail to reverse the direction of travel and to gain elevation. It is constructed on a slope of more than 15 percent when measured between the exterior boundaries of the trail 120 to 180 degrees. The landing is the turning portion of the switchback. The approaches are the trail sections upgrade and downgrade from the landing.

Trail: Linear route on land or water with protected status and public access for recreation or transportation purposes such as walking, jogging, hiking, bicycling, horseback riding, mountain biking, canoeing, kayaking, backpacking, and vehicular travel by motorcycle, all-terrain vehicles or snowmobiles.

Trailbed: The finished surface on which base course or surfacing may be constructed. For trails without surfacing, the trailbed is the tread.

Trailhead (Staging Area): An access point to a trail often accompanied by various public facilities, such as a horse unloading dock or chute, parking areas, toilets, water, directional and informational signs, and a trail use register.

Transportation Enhancement: Projects that include: providing bicycle and pedestrian facilities; converting abandoned railroad rights-of-way into trails; preserving historic transportation sites; acquiring scenic easements; mitigating the negative impacts of a project on a community by providing additional benefits; and other nonmotorized projects.

Transportation Equity Act for the 21st Century (TEA-21): Federal legislation authorizing highway, highway safety, transit, and other surface transportation programs from 1998 through 2003. It provides funding opportunities for pedestrian, bicycling, and public transit facilities, and emphasizes intermodalism, multimodalism, and community participation in transportation planning initiated by ISTEA.

Tread (Treadway): The actual surface portion of a trail upon which users travel excluding backslope, ditch, and shoulder. Common tread surfaces are native material, gravel, soil cement, asphalt, concrete, or shredded recycled tires.

Tread Width: The width of the portion of the trail used for travel.

Turnout: A place where the trail is widened to permit trail traffic traveling in opposite directions to pass.

Turnpike (Turnpiking): Tread made stable by raising trail bed above wet, boggy areas by placing mineral soil over fabric between parallel side logs or rocks (along edge of tread). Usually includes ditches alongside the logs or rocks. Turnpike must be "crowned" to provide drainage.

Universal Trail Assessment Process (UTAP): An inventory process that can be used by trail managers to assess a trail to determine compliance with design guidelines and to provide objective information to trail users regarding grade, cross slope, tread width, surface, and obstacles.

Waterbar: A drainage structure for turning water composed of an outsloped segment of tread leading to a barrier placed at a 45 % angle to the trail, usually made of logs, stones, or rubber belting material. Water flowing down the trail will be diverted by the outslope or, as a last resort, by the barrier.

APPENDIX E.

TRAIL CONSTRUCTION CRITERIA



BACK COUNTRY AND PRIMITIVE TRAIL DESIGN INFORMATION

HIKING TRAILS

	Easiest	More Difficult	Most Difficult 1/
Grade			
Max. Pitch Grade	20%	30%	+30%
Length	100'	300'	500'
Clearing 2/			
Width	48"	36" to 48"	36"
Height	8'	8'	8'
Tread 3/			
Width	18" to 24" Obstacle-free	12" to 18" If needed, depending on volume and drainage.	12"
Surface	Spot gravel surfacing.	Not surfaced-- leave roots, imbedded rocks, and some logs.	No graded tread except on side slopes over 50% where safety or resource damage is a problem.

1/ Upper limit of grade and pitch length for most difficult trails depends on soil type, amount of rock, vegetation type, and other conditions affecting stability of the trail surface.

2/ Curve alignment to avoid cutting large trees.

3/ Increase tread width 6 inches on switchbacks or where side slopes exceed 60 percent.

MOUNTAIN BICYCLE TRAILS

	Easiest	More Difficult	Most Difficult ^{1/}
Grade			
Max. Pitch	10%	30%	+30%
Max. Sustained Pitch	5%	10%	15%
Length	100'	300'	500'
Turning Radius	6'	3'	2'
Length of Trip			
Day	10-20 mi	20-40 mi	40-50 mi
One-half Day	5-10 mi	15-20 mi	20-25 mi
Clearing^{2/}			
Width	48"+	36"-48"	36"
Height	8'	8'	Max. 8'
Tread^{3/}			
Width	24"+	12"-24"	12"
Surface	Relatively smooth	Sections of relatively rough surface	Varied--Some portage required

1/ Upper limit of grade and pitch length depends on soil type, amount of rock, vegetation type, and other conditions affecting stability of the trail surface.

