

## ***CHAPTER I. PURPOSE OF AND NEED FOR THE ACTION***

### ***A. NATURE AND PURPOSE OF THE ACTION***

This Environmental Assessment (EA) is tiered to the Medicine Bow National Forest and Thunder Basin National Grassland Land and Resource Management Plan (Forest Plan, 1985). It is also tiered to the Final Environmental Impact Statement (FEIS) for the Forest Plan. Tiering means that Forest Plan and Forest Plan FEIS information is incorporated by reference in this document rather than repeated. Tiering is used to reduce paper work as stated in 40 CFR 1500.4 and 40 CFR 1502.20. The Forest Plan and the FEIS are on file at the Medicine Bow-Routt National Forests, 2468 Jackson Street, Laramie, Wyoming.

#### ***Introduction***

This EA documents the environmental effects of implementing Phase I of a two-phase travel management strategy for the Medicine Bow National Forest.

- **Phase I** involves changing existing travel regulations on the Medicine Bow National Forest (see Map 1, EA page 2) to restrict all forms of motorized vehicles, with the exception of snowmobiles, to designated routes (see Glossary). Phase I would also result in the immediate closure of any user-created route that is causing considerable adverse off-road vehicle impacts, as required by 36 CFR 295.5. The remaining user-created routes would remain open, temporarily, to motorized use until the Phase II, site-specific analyses are completed to determine their fate. No user-created routes would be added to the Forest Transportation System (FTS) until the Phase II analyses are completed.
- **Phase II** involves the completion of site-specific travel management analyses to decide the future status of the FTS. The Phase II analyses, which would be completed over the next five to seven years, would determine whether or not unplanned and unmanaged user-created roads and trails should be added to the FTS. The Phase II analyses would also determine whether or not additional motorized opportunities should be developed or if existing FTS routes should be opened or closed. The Phase II analyses would incorporate the requirements of the anticipated National Roads Policy and would involve further public discussion and disclosure. EA page 30 contains a prioritized list of areas wherein future Phase II, site-specific travel management analyses would be conducted.

This EA also describes alternative ways of implementing the proposed travel regulation changes and the potential effects they could have on the environment. The alternatives were designed to address issues raised during the public participation process (Scoping, 40 CFR 1501.7) for this analysis and to help achieve the goals and objectives of the Forest Plan.

Existing travel regulations are displayed on the 1985 Medicine Bow National Forest (MBNF) Travel Management Map (Travel Map). The Travel Map, which was incorporated into and made a part of the Medicine Bow Forest Plan on August 2, 1985, shows roads, trails, and area travel regulations (e.g. Medicine Bow Peak and Banner Lakes white arrow areas, etc.). Existing travel

regulations are also contained in special Travel Orders that have been signed into effect since the 1985 Travel Map was produced. Special Travel Orders include:

**Map 1. Medicine Bow National Forest.**

**Green Ridge, Sandstone Divide, and Headquarters Divide - Order #A1, June 12, 1986:** These areas are closed to motorized travel on and off Forest roads and trails, except on designated routes marked with a white arrow. From November 16 to May 15, only over-snow machines operating on snow are allowed.

**Battle Mountain, Beaver/Etna Creeks, Bear Mountain Areas - Order #A1, June 12, 1986:** These areas are closed from September 1 through November 15 to motorized travel on and off Forest roads and trails.

**Jack Creek Campground Area - Order #C1, April 1, 1988:** Off-road travel is prohibited in the area immediate to the Jack Creek Campground. Motorized vehicles must stay on roads designated as open.

**Hog Park Area - Order #3A, May 27, 1988:** Motorized vehicles are allowed only on roads signed as open in the area between Roads 550 and 496 and the Hog Park Reservoir shoreline. Operating snowmobiles on snow is permitted.

**Rob Roy Recreation Area - Order #5-1, July 27, 1988:** The Rob Roy Recreation Area is currently under a White Arrow travel management program. Within this area, roads open to motorized travel are marked by white arrows on posts.

**Deep Jack Road Corridor and Mill Creek Area - Order #4-3, July 10, 1989:** These areas are closed to motorized travel on and off forest roads and trails except on designated routes marked with a white arrow from May 15 to November 15. From November 16 to May 15, only over-snow machines operating on snow are allowed.

**South Brush Creek Area - Order #96-05, March 22, 1996:** Within the South Brush Creek Area, using or possessing a motorized vehicle, including snowmobiles, off designated Forest Development Roads (see Glossary) is prohibited. Using or possessing any motorized vehicle, including snowmobiles, on any trail is also prohibited unless designated otherwise.

**Cedar Pass Area - Order #96-04, April 18, 1996:** The Cedar Pass Area is currently under a White Arrow travel management program. Within this area, roads open to motorized travel are marked by white arrows on posts.

Existing travel regulations, which include the 1985 Travel Map regulations and the special Travel Order areas described above, are displayed on Maps 2 and 2a (EA pages 4 and 5). More detailed information pertaining to existing travel regulations is contained in Appendix A.

Other Federal, state, and local jurisdictions assisted in the analysis and disclosure of the environmental effects and in the development of alternatives described in this EA (see AGENCIES AND ORGANIZATIONS CONSULTED). Decisions by other jurisdictions concerning whether or not to issue approvals related to this proposal may be aided by the disclosure of impacts in this document.

An EA is not a decision document. It is a document disclosing the environmental effects of implementing a proposed action and alternatives to that action. This EA will be available for public comment for 45 calendar days from the day after legal notice is published in the Laramie

Daily Boomerang. After the public review, the decision will be documented in a separate Decision Notice (DN) signed by Medicine Bow Forest Supervisor, Jerry E. Schmidt.

**Map 2. Existing Travel Regulations - Sierra Madre and Snowy Range.**

**Map 2a. Existing Travel Regulations - Laramie Peak Area.**

## *Existing Condition*

According to existing travel regulations, roughly 762,670 acres, or 70 percent of the MBNF Forest, are open yearlong or seasonally to the use of motorized travel on and off Forest Development Roads (see Glossary) and Trails. The remaining 320,363 acres, or 30 percent of the Forest, currently have travel restrictions in place. Even though the creation of new routes by Forest users is prohibited in open areas, cross-country travel has resulted in new routes through repeated use. Frequently these user-created routes (see Glossary) have been developed in less than optimal locations. For example, user-created routes often traverse steep slopes and cross riparian areas and meadows which can lead to unacceptable resource damage. They also access areas that were once remote which can impact wildlife and reduce solitude for non-motorized Forest users. More information on the existing condition can be found in Chapter III, Affected Environment.

## *Desired Condition*

The MBNF will have a transportation system that offers a variety of experiences for both motorized and non-motorized Forest users. The system will be designed to protect physical, biological, and social values of the Forest while meeting the Standards and Guidelines and Management Objectives of the Forest Plan. A wide range of Forest users will be encouraged to actively participate in system planning, design, and implementation in an attempt to address and reduce potential conflicts.

Motorized routes will accommodate a variety of vehicle types, provide challenges, and allow visitors to experience the area's unique scenic vistas and backcountry. The transportation system will be clearly marked so that permitted uses are easy to identify. Roads and trails will be designed to require minimal maintenance. They will also be able to withstand repeated use so that they provide a quality forest experience and remain visually pleasing for years to come.

## *The Proposed Action*

The MBNF is proposing to implement two phases of travel management policy and analysis.

Under **Phase I**, existing travel regulations would be changed to restrict all forms of motorized vehicles, with the exception of snowmobiles, to designated routes (see Glossary). The travel regulation changes would apply to all areas of the Forest where motorized travel is not already restricted (762,670 acres or 70 percent of the Forest). The changes would also apply to seasonal closure areas (e.g. Battle Mountain, Beaver/Etna Creek, and Bear Mountain) and to all areas currently designated as “6” and “7” on the 1985 Travel Map. Finally, the changes would apply to areas designated as “4” on the 1985 Travel Map during the summer months only. Maps 3 and 3a (pages 7 and 8) show the areas where the proposed travel regulation changes would be implemented. Phase I would also include immediately closing any existing user-created route that is causing unacceptable resource impacts, as required by 36 CFR 295.5.

Under **Phase II**, site-specific travel management analyses would be completed to determine whether or not unplanned and unmanaged user-created roads and trails should be added to the Forest Transportation System (FTS) or if they should be decommissioned. The analyses would also determine whether or not additional motorized opportunities should be developed or if

existing FTS routes should be opened or closed. The analyses would be completed over the next five to seven years and would incorporate the requirements of the anticipated National Roads

**Map 3. Proposed Action - Sierra Madre and Snowy Range.**

**Map 3a. Proposed Action - Laramie Peak Area.**

Policy. Decisions pertaining to the Phase II analyses would be made only after further public discussion and disclosure. EA page 30 contains a prioritized list of areas wherein future site-specific travel management analyses would be conducted.

**NOTE: Although Phase I of the Proposed Action would result in the immediate closure of existing user-created roads or trails that are causing unacceptable resource effects, it would not add any routes to the FTS. The primary decision that would be made is whether or not to restrict future off-route vehicular use. Decisions to open or close individual roads and trails not causing considerable resource effects, or to develop additional motorized opportunities, would be made during Phase II of the Proposed Action and only after further public discussion and disclosure.**

The following information provides a more detailed description of the proposed travel regulation changes (Phase I):

Areas currently classified as:

- a) **“Areas closed to motorized travel on and off Forest roads and trails, except on designated routes with a white arrow, during the period December 1 to April 30.”** This regulation applies to all areas designated as “4” on the 1985 Travel Map.
- b) **“Areas (are) currently open yearlong to the use of motorized travel off of Forest Development roads and trails providing resource damage does not occur.”** This regulation applies to all areas designated as “6” on the 1985 Travel Map.
- c) **“Areas (are) closed to motorized travel on and off Forest roads and trails (except on designated routes with a white arrow) except for low pressure tire vehicles, motorcycles, bicycles, ground-effect or air-cushion vehicles, and low pressure tracked vehicles. Areas is closed to all motorized travel on and off roads and trails during the period December 1 to April 30.”** This regulation applies to all areas designated as “7” on the 1985 Travel Map.
- d) **“Areas (are) closed September 1 to November 15 to motorized travel on and off Forest roads and trails.”** This regulation applies to seasonal closure areas, including Battle Mountain, Beaver/Etna Creeks, and Bear Mountain. Appendix A provides a listing of all existing area closures and travel restrictions.

Would be changed to:

**“Motorized vehicles (are) restricted yearlong to designated roads and trails in all areas of the Forest. Off-route motorized travel is not allowed. Motorized travel up to 300 feet off of designated routes could occur for such activities as firewood gathering, dispersed camping, game retrieval, picnicking, etc. providing that resource damage does not occur.”**

The Proposed Action would also include the following activities:

- 1) If funding allows, law enforcement efforts and Forest Service education and ethics programs regarding travel would be increased;

- 2) Forest users would be involved with enforcement through peer pressure and information gathering; and
- 3) Access would be provided to private inholders, as required by Section 1323(a) of the Alaska National Interest Lands Conservation Act (P.L. 96-487; 16 U.S.C. 3210). Access would also be negotiated, as needed, with National Forest System land permit holders.

If the Proposed Action is selected, the following items would be monitored to ensure that the Purpose of and Need for the proposal (see page 10) is being met:

- 1) Creation of new, user-created roads and trails;
- 2) Trends in violation notices and reported incidents;
- 3) Effects on game and non-game wildlife species;
- 4) User conflicts (e.g. complaints);
- 5) Resource damage; and
- 6) Conflicts with private landowners.

**\*\*If monitoring identifies problems associated with implementing the Proposed Action, minor adjustments may be made to improve the travel management situation.\*\***

The Proposed Action and Alternatives 3 and 4 are consistent with the overall management direction set forth in the Forest Plan. The No Action alternative is not. Although Alternative 2 would improve Forest Plan consistency over existing conditions, it is not fully consistent with Forest Plan Direction and Standards and Guidelines. Consequently, the Forest Plan would need to be amended if either the No Action alternative or Alternative 2 is selected. Chapter IV contains more detailed information related to Forest Plan consistency, and Chapter II provides a detailed description of the alternatives considered in this EA.

The Proposed Action and Alternatives 2 through 4 are not consistent with the 1985 Travel Map. Therefore, a Supervisor's Order would need to be written to revise the Travel Map if one of these alternatives is selected, as indicated on Page II-59 of the Medicine Bow National Forest Plan. The Travel Map would not need to be revised if the No Action alternative is selected.

The Forest Plan is being implemented as required by the Forest and Rangeland Renewable Resources Planning Act of 1974 (RPA, P.L. 93-378) and the National Forest Management Act of 1976 (NFMA, P.L. 94-588). The Forest Plan provides the framework for the actions proposed here, and the actions are being undertaken as one step in implementing the Forest Plan.

### ***Purpose of and Need for the Proposal***

The *purpose* of this proposal is to:

- Reduce resource impacts by: 1) stopping off-route travel; 2) eliminating the proliferation of user-created routes; and 3) closing user-created routes that are causing considerable adverse impacts;
- Protect the environment while providing opportunities for resource management (e.g. livestock grazing, timber harvest, mineral exploration, etc.);
- Provide a variety of recreation opportunities for Forest users;
- Minimize user conflicts; and
- Reduce confusion occurring as a result of existing MBNF Travel regulations.

The proposal is needed to:

**Reduce adverse resource impacts caused by unrestricted vehicular use in order to maintain and restore healthy ecosystems and watersheds:** Maintenance and restoration of healthy ecosystems and watersheds is a national goal. The MBNF is striving to meet that goal by analyzing the proposal to restrict off-route vehicular use. Under existing travel regulations, off-route travel is allowed by both full-sized and trail vehicles on much of the MBNF. The result has been an increase in off-route travel and the development of unplanned, unsafe, and unauthorized routes. Forest managers and the public have expressed concern that unrestricted vehicular use and the proliferation of unauthorized routes have the potential to impact vegetation, soils, water resources and riparian areas, and detract from an area's scenic beauty.

**Improve wildlife habitat effectiveness:** Off Highway Vehicle (OHV) (see Glossary) use and new routes created by such use have made once remote and secure habitats easily accessible. This has reduced habitat effectiveness by displacing wildlife from preferred habitat; it has also reduced wildlife security areas. Disturbance to wildlife during critical seasons (e.g. breeding seasons) has the potential to reduce survival rates.

**Minimize increasing conflicts between motorized and non-motorized Forest users:** Unrestricted OHV use increases safety concerns and reduces opportunities for people who enjoy non-motorized experiences, such as hiking, wildlife viewing, and horseback riding. It also reduces hunting quality for hunters who choose not to use OHVs.

**Minimize conflicts with private landowners:** OHV use often displaces elk and deer from the National Forest to private lands, reducing hunting opportunities and creating conflicts with landowners and livestock.

**Improve consistency across the Forest:** Travel management regulations currently vary in different parts of the Forest, and this is confusing to our recreating public. For example, some areas allow off-route travel while others do not. Consequently, up-to-date visitor and travel management maps are necessary in order to know what types of activities are permitted in specific areas of the Forest. Signs, maps, and interpretation and enforcement of travel regulations also vary across the Forest. This reduces public service and hinders law enforcement efforts.

**Maintain consistency with the Forest Plan and to follow the Rocky Mountain Regional Guide (Amended May 1992; Technical Corrections, June 1995):** Existing travel regulations would result in continued resource damage, loss of solitude in semi-primitive non-motorized (see Glossary) areas, conflicts with other Forest users, and declines in wildlife habitat. Consequently, the regulations are not consistent with resource management objectives contained in Forest Plan Direction (see Appendix B), the coordinated travel management guidelines listed on pages II-59 and II-60 of the Forest Plan, or Forest Plan Standards and Guidelines in areas emphasizing non-motorized recreation, wildlife habitat, and riparian ecosystems. In addition, existing travel regulations do not comply with direction outlined in the Rocky Mountain Regional Guide (Regional Guide). The Regional Guide states, "On all land areas outside of developed travelways, motorized use with wheeled vehicles will be restricted unless such use is specifically allowed and so designated" (Regional Guide, Chapter 2, pages 12 and 13,

item #3). The Regional Guide contains overriding Regional travel management policies that apply to all National Forest System lands.

### ***Management Requirements***

Travel management on the MBNF must be within the sideboards of management requirements established at many levels. For example, management must be consistent with the overall direction provided within the Forest Plan. The Forest Plan lists a set of goals (Forest Plan, pages III-3 through III-5) that describe a desired condition to be achieved through management of the Forest. Actions necessary to achieve these goals, such as the Proposed Action, are authorized by the Forest Plan. Forest Plan goals that relate to travel management are listed in Appendix B.

The Forest Plan also provides general direction and Standards and Guidelines for specific management activities for the entire Forest as well as for specific management prescription areas (See Forest Plan, pages III-14 through III-234). Selected Standards and Guidelines specific to travel management are also listed in Appendix B.