2/ Curve alignment to avoid cutting large trees.

3/ Increase tread width 6 inches on switchbacks or where side slopes exceed 60 percent.

EQUESTRIAN TRAILS

	<u>Easiest</u>	<u>More Difficult</u>	<u>Most</u>
Difficult 1/ Grade			
Max. Pitch			
Grade	15%	25%	+30%
Length	200'	300'	500'
Clearing 2/ Width			
Width	8'; 6' between large trees. Pack clearance must be 3' from a point 30" above grade of tread.	6' Pack clearance must be 3' from a point 30" above a grade of tread.	3' to 4' wide
Height	10'	8'	Maximum 8'
Tread 3/ Width			
Width	24"	24"	18"
Surface	Surfacing as needed for stability. Reinforce cross drains with logs or rocks on steep gradients (greater than 10%). Special emphasis on puncheon or turnpikes in bog holes. Construct extra trailbed width in steep terrain.	Leave roots and imbedded rocks. Cross drains permanent with natural roots, rocks, or imbedded logs.	Not graded except on side slopes greater than 30%.

1/ Assume pack animals normally are not accommodated on most difficult trails, so less clearing width is needed. Same holds true for day-use horse trails. The upper limit for most difficult saddle animal trails depends on the soil type, amount of rock, vegetation types, and other conditions affecting stability of the trail surface. The skill of the rider and the condition of the animal also are important considerations.

2/ Along a precipice or hazardous area, the trail clearing width should be at least 48 to 60 inches to provide safety to the riders and their animals.

3/ Increase tread width 12 inches on switchbacks. Tread width on special sections, such as fords or turnpikes, should be at least 36 inches.

CROSS-COUNTRY SKI TRAILS

	<u>Easiest 1/</u>	<u>More Difficult 1/</u>	<u>Most Difficult 1/</u>
Greatest Single Climb (elevation gain of single continuous climb)	35'	70'	140'
Elevation Differential (lowest to highest point on trail)	100'	250'	500'
Total Climb (sum of all elevation gains)	150'	400'	650'
Greatest Sustained Gradient (over 300' trail distance)	7.5%	12%	17%
Greatest Short Gradient (under 100' trail distance)	10%	20%	--

1/ Based on a 3-mile loop. These are maximum guides for smooth, wide, straight trails with good outruns. Correlate grade with distance to avoid excessive speed buildup.

ATV TRAILS

	Easiest	More Difficult	Most Difficult
Grade			
Max. Sustained	15%	25%	35%
Length	200'	300'	500'
Max. Pitch	20%	30%	50%
Clearance (1-Way Traffic)			
Wooded			
Downhill side	2'	1.5'	1.0'
Uphill side	3'	3'	3'
Level	3.1' each side	2.6' each side	2.5' each side
Open			
Downhill side	2'	1.5'	1.0'
Uphill side	3'	3'	3'
Level	3.1' each side	2.6' each side	2.4' each side
Height	6'	6'	5'
Tread Width			
Minimum	6.2'	5.2'	4.8'
Maximum	7.2'	6.2'	5.8'
Surface	Relatively smooth, no roots or rocks protruding more than 3", tread plane flat, sweeping curves, no holes wider than 24" nor deeper 6", lose sand OK	Section of relatively rough surface, no roots or rocks protruding more than 3", tread plane can be insloped 5% max, climbing turns	Relatively rough w/very rough short sections, no protruding rocks 3", tread plane can be insloped or out-sloped
Obstacles^{2/}	Wet xings 6" deep, 10' long max, draindips OK, no waterbars	Wet xings 10" deep, 25' long, waterbars downhill OK	Same as more difficult except waterbars may go uphill & down
Exposure (Sideslope)			
	0% to 20%	20% to 30%	30% to 40%
Length	Less than 300'	300' to 500'	More than 500'
Traffic Flow			
	One-way, or two-way w turnouts	One-way, or two-way w turnouts	One-way, or two-way w turnouts
Length of Trip			
One-half day	3 miles	10 miles	15 miles
Full day	6 miles	20 miles	30 miles

- 1/ Increase tread width 6 inches on switchbacks or where side slopes exceed 30 percent.
- 2/ Avoid any type of sharp peaks in vertical alignment.

OFF-HIGHWAY MOTORCYCLE TRAILS

	Easiest	More Difficult	Most Difficult 1/
Grade			
Max. Pitch	15%	30%	50%
Clearing			
Width			
Wooded			
Downhill Side	2'	1-1/2'	1-1/2'
Uphill Side	3'	3'	3'
Level	1-1/2' each side	1-1/2' each side	1-1/2' each side
Open			
Downhill Side	2'	1-1/2'	1-1/2'
Uphill Side	3'	3'	2-1/2'
Level	2'	2' each side	1-1/2' each side
Height	8'	8'	8'
Tread			
Width			
Minimum	18" 2/	18"	12"
Maximum	30"	24"	24"
Surface	Relatively smooth throughout, no roots or rocks protruding more than 3". Avoid sand and loose materials.	Sections of relatively rough surface, some loose material such as sand.	Relatively rough with very rough short sections. Long stretches of loose rock, sand, and mud desirable where available.
Obstacles (optional)	None	1 to 5 small logs (up to 6" in diameter) per mile on flat terrain.	1 to 5 logs (up to 6" in diameter) per mile lying on flat terrain.
Turns			
Per 1/4 Mile	2	6	11

1/ Upper limit of grade and pitch length for most difficult trails depends on soil type, amount of rock, vegetation type, and other conditions affecting stability of the trail surface.

2/ Increase tread width 6 inches on switchbacks or where side slopes exceed 50 percent.

SNOWMOBILE TRAILS

	<u>Easiest</u>	<u>More Difficult</u>	<u>Most Difficult</u>
Length of Trip			
Full Day	30 - 50 mi.	50 - 75 mi.	75 - 100 mi.
Half Day	15 - 25 mi.	25 - 40 mi.	40 - 50 mi.
Grade			
Max. Sustained	8%	--	15%
Max. Pitch	25%	--	35%
Clearing Width			
One-Way	12'	--	9'
Two-Way	16'	--	14'
Clearing Height Minimum 7' above normal maximum snow depth or 10' above ground, whichever is greater (measured to snow-loaded branches).			
Groomed Width			
One-Way	8'	--	5'
Two-Way	12'	--	10'
Turning Radius		25'	
Surface		Minimum: 4" of snow.	
Cross slope			
Maximum for over 50'	15%	30%	40%

4X4 TRUCK ROUTES

	<u>Easiest 1/</u>	<u>More Difficult 2/</u>	<u>Most Difficult</u>
Grade			
Max. Sustained (200-300)	20%	20%	30%
Max. Pitch	20%	30%	50%
Clearance			
Width	Ample clearance for logging truck.	12.5'	8'
Height	Ample clearance For logging truck.	9'	8'
Travel Way			
Width	10'	5.0' for 70" Vehicle width	5.0' for 70" vehicle width
Surface	Rough, irregular. Travel w low Clearance difficult	Some sections are rough, large rocks, mud loose materials,	Rough to very rocks, mud, winching area
Obstacles	None	1 to 5 small logs (up to 6" diameter) per mile on flat terrain	1 to 5 logs (up to 10" 10" diameter) per mile, large rocks
Flow	Two-way traffic difficult and require backing to pass	Two lock-to-lock turns within 150'	Five lock-to-lock turns within 150'
Travel Way Plain (outslope)	Level only as necessary for drainage.	20%	30%
Average Speed	Some slow-speed sections	4-10 mph	2-4 mph
Length of Day Trip	30 to 40 miles	10 to 15 miles	10 miles

1/ Easiest trails usually are built for other purposes.

2/ Most difficult for long-wheelbase vehicles. Short-wheelbase vehicles have maximum hub-to-hub length of 100 inches (for example, Blazers, CJ4's, and Jeeps, which have a 90-inch length).