In addition, travel management on the MBNF must be consistent with direction outlined in the Rocky Mountain Regional Guide (Regional Guide). The Regional Guide contains overriding Regional travel management policies that apply to all National Forest System lands. As mentioned above, the Regional Guide sets Regional policy and direction as follows, "On all land areas outside of developed travel ways, motorized use with wheeled vehicles will be restricted unless such use is specifically allowed and so designated" (Regional Guide, Chapter 2, pages 12 and 13, item #3).

Additional direction for travel management and the development of Forest transportation systems is found in the National Forest Roads and Trails Act of October 13, 1964 as amended (16 U.S.C. 532-538, P.L. 88-657), the Highway Safety Act (see Glossary) of 1966 (23 U.S.C. 402, P.L. 89-564), the National Trails System Act of October 2, 1968 (16 U.S.C. 1241-1249, P.L. 90-543), and the Surface Transportation Assistance Act of 1978 as amended (23 U.S.C. 101a, 201-205, P.L. 95-5999 and 97-424). The Surface Transportation Assistance Act corresponds to policy and direction in Forest Service Manuals 2300 and 7700.

The authority to allow, restrict, or prohibit off-road vehicle (see Glossary) use is provided in Executive Order 11644, as amended by Executive Order 11989, and Title 36 Code of Federal Regulations, Parts 261, 293, and 295. Direction for off-road travel management is found in Forest Service Manual 2350 and in Forest Plan Direction (pages III-76 through III-78).

### ***Decisions to be Made Based on this Analysis***

Specific decisions that Medicine Bow National Forest Supervisor, Jerry E. Schmidt, must make regarding revisions to existing travel regulations are:

- Which alternative to select; the Proposed Action, the No Action alternative (Alternative 1), or one of the action alternatives (Alternatives 2 through 4). Alternatives are described in Chapter II.

If either the Proposed Action or an action alternative is selected:

- In which areas of the Forest to implement travel revisions, i.e., the entire Forest or parts of the Forest;
- Which specific mitigation measures to implement; and
- Which specific monitoring measures to implement.

## ***B. SCOPING***

Scoping (40 CFR 1501.7) is an important part of the environmental analysis process for determining the scope of issues to be addressed and for identifying the environmental issues related to a proposed action.

During the 1997 big game hunting season, an informational brochure was distributed to several hundred hunters in the Sierra Madre, Snowy Range, and Laramie Peak areas of the Forest. The brochure described the travel management situation on the Forest, existing travel regulations, and possible regulation changes. The brochure also requested comments from the public and explained that the comments received would be used to develop a proposal that would be sent out for additional public comment later in the year. From this initial Scoping effort, 49 comment letters were received.

On January 28, 1998, a formal Scoping letter describing existing travel regulations, proposed regulation changes, purpose of and need for the proposal, and decisions to be made was mailed to roughly 900 interested and potentially affected individuals, groups, organizations, and agencies. The letter requested that issues, comments, and concerns related to the proposal be submitted to the MBNF by March 23, 1998. In an attempt to inform the general public about the proposal, a press release describing the proposed travel regulation changes was also mailed to local media contacts on February 2, 1998. From this Scoping effort, 337 comment letters, 25 form letters, and several petitions containing close to 2,000 signatures were received. The list of individuals, groups, organizations, agencies, and media contacts to whom the Scoping letter or press release was sent is in the project file located in the Laramie District Office, 2468 Jackson Street, Laramie, Wyoming.

In addition to distributing the informational brochure and Scoping letter, the Forest also hosted several meetings with other agencies and with the public. For example, on February 20, 1998, the Forest hosted an Inter-agency meeting with the Wyoming Game and Fish Department (WGFD) and the Bureau of Land Management (BLM). The purpose of the meeting was to explain the proposal to these agencies and to collect their comments on it. The Forest also hosted eight public Open House meetings around the State. The purpose of these meetings was to discuss the proposed travel regulation changes with the public and to collect their comments on it. Meetings were held in Baggs (January 21, 1998); Saratoga (March 3, 1998); Rawlins (March 5, 1998); Laramie (March 10, 1998); Cheyenne (March 12, 1998); Esterbrook (March 14, 1998); Douglas (March 16, 1998); and Wheatland (March 23, 1998). Finally, on May 20, 1998, Forest representatives met with the Larimer County 4WD Club, Inc. in Fort Collins, Colorado. Again, the purpose of this meeting was to discuss the proposed travel regulation changes with Club members and to collect their comments on it.

As part of the Scoping effort, large, 2 inch per mile transportation maps depicting improved and unimproved open roads (see Glossary) were also displayed in local libraries and at the Open

House meetings. The maps were generated to show the degree of accessibility to the Forest and to show relative road densities. They were also generated so that the public would have an opportunity to identify any roads or trails that may be missing from our inventory.

On April 14, 1999 a copy of the Forest-wide Travel Management Environmental Assessment (EA) was mailed to persons who had participated in earlier scoping efforts and to individuals who requested a copy of the document. To provide general public notice of the availability and opportunity to comment on the EA, a Request for Comment (legal notice) was also published in the Laramie Daily Boomerang on April, 14 1999. The Request indicated that comments on the EA would be accepted for 45 days. The 45-day comment period began on April, 15 1999, the day after the request was published.

During the 45-day comment period, the Forest Service hosted three open house meetings. The purpose of the meetings was to discuss the proposed action and the alternatives with the public and to determine if any new issues or concerns had arisen since the scoping effort. Meetings were held in Laramie (May 6, 1999), Saratoga (May 11, 1999), and Douglas (May 13, 1999). No new issues were identified as a result of the meetings or as a result of other oral and written comments received by the Forest Service during the 45-day comment period for the EA.

When the EA comment period ended on June, 1 1999, both written and oral comments received from the public were analyzed and addressed by Forest Resource Specialists. Public comments and Forest Service response to the comments are contained in Appendix C.

**NOTE: Although Phase I of the Proposed Action would result in the immediate closure of existing user-created roads or trails that are causing unacceptable resource effects, it would not add any routes to the FTS. The primary decision that would be made is whether or not to restrict future off-route vehicular use. Decisions to open or close individual roads and trails not causing considerable resource effects, or to develop additional motorized opportunities, would be made during Phase II of the Proposed Action and only after further public discussion and disclosure.**

## 1. Issues

Public comments received during both the scoping effort and the comment period for the EA were used to help determine issues related to the proposed travel regulation changes. Other information used to determine the issues included ID Team meeting notes, management requirements described on pages 11 and 12 of this EA, Forest Service monitoring information, and past agency and public comments related to travel management. All of this information can be found in the Travel Management project file located in the Laramie District Office, 2468 Jackson Street, Laramie, Wyoming.

Issues were broken down into four basic categories:

- 1) **Key<sup>1</sup> issues leading to the development of the Proposed Action** - These issues were determined after reviewing public and agency comments (i.e., Forest Service, BLM,

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<sup>1</sup>A variety of factors were used to determine key issues, including geographic extent, duration of effects, and/or intensity of public interest or resource conflict (40 CFR 1508.27). Key issues were used to develop the alternatives and to focus the analysis.

and WGFD), monitoring information, and the management requirements listed on pages 11 and 12 of this EA.

- 2) **Key issues used to develop alternatives to the Proposed Action** - These issues were determined after reviewing comments received from the Scoping efforts described above (e.g. informational brochure, Scoping letter, and Interagency and public meetings).
- 3) **Issues incorporated into alternative design** - These issues were either addressed by management requirements and/or they did not suggest a need for additional alternatives. Consequently, they were incorporated into the design of existing alternatives.
- 4) **Issues beyond the scope of this analysis or beyond Forest Service jurisdiction** (see Glossary) - These are issues that: 1) did not fall within the bounds of the analysis; 2) that could not be addressed at this level of analysis; or 3) they are issues over which the Forest Service has no control.

#### **KEY ISSUES LEADING TO THE DEVELOPMENT OF THE PROPOSED ACTION:**

- 1) **Adverse resource impacts caused by unrestricted vehicular** - Existing travel regulations allow off-route travel by both full-sized and trail vehicles on much of the Forest. The result has been an increase in off-route travel and the development of unplanned and unauthorized routes. Forest managers and the public have expressed concern that unrestricted vehicular use and the proliferation of unauthorized routes have the potential to impact vegetation, soils, water resources and riparian areas, and detract from an area's scenic beauty.
- 2) **Wildlife Habitat Effectiveness** - Increased OHV use and new routes created by such use have made once remote and secure habitats easily accessible. This has reduced habitat effectiveness by displacing wildlife from preferred habitat; it has also reduced wildlife security areas. Disturbance to wildlife during critical seasons (e.g. breeding seasons) has the potential to reduce survival rates.
- 3) **Conflicts between motorized and non-motorized Forest users** - Unrestricted OHV use increases safety concerns and reduces opportunities for people who enjoy non-motorized experiences, such as hiking, wildlife viewing, and horseback riding. It also reduces hunting quality for hunters who choose not to use OHVs.
- 4) **Conflicts with private landowners** - Unrestricted OHV use often displaces elk and deer from the National Forest to private lands, reducing hunting opportunities and creating conflicts with landowners and livestock.
- 5) **Inconsistent regulations and lack of consistent signing and law enforcement** - Travel management regulations currently vary in different parts of the Forest and are confusing to our recreating public. For example, some areas allow off-route travel while others do not. Consequently, up-to-date visitor and travel management maps are necessary in order to know what types of activities are permitted in specific areas of the Forest. Signs, maps, and interpretation and enforcement of travel regulations also vary across the Forest. This reduces public service and hinders law enforcement efforts.

- 6) **Conflicts with the Forest Plan and the Rocky Mountain Regional Guide (Amended May 1992; Technical Corrections, June 1995)** - Existing travel regulations would result in continued resource damage, loss of solitude in semi-primitive non-motorized areas, conflicts with other Forest users, and declines in wildlife habitat. Consequently, the regulations are not consistent with resource management objectives contained in Forest Plan Direction (see Appendix B), the coordinated travel management guidelines listed on pages II-59 and II-60 of the Forest Plan, or Forest Plan Standards and Guidelines in areas emphasizing non-motorized recreation, wildlife habitat, and riparian ecosystems. In addition, existing travel regulations do not comply with direction outlined in the Rocky Mountain Regional Guide. The Regional Guide states, "On all land areas outside of developed travel ways, motorized use with wheeled vehicles will be restricted unless such use is specifically allowed and so designated" (Chapter 2, pages 12 and 13, item #3). The Regional Guide contains overriding Regional travel management policies that apply to all National Forest System lands.

#### **KEY ISSUES USED TO DEVELOP ALTERNATIVES TO THE PROPOSED ACTION:**

1) **The Proposed Action is too restrictive and limits personal freedom** - The proposal would restrict the freedom of all people rather than just those who do not abide by existing regulations. It would also limit some opportunities for motorized recreation and would deny people motorized access to some locations on public lands. Alternative 1 addresses this issue: No Action - Existing Travel Regulations Would Remain Unchanged.

2) **The Proposed Action reduces game retrieval opportunities** - The proposal would make it difficult for most people to retrieve big game since most game is shot farther than 300 feet from roads. It would also give preferential treatment to people who use snowmobiles and horses during the hunting season. This issue is addressed by Alternative 1: No Action - Existing Travel Regulations Would Remain Unchanged and Alternative 2: Allow Use of Off-route Vehicles for Big Game Retrieval.

3) **The Proposed Action discriminates against the elderly and people with disabilities** - By not allowing off-route vehicular use, the Proposed Action would prevent the elderly and people with disabilities from accessing remote places on the Forest. It would also discriminate against these individuals during the hunting seasons by reducing hunting opportunities and the ability to retrieve downed game. This issue is addressed by Alternative 1: No Action - Existing Travel Regulations Would Remain Unchanged and, in part, by Alternative 2: Allow Use of Off-route Vehicles for Big Game Retrieval.

4) **Distance allowed for off-route travel is too great** - The 300 foot restriction is too large and would lead to increased resource damage. It would also lead to law enforcement problems and the creation of new, user-created roads and trails. Alternative 3: Reduce Off-route Travel Restriction from 300 Feet to 100 Feet addresses this issue.

5) **Laramie Peak should be excluded from the proposal** - The Laramie Peak area of the Forest is geographically unique due to landownership patterns and problems with access. These conditions, in and of themselves, limit where and when off-route motorized travel may occur. Further, because Laramie Peak does not receive the same level of use as the Snowy Range or the Sierra Madre mountain ranges, resource damage

from off-route motorized vehicle use is relatively less than on other parts of the Forest at this time. This issue is addressed, in part, by Alternative 4: Travel Restrictions in the Snowy Range, Sierra Madre, and in Defined Blocks of Land on Laramie Peak.

#### **ISSUES INCORPORATED INTO ALTERNATIVE DESIGN:**

Forest Service personnel, other agencies, and the public raised the following issues. Although they are important, it was felt that they did not warrant the development of an alternative in and of themselves. Consequently, they were incorporated into the design of all alternatives analyzed in this EA.

- 1) Education and ethics programs regarding travel should be increased.**
- 2) Law enforcement efforts need to be increased.**
- 3) Forest users should be involved in enforcement through peer pressure and information gathering. Clubs, vehicle manufacturers, individuals, and retailers should be asked to help.**
- 4) Private inholders and permittees should be allowed access as needed.**

#### **ISSUES BEYOND THE SCOPE OF THIS ANALYSIS OR BEYOND FOREST SERVICE JURISDICTION:**

- 1) Off highway vehicles (OHVs) should be licensed or registered and the money generated should be used to create more trails and to rehabilitate damaged areas.**

**RESPONSE:** Although we support the proposal to implement State licensing and registration for OHVs, this issue is beyond Forest Service jurisdiction. However, we will work with the State of Wyoming and user groups to continue to support future OHV registration. We will also work with the State to develop a program wherein money generated from registration stickers could be used to maintain motorized routes.

- 2) Age restrictions should be imposed for OHV use.**

**RESPONSE:** This issue is also beyond Forest Service jurisdiction. However, Wyoming State Statutes do require persons operating an OHV to be licensed, street-legal, and insured. This requirement, in and of itself, imposes an age restriction since a person must be 16 years old before obtaining a driver's license.

- 3) Snowmobiles should be included in the proposal.**

**RESPONSE:** This issue is beyond the scope of this analysis. The purpose of the analysis is to address the proliferation of user-created routes and the associated resource damage, social conflicts, and disturbance to wildlife. However, we do recognize that snowmobile use on the Forest is an important issue; therefore, it is an issue that may be addressed in a future analysis.

- 4) The Forest Service should create more OHV trails.**

**RESPONSE:** This issue is beyond the scope of this analysis. The Forest Service is not proposing to open, close, or create any roads or trails as a result of this analysis. The only decision that would be made is whether or not to restrict future off-route vehicular

use. We will, however, be conducting site-specific travel management analyses in the future. At that time, we will be looking at motorized opportunities and determining whether or not specific roads or trails should be opened or closed or if the construction of new routes is warranted. These decisions would be made only after further public discussion and disclosure. See EA page 30 for a list of future travel management analysis areas.

**5) Fines should be increased to pay for resource damage.**

**RESPONSE:** This issue is beyond Forest Service jurisdiction. However, we support the idea of increasing fines for resource damage caused of off-route travel and will be pursuing this with the Federal Magistrate.

**6) Damaged areas should be prioritized for restoration.**

**RESPONSE:** This issue is beyond the scope of this analysis. As mentioned above, the only decision to be made through this analysis is whether or not to restrict future off-route vehicular travel. Although damaged areas are restored on a continuing basis via the Forest Service's Soil and Water program, areas for conducting site-specific travel management analyses have been identified (see EA page 30) and will be addressed in the future. Resource damage was one criterion used to determine which areas would be analyzed first.

**7) The proposal will endanger children by forcing them to ride on roads.**

**RESPONSE:** This issue is beyond Forest Service jurisdiction. There are numerous Federal and Wyoming State laws that apply to motorized vehicle use and that must be followed by OHV users. For example, Title 36 Code of Federal Regulations (CFR), Part 261.12 and 261.13 regulate the operation of motorized vehicles on Forest Development Roads and off of roads, respectively. Additionally, Wyoming State Statutes (31-1-101 (E) and (K)) apply to the operation of all motorized vehicles on Forest Roads because all designated roads are considered ``open roads" by Federal and State law. In order to legally operate an OHV on any designated Forest Service road, the operator must be a licensed driver with a motorcycle endorsement on their license, and the OHV must fit the legal definition of a motor vehicle, i.e., it must have a valid license plate, it must be insured, and it must have a headlight, tail light, brake light, muffler, mirror, and a horn.

**8) The proposal conflicts with the National Road Policy.**

**RESPONSE:** This issue is beyond the scope of this analysis. The timing of this proposal and the Chief's proposed road policies has caused some confusion. The Chief's proposed policies address the need for a long-term national transportation policy while our proposal addresses specific concerns related to travel off the transportation network on the MBNF.

## ***CHAPTER II. ALTERNATIVES, INCLUDING THE PROPOSED ACTION***

The National Environmental Policy Act (NEPA) regulations (40 CFR 1502.14) require rigorous exploration and objective evaluation of all reasonable alternatives including those not within the jurisdiction of the agency. According to NEPA, Federal agencies are also required to include and discuss appropriate measures to mitigate adverse environmental impacts that could result from implementing a proposed action.

This Chapter examines a range of alternatives to the Proposed Action, each having different environmental impacts and protection measures. The alternatives were developed in response to the key issues (see pages 15 and 16) and present a broad range of analysis options, as required under NEPA. Five (5) alternatives, including a No Action alternative and the Proposed Action, were studied in detail and are documented as part of this EA. Each action alternative (Alternatives 2 through 4) and the Proposed Action contain mitigation measures designed to protect other resource uses and values. The alternatives also contain monitoring requirements designed to ensure that the mitigation measures work and that the Purpose and Need (pages 10 and 11) for this proposal is being met.

The Proposed Action and Alternatives 3 and 4 are consistent with the overall management direction set forth in the Forest Plan. The No Action alternative is not. Although Alternative 2 would improve Forest Plan consistency over existing conditions, it is not fully consistent with Forest Plan Direction and Standards and Guidelines. Therefore, the Forest Plan would need to be amended if either the No Action alternative or Alternative 2 is selected. Chapter IV contains more detailed information related to Forest Plan consistency.

The Proposed Action and Alternatives 2 through 4 are not consistent with the 1985 Travel Map. Consequently, the Travel Map would need to be revised via a Supervisor's Order if one of these alternatives is selected, as indicated on page II-59 of the Forest Plan. The Travel Map would not need to be revised if the Action alternative is selected.

Implementation of the Proposed Action or Alternatives 2 through 4 could occur in several ways. The alternative could be implemented: 1) On the entire 762,670 acres that currently do not have travel restrictions in place; 2) By mountain range or combination of mountain ranges (Laramie Peak, Sierra Madre, or Snowy Range); or 3) By Wyoming Game and Fish Department elk hunt areas. (Elk hunt areas are described in Chapter IV.) These options allow the decision maker flexibility in applying the selected alternative to the entire Forest or to specific portions of it.

### ***A. FEATURES COMMON TO ALL ACTION ALTERNATIVES (Proposed Action and Alternatives 2 through 4)***

1. If an action alternative is selected, the 1985 Travel Management Map would be updated to reflect the travel regulation changes associated with that particular alternative. A Supervisor's Order would be written to implement the travel regulation changes.

## ***B. FEATURES COMMON TO ALL ALTERNATIVES, INCLUDING THE NO ACTION ALTERNATIVE***

1. Over the next five to seven years, Phase II, site-specific travel management analyses would be completed to determine whether or not to add unplanned and unmanaged user-created roads and trails to the Forest Transportation System (FTS) or to decommission them. The analyses would also determine whether or not additional motorized opportunities should be developed or if existing FTS routes should be opened or closed. These decisions would be made only after further public discussion and disclosure. EA page 30 contains a prioritized list of areas wherein future site-specific travel management analyses would be conducted.
2. All Federal and Wyoming State laws applying to motorized vehicle are subject to enforcement. Title 36 Code of Federal Regulations (CFR), Parts 261.12 and 261.13 regulate the operation of motorized vehicles on Forest Development Roads (FDR) and off FDR roads, respectively. Additionally, Wyoming State Statutes (31-1-101 (E) and (K)) apply to the operation of all motorized vehicles on Forest Roads because all designated roads are considered "open roads" by Federal and State law. In order to legally operate an OHV on any designated Forest Service road, the operator must be a licensed driver with a motorcycle endorsement on their license, and the OHV must be legal by State definition of a motor vehicle, i.e., it must have a valid license plate attached to the vehicle, the vehicle operator must have proof of insurance, and the OHV must have a head light, tail and brake lights, a muffler, a rear view mirror, and a horn.
3. If funding allows, law enforcement efforts and Forest Service education and ethics programs regarding travel on the National Forest would be increased.
4. Access would be provided to private inholders, as required by Section 1323(a) of the Alaska National Interest Lands Conservation Act (P.L. 96-487; 16 U.S.C. 3210). Access would also be negotiated, as needed, with National Forest System land permit holders.
5. Forest users would be involved with regulation enforcement through peer pressure and information gathering. Clubs, manufacturers, individuals, and retailers would be asked to help.

## ***C. ALTERNATIVES CONSIDERED AND ANALYZED IN DETAIL***

### ***PROPOSED ACTION: Restrict Motorized Vehicle Use to Designated Routes***

The Proposed Action was designed to address issues related to: a) Wildlife habitat effectiveness; b) Conflicts with private landowners; c) Adverse resource impacts caused by unrestricted off-route vehicular use; d) Conflicts between motorized and non-motorized Forest users; e) Inconsistent regulations and lack of consistent signing and law enforcement; and f) Conflicts with the Forest Plan and the Rocky Mountain Regional Guide.

The MBNF is proposing to implement two phases of travel management policy and analysis.

Under **Phase I** of the Proposed Action, existing travel regulations would be changed to restrict all forms of motorized vehicles, with the exception of snowmobiles, to designated routes. The changes would occur on roughly 762,670 acres, or 70 percent, of the Forest. The remaining 320,363 acres, or 30 percent, of the Forest currently have year-round travel restrictions in place. Any user-created route causing unacceptable resource effects would also be immediately closed, as required by 36 CFR 295.5.

Under **Phase II**, site-specific travel management analyses would be completed to determine whether or not to add unplanned and unmanaged user-created roads and trails to the Forest Transportation System (FTS) or to decommission them. The analyses would also determine whether or not additional motorized opportunities should be developed or if existing FTS routes should be opened or closed. The analyses would be completed over the next five to seven years and would incorporate the requirements of the anticipated National Roads Policy. Decisions pertaining to the Phase II analyses would be made only after further public discussion and disclosure. EA page 30 contains a prioritized list of areas wherein future site-specific travel management analyses would be conducted.

Phase I travel regulation changes would apply to all areas of the Forest where motorized travel is not already restricted. The changes would also apply to seasonal closure areas (e.g. Battle Mountain, Beaver/Etna Creek, and Bear Mountain) and to all areas currently designated as “6” and “7” on the 1985 Travel Map. Finally, the changes would apply to areas designated as “4” on the 1985 Travel Map during the summer months only. Maps 3 and 3a (pages 7 and 8) show the areas where the proposed travel regulation changes would be implemented.

The following information provides a more detailed description of the proposed travel regulation changes:

Areas currently classified as:

- a) **“Areas closed to motorized travel on and off Forest roads and trails, except on designated routes with a white arrow, during the period December 1 to April 30.”** This regulation applies to all areas designated as “4” on the 1985 Travel Map.
- b) **“Areas (are) currently open yearlong to the use of motorized travel off of Forest Development roads and trails providing resource damage does not occur.”** This regulation applies to all areas designated as “6” on the 1985 Travel Map.
- c) **“Areas (are) closed to motorized travel on and off Forest roads and trails (except on designated routes with a white arrow) except for low pressure tire vehicles, motorcycles, bicycles, ground-effect or air-cushion vehicles, and low pressure tracked vehicles. Areas is closed to all motorized travel on and off roads and trails during the period December 1 to April 30.”** This regulation applies to all areas designated as “7” on the 1985 Travel Map.

- d) “**Areas (are) closed September 1 to November 15 to motorized travel on and off Forest roads and trails.**” This regulation applies to seasonal closure areas, including Battle Mountain, Beaver/Etna Creeks, and Bear Mountain. Appendix A provides a listing of all existing area closures and travel restrictions.

Would be changed to:

**“In all areas of the Forest, motorized vehicles (are) restricted yearlong to designated roads and trails. Off-route motorized travel is not allowed. Motorized travel up to 300 feet off of designated routes could occur for such activities as firewood gathering, dispersed camping, game retrieval, picnicking, etc. providing that resource damage does not occur.”**

**NOTE: Although Phase I of the Proposed Action would result in the immediate closure of existing user-created roads or trails that are causing unacceptable resource effects, it would not add any routes to the FTS. The primary decision that would be made is whether or not to restrict future off-route vehicular use. Decisions to open or close individual roads and trails not causing considerable resource effects, or to develop additional motorized opportunities, would be made during Phase II of the Proposed Action and only after further public discussion and disclosure.**

**ALTERNATIVE 1: No Action - Existing Travel Regulations Would Remain Unchanged**

The No Action alternative was designed to address issues related to: a) The restrictive nature of the Proposed Action and limitations on personal freedom; b) Game retrieval; c) Discrimination against the elderly and people with disabilities; and d) The need to exclude the Laramie Peak area of the Douglas Ranger District from the Proposed Action.

Under the No Action alternative, MBNF travel regulations would not be revised. All existing travel restrictions would remain in place in areas currently restricted to off-route motorized travel. All areas open to off-route motorized travel would also remain open. Maps 2 and 2a (pages 4 and 5) display open areas and areas where travel restrictions are currently in place.

**ALTERNATIVE 2: Allow Use of Off-road Vehicles for Big Game Retrieval**

Alternative 2 was designed to address issues related to: a) Game retrieval; and b) Discrimination against the elderly and people with disabilities.

All aspects of the Proposed Action would apply to Alternative 2. The only difference between the Proposed Action and Alternative 2 is that, under Alternative 2, off-route motorized vehicles 48 inches in width or less would be allowed to travel off of designated roads and trails during the big game hunting season. They would also be allowed to travel behind Forest Service gated roads. **Off-route motorized travel would be allowed for big game retrieval only, providing resource damage does not occur.** For the purposes of this analysis, big game is defined as elk, deer, antelope, moose, and bighorn sheep.

Other aspects of Alternative 2 include:

1) Game retrieval would not be allowed in areas of the Forest where motorized travel is currently restricted.

**Map 4. Areas Where Big Game Retrieval is Restricted - Sierra Madre and Snowy Range.**

**Map 4a. Areas Where Big Game Retrieval is Restricted - Laramie Peak.**

- 2) Restricted areas include Ashenfelder, Bear Mountain, the Sandstone area, Beaver/Etna Creeks, Battle Mountain, South Brush Creek, Cedar, Rob Roy Reservoir area, Hog Park Reservoir area, Jack Creek Campground area, and all areas designated as 1, 2, 3, and 5 on the 1985 Travel Map (See Maps 4 and 4a). Restricted areas also include non-motorized trails.
- 3) Motorized vehicles would not be allowed more than 300 feet off of designated roads and trails in the Pennock Mountain area of the Brush Creek/Hayden Ranger District.
- 4) Motorized vehicles 48 inches in width or less would be allowed behind all closed roads regardless of closure type (e.g. gates, tank traps, etc.) in areas where motorized travel is not currently restricted.
- 5) Game retrieval would be allowed from 10:00 a.m. until 3:00 p.m. and from 1/2 hour after sunset until midnight.
- 6) One vehicle per downed animal could be used for game retrieval.
- 7) A validated carcass tag must be attached to the downed animal or in the possession of the person(s) using a motorized vehicle to travel off of designated routes while transporting game from the field.

**ALTERNATIVE 3: Reduce Off-route Travel Restriction from 300 Feet to 100 Feet**

Alternative 3 was designed to address issues related to: a) Wildlife habitat effectiveness; b) Conflicts with private landowners; c) Adverse resource impacts caused by unrestricted off-route vehicular use; d) Conflicts between motorized and non-motorized Forest users; e) Inconsistent regulations and lack of consistent signing and law enforcement; f) Conflicts with the Forest Plan and the Rocky Mountain Regional Guide; and g) Distance allowed for off-route travel is too great.

All aspects of the Proposed Action would apply to Alternative 3. The only difference between the alternatives is that, under Alternative 3, motorized travel off of designated routes would be reduced from 300 feet to 100 feet, providing that resource damage does not occur. The ability to travel 100 feet off-route would allow for such activities as firewood gathering, camping, game retrieval, picnicking, etc.

**ALTERNATIVE 4: Travel Restrictions in the Snowy Range, Sierra Madre, and in Defined Blocks of Land on Laramie Peak**

Alternative 4 was designed to address issues related to: a) Wildlife habitat effectiveness; b) Conflicts with private landowners; c) Adverse resource impacts caused by unrestricted off-route vehicular use; d) Conflicts between motorized and non-motorized Forest users; e) Inconsistent regulations and lack of consistent signing and law enforcement; and f) Conflicts with the Forest Plan and the Rocky Mountain Regional Guide. It was also designed to address, in part, significant issues related to excluding the Laramie Peak area of the Douglas Ranger District from the Proposed Action.

Under Alternative 4, all aspects of the Proposed Action would apply to defined blocks of land on the Laramie Peak area of the Douglas Ranger District. All aspects of the Proposed Action would also apply to the entire Sierra Madre and Snowy Range areas of the Forest.

Defined blocks of land wherein the Proposed Action would apply to the Laramie Peak area were selected for the following reasons:

- 1) The blocks can be easily managed;
- 2) The blocks have legal public access (easements);
- 3) Private lands within the defined blocks have the potential to be included in the National Forest System through land exchanges;
- 4) These areas are experiencing resource damage and reported conflicts between Forest users and private landowners as a result of off-route motorized vehicle use; and
- 5) Travel regulations can more easily be enforced in these areas.

Map 5 displays the defined blocks of land wherein the Proposed Action would apply to the Laramie Peak area of the Douglas Ranger District.

#### ***D. ALTERNATIVES ELIMINATED FROM DETAILED STUDY***

##### ***ALTERNATIVE 5: Close User-created Routes, but Allow Travel on Forest Service Routes***

This alternative would have continued to allow motorized travel on Forest Service routes, but user-created routes would have been closed.

The Interdisciplinary (ID) Team initially considered this approach, but eventually eliminated it from detailed study. As described in the Purpose of and Need for the Proposal section of this EA (pages 10 and 11), unrestricted motorized vehicle use has negatively affected certain resources in isolated areas across the Forest. The impacts resulting from unrestricted motorized use have also been conflicting with Forest Plan Standards and Guidelines and Direction related to coordinated travel management, non-motorized recreation, wildlife habitat, and riparian ecosystems (see Chapter IV). Although the ID Team determined that the effects of user-created routes are not significant at this point in time, the Forest Service still made a conscious decision to develop a programmatic travel management strategy to limit the effects of unrestricted motorized use to a level consistent with Forest Plan Direction.

Past experience with attempts to provide both programmatic and site-specific direction over large areas has been less than satisfactory. This is due to differences in approach between programmatic and site-specific analyses, the amount of data required for site-specific decisions, and, in this case, the size of the area where site-specific analysis would be required. The volume of data and information, the complexity and difference between the two levels of analyses, and the resources that the Forest has to apply to this effort resulted in the decision to initially develop programmatic guidance. As part of this decision, the Forest Service will use the programmatic direction (Phase I) to analyze landscape level areas for site-specific decisions. We believe this approach is the most effective way to begin to implement travel management changes. This view was strengthened after discussions with other National Forests (with less total miles of roads and trails) where attempts to combine a programmatic decision to eliminate off-route travel Forest-wide with site-specific decisions on every route have not been successful.

As previously mentioned, the Forest-wide Travel Management EA addresses Phase I of a long-term travel management strategy on the MBNF. This strategy attempts to eliminate the future proliferation of user-created routes and reduce impacts of off-road vehicle use by immediately closing user-created routes that are causing unacceptable adverse impacts to the environment. These actions, in and of themselves, would immediately improve resource conditions across the **Map 5. Defined Blocks of Land on Laramie Peak.**

entire Forest while continuing to provide opportunities for primitive motorized recreation.

The MBNF contains only 100 miles of motorized trails, none of which are located on the Laramie District. Thus, closing all user-created routes now would completely eliminate any type of motorized trail opportunities on a significant portion of the Forest. Further, immediately closing user-created routes ignores the reality that they may meet a real need. A systematic approach to inventory them and specific decisions regarding their status makes better management sense. Prompt action to close or revegetate these routes may sound appealing, but it carries the potential for the unwise expenditure of monies in the event that some of these travelways are useful or desirable. Finally, closing all user-created routes now, rather than waiting until the Phase II analyses are completed, could also create a public safety hazard by forcing ORVs to share FTS routes that were designed primarily for passenger vehicles. Although Phase I would not result in the closure of user-created routes, unless they are causing considerable adverse effects, it would not add any routes to the FTS.

Phase II of the travel management strategy is intended to address the site-specific questions about which routes are appropriate to keep open, which ones to close or decommission, and what types of uses are appropriate on remaining routes. Phase II would result in the examination of the entire transportation network, not just user-created routes. The result would be a system designed to meet the needs of the Forest and its users. Forest transportation systems, and the opportunities they provide, are receiving a lot of attention nationally as well as at the individual Forest level. Phase II of our long-term travel management strategy will be consistent with national direction with input from our many users.

The MBNF has many miles of travel routes, and Phase II analyses will require intensive study of road densities, resource goals, effects to resources, accessibility, and social and economic needs and impacts. These analyses are expected to be completed over the next five to seven years and, in fact, have been ongoing.

#### **ALTERNATIVE 6: Allow Off-route Motorized Travel in ``Specified Areas'' Only**

This alternative would have restricted motorized travel to designated routes across part of the Forest and would have allowed for off-route travel in specified areas.

Under this alternative, motorized use would have been concentrated in specified areas (e.g. specific Mountain Ranges or elk hunt areas). To allow flexibility in decision making, the effects of the alternatives analyzed in this EA are displayed by Mountain Range (Snowy Range, Sierra Madre, and Laramie Peak) or, in the case of Alternative 2, by Wyoming Game and Fish Department elk hunt area (see Chapter IV). By displaying the effects in this manner, the decision maker will be able to apply features associated with the selected alternative to the entire Forest or to specific portions of it. Consequently, Alternative 6 falls within the range of alternatives already analyzed in this EA.

#### **ALTERNATIVE 7: Exclude the Laramie Peak Area from the Proposed Action**

This alternative would have excluded the entire Laramie Peak mountain range from the Proposed Action.

This alternative was eliminated from detailed study because exclusion of Laramie Peak is addressed by the No Action alternative.

**ALTERNATIVE 8: Restrict the Use of Motorized Vehicles Off of Designated Routes During the Big Game Hunting Season.**

This alternative would restrict the use of motorized vehicles off of designated routes during the big game hunting season, but would allow such use during the remainder of the year.

Typically the Forest Service develops alternatives in response to public comments received on a Proposed Action. We did not receive comments indicating that motorized vehicle use off of designated routes during the big game hunting season should be restricted but allowed during the remainder of the year. Therefore, we neither developed nor analyzed in detail an alternative that would address this scenario.

**E. MITIGATION MEASURES**

Mitigation measures would apply to the Proposed Action and to Alternatives 2 through 4.

1. Access would be provided to private inholders, as required by Section 1323(a) of the Alaska National Interest Lands Conservation Act (P.L. 96-487; 16 U.S.C. 3210). Access would also be negotiated, as needed, with National Forest System land permit holders. Access for permitted activities (e.g. livestock operations, mineral exploration and development, outfitter and guide operations, recreation events, etc.) on National Forest System land is independent of general public access. Individuals or groups with special permits are allowed to conduct their business according to their permits. Permittees cannot be denied access to their area; however, the Forest Service can control when and how access is achieved through approval of annual operating plans. It is the responsibility of all permittees to follow the terms of their permits.
2. Designated travel routes would be posted, signed on the ground, and depicted on the Travel Map. A new, updated Travel Map would be prepared to clearly depict available travel systems and travel regulations. In addition, maps specific to user types (e.g. snowmobiles, ATVs, cross-country skiing, etc.) would be developed in cooperation with user groups to better highlight those trails systems.
3. Any Federal, State, local official, or member of a rescue organization or fire fighting organization, in the performance of an official duty, would be exempt from travel restrictions, except in Wilderness and Congressionally designated special areas (36 CFR 261.50 (e), FSM 2355.32, R2 Supp. 2300-93-7).
4. The Forest Supervisor would continue to implement special orders, under 36 CFR 295.5, to restrict public use on roads, trails, and/or areas where unacceptable adverse effects are occurring. 36 CFR Part 261 also prohibits damage to the land, wildlife, or vegetative resources.
5. If Alternative 2 is selected, the game retrieval portion of this alternative would be implemented for a 3 year trial period. If monitoring indicates a problem with allowing off route travel for game retrieval purposes, minor adjustments may be made to improve the travel management situation.

**F. MONITORING REQUIREMENTS**

Any alternative that is selected would be monitored to ensure that the Purpose and Need for this proposal is being met (see page 10). Table 1 displays the conditions that would be monitored under each alternative.

**Table 1. Monitoring Items.**

<b>Monitoring Item</b>	<b>When</b>	<b>Who<sup>2</sup></b>
Creation of new, user-created roads and trails	During future site-specific travel management analyses and during normal law enforcement patrols	Forest engineers, field going personnel, and Forest Protection Officers
Trends in violation notices and reported incidents	Year-round	Forest Protection Officers
Effects on game and nongame wildlife species	During future site-specific travel management analyses	Forest wildlife biologists
User conflicts	Year-round	Forest personnel
Resource damage	Year-round	Forest engineers, field going personnel, and Forest Protection Officers
Conflicts with private landowners	Year-round	Forest personnel

**NOTE: Although Phase I of the Proposed Action would result in the immediate closure of existing user-created roads or trails that are causing unacceptable resource effects, it would not add any routes to the FTS. The primary decision that would be made is whether or not to restrict future off-route vehicular use. Decisions to open or close individual roads and trails not causing considerable resource effects, or to develop additional motorized opportunities, would be made during Phase II of the Proposed Action and only after further public discussion and disclosure.**

Although we plan to complete site-specific travel management analyses across the entire Forest, the following areas would be analyzed first. These areas were selected for several reasons, including severity of existing resource impacts and complaints from both motorized and non-motorized Forest users.

**Laramie Peak:**

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<sup>2</sup> All incidents would be reported to the Forest-wide Travel Management Coordinator so that a centralized record could be maintained.

- |                       |                                |
|-----------------------|--------------------------------|
| 1) Cold Springs Area  | 5) Big Bear Canyon/Devils Pass |
| 2) Deer Creek         | 6) Esterbrook South            |
| 3) Cow Creek Mountain | 7) Horseshoe Creek             |
| 4) Bull Gap area      |                                |

**Sierra Madre:**

- |  |                            |
|--|----------------------------|
| 1) Cottonwood Rim/Battle Mountain area | 2) Holroyd/Cunningham Park |
|  | 3) Divide Peak             |

**Snowy Range:**

- |                     |                 |
|---------------------|-----------------|
| 1) Pennock Mountain | 3) Phantom Lake |
| 2) White Rocks      |                 |

**Pole Mountain:**

1) Pole Mountain Area - although this area is already covered under a White Arrow program wherein motorized travel is restricted to designated routes, increasing recreational use and high road densities have led to the need for an in-depth travel management analysis.

***G. COMPARISON OF ALTERNATIVES***

Table 2 displays important components of the Proposed Action and each alternative while Table 3 displays how the issues listed on page 14 through 16 of this EA would be affected by implementation of the various alternatives.

- |                         |   |
|-------------------------|---|
| <b>Proposed Action:</b> | Restrict Motorized Vehicle Use to Designated Routes   |
| <b>Alternative 1:</b>   | No Action, Existing Travel Regulations Would Remain Unchanged                                       |
| <b>Alternative 2:</b>   | Allow Use of Off-route Vehicles for Big Game Retrieval  |
| <b>Alternative 3:</b>   | Reduce Off-route Travel Restriction From 300 Feet to 100 Feet                                       |
| <b>Alternative 4:</b>   | Travel Restrictions in the Snowy Range, Sierra Madre, and in Defined Blocks of Land on Laramie Peak |

**Table 2. Important Components of the Proposed Action and Each Alternative.**

<b>Alternative Components</b>	<b>Proposed Action</b>	<b>Alt. 1</b>	<b>Alt. 2</b>	<b>Alt. 3</b>	<b>Alt. 4</b>
<b>% of Forest Affected by Regulation Changes<sup>3</sup></b>	70	0	70	70	65
<b>Forest Plan Amendment</b>	No	Yes	Yes	No	No
<b>Mitigation</b>	See pages 28 and 29	No	See pages 28 and 29	See pages 28 and 29	See pages 28 and 29
<b>Monitoring</b>	See page 29	See page 29	See page 29	See page 29	See page 29
<b>Distance Motorized Vehicles Would be Allowed Off of Designated Routes for Such Activities as Firewood Gathering, Dispersed Camping, Game Retrieval, etc.</b>	300 feet on either side of the designated route	300 feet on either side of the road in restricted areas. No limitation in open areas, provided resource damage does not occur (see Maps 2 and 2a)	300 feet on either side of the designated route. No limitation for vehicles 48 inches in width or less that are being used for game retrieval purposes only.	100 feet on either side of the designated route	300 feet on either side of the designated route

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<sup>3</sup> These figures could be decreased if the Decision Maker decides to apply the travel regulations to specific areas of the Forest only, i.e., by specific mountain range or elk hunt area.

**Table 3. Effects to the Issues by Alternative<sup>4</sup>.**

<b>Issue</b>	<b>Proposed Action</b>	<b>Alt. 1</b>	<b>Alt. 2</b>	<b>Alt. 3</b>	<b>Alt. 4</b>
<b>Wildlife Habitat Effectiveness</b>	Improved	Reduced	Improved, except during the big game hunting season	Improved	Improved
<b>Conflicts with Private Landowners</b>	Reduced	Maintained or Increased	Reduced, except for during the big game hunting season	Reduced	Reduced
<b>Adverse Resource Impacts Caused by Unrestricted Vehicular</b>	Reduced	Maintained or Increased	Reduced, except for during the big game hunting season	Reduced	Reduced
<b>Reduced Conflicts Between Motorized and Non-motorized Forest Users</b>	Yes	No	Yes, except for during the big game hunting season	Yes	Yes
<b>Consistent Signing and Enforcement</b>	Yes	No	Yes	Yes	Yes
<b>Conflicts with the Forest Plan and the Regional Guide</b>	No	Yes	During the big game hunting season	No	No
<b>Limiting Personal Freedom</b>	Yes	No	Yes	Yes	Yes
<b>Allow Off-route Vehicle Use for Big Game Retrieval</b>	Up to 300 feet on either side of designated routes	Yes	Yes	Up to 100 feet on either side of designated routes	Up to 300 feet on either side of designated routes
<b>Discrimination Against the Elderly and People with Disabilities</b>	Perceived discrimination	No	Not during hunting season. Perceived discrimination during the rest of the year.	Perceived discrimination	Perceived discrimination
<b>Reduce 300 foot Off-route Travel Allowance to 100 feet for Such Activities as Firewood Gathering, Dispersed Camping, etc.</b>	No	No	No	Yes	No
<b>Exclude Laramie Peak From the Analysis</b>	No	Yes	No	No	In part

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<sup>4</sup> More detailed information regarding the effects to issues can be found in Chapter IV, Environmental Consequences.

## **CHAPTER III. AFFECTED ENVIRONMENT**

### ***Introduction***

The affected environment consists of various resources and uses within the analysis area. Generally, the environment will experience physical and biological changes as a result of actions proposed by the alternatives. In some cases, the environmental effects of the alternatives may extend beyond the Forest boundary, such as displacing wildlife onto private land. In most cases, however, the affected environment is generally limited to the Forest, and most environmental effects would occur within the Forest boundary.

### ***General Description***

Use of All Terrain Vehicles (ATVs) and other off-highway vehicles (OHVs) boomed nationwide in the late 1980's and early 1990's and has continued to grow. The physical characteristics of these vehicles have changed as well. For example, ATVs have changed from the original 3-wheeler less than 40 inches wide to 4-wheel, 4 wheel-drive machines up to 48 inches in width. The increased stability and traction associated with the newer machines has resulted in an increased popularity for recreational riding and access and for utilitarian purposes such as livestock management. As use of these vehicles has increased, there has also been a corresponding increase in conflicts with non-motorized uses and resource impacts.

Under the Forest's existing travel regulations, roughly 762,670 acres, or 70 percent of the Forest, are currently open to off-route motorized travel, provided resource damage does not occur. The remaining 320,363 acres, or 30 percent, of the Forest currently have travel restrictions in place. Even though the creation of new routes is prohibited in the areas open to off-route motorized use, cross-country travel has resulted in new routes through repeated use. Frequently these routes have been created in less than optimal locations. For example, they often traverse steep slopes and they cross riparian areas and meadows which can lead to unacceptable resource damage. They also access areas that were once remote, which can impact wildlife and reduce solitude for non-motorized Forest users.

Resource damage resulting from unrestricted off-route vehicle use often creates a conflict with several Forest-wide Standards and Guidelines. The damage also creates conflicts with Standards and Guidelines contained in many of the specific management prescription areas (See Forest Plan, pages III-14 through III-234), making it difficult to achieve the intent and purpose of the Forest Plan. Selected Standards and Guidelines specific to travel management are listed in Appendix B.

## **A. RESOURCE DESCRIPTIONS**

### **1. TRANSPORTATION**

#### **Inventory Information**

Beginning in the mid-1980s, the MBNF undertook an intensive transportation inventory effort. At that time, several hundred miles of non-system roads (see Glossary) were mapped and added to our database. In 1997, the inventory effort received renewed emphasis. This time, new technologies, such as Global Positioning System (GPS) units, were used to accurately map non-system roads, and these roads were also added to the database.

Over the next year, our objective is to complete the inventory of all drivable roads and trails and add them to our database. This information will be used during the Phase II, site-specific travel management analyses (see page 30) to make decisions about whether or not to close, open, or obliterate roads or to develop additional motorized opportunities across the Forest. As previously indicated, the only decision we will be making through this particular analysis is whether or not to restrict future off-route vehicular use on roughly 762,670 acres, or 70 percent of the Forest.

### **Existing Travel Opportunities**

With over 2,800 miles of open roads and trails providing motorized access, the MBNF is one of the most heavily roaded Forests in the Rocky Mountain Region. This is due in large part to the terrain, which lends itself to easy access, and to the Forest's logging history which began during the Tie Hack period and has continued up to the present. Access opportunities include designated ATV trails, motorcycle trails, primitive 4 wheel-drive roads, two track roads, improved dirt and gravel roads, and paved highways.

Existing motorized travel opportunities include both improved and unimproved roads and trails. Improved roads include everything from historic logging roads to major gravelled roads, all of which are maintained by the Forest Service. Unimproved roads are typically primitive or two-track roads which were often created by hunters or recreational users.

Table 4 displays miles of open road by mountain range on the MBNF. These figures were extracted from our road's database on July 30, 1998.

**Table 4. Miles of Open Roads by Mountain Range.**

<b>Mountain Range</b>	<b>Improved Roads</b>	<b>Unimproved Roads/Trails</b>	<b>Total Road Miles</b>
Snowy Range	412	1,139	1,551
Sierra Madre	237	597	834
Laramie Peak	107	123	230
Pole Mountain	81	143	224
<b>TOTALS</b>	<b>837</b>	<b>2,002</b>	<b>2,839</b>

### **Road Densities**

Open road densities, which were calculated using actual, rather than adjusted road miles, vary widely across the Forest. For example, road densities average 0.48 miles of road per square mile in the 6th level watersheds of the Sierra Madres whereas, on the west side of the Snowy Range, 6th level watersheds contain average road densities of 1.61 miles of road per square mile. On

Laramie Peak, they vary from less than 0.05 mi./sq. mi. in the semi-primitive non-motorized prescription areas (e.g. Ashenfelder) to roughly 2 mi./sq. mi. on the rest of the area. Although these road densities would not change if off-route vehicular travel were restricted, as proposed in this EA, this information was disclosed to show the relative amount of motorized opportunities currently available across the Forest.

### **Existing Travel Regulations**

Currently, off-route motorized travel is allowed on roughly 762,670 acres, or 70 percent of the Forest, provided that resource damage does not occur. The remaining 320,363 acres, or 30 percent, of the Forest currently have travel restrictions in place.

The Forest began implementing travel regulations in the form of area closures roughly 20 years ago. Some were implemented as “white arrow” areas, which restricted motorized traffic to routes signed with white arrows, while others were closed completely to motorized traffic, either seasonally or year-round. The regulations were put in place for a variety of reasons. Some were meant to protect natural resources such as high elevation ecosystems which are slow to recover from damage. Others were established to provide more effective summer or winter habitat for wildlife, to protect wildlife calving areas and winter range, or to protect open meadows near high use recreation areas. Still others were needed to minimize conflicts with other users or to provide areas for non-motorized activities, such as hiking, mountain biking, and horseback riding. Current travel restrictions on the MBNF are displayed on maps 2 and 2a (pages 4 and 5). A complete set of signed closure orders with maps can be found at the Medicine Bow-Routt National Forest office in Laramie, Wyoming.

Despite these regulations, problems and conflicts associated with off-route vehicle use have grown over the last several years. Conflicts have arisen due to a mixture of motorized and non-motorized uses on the same trails. User-created trails have been developed and trees are being cut illegally. Erosion is occurring in areas where existing trails are being shortcut, hill climbs are being developed, and user-created trails/roads are being developed in inappropriate locations. Further, people are now able to access areas that were once remote, which has the potential to impact wildlife and reduce solitude for non-motorized Forest users. All of these conflicts and impacts led us to make the decision to analyze the proposal to restrict off-route vehicle use across the entire Medicine Bow Forest. Pages 37 and 38 of this EA contain a more detailed description of the watersheds wherein user-created roads have been located.

### **User-Created Roads**

Page 54 of this EA (under **3. Representative Areas**) provides detailed information concerning open roads and user-created roads within the Pennock Mountain and Spring Creek areas of the Forest. Approximately 28.6 miles of user-created roads (20 percent of the 143 total miles) exist in the Spring Creek area. In the Pennock area, the estimate for user-created roads is 51.2 miles (85 percent of the 60 total miles). Many of these roads are historic, and we do not have accurate records on either the creation date or the dates when the roads were inventoried. However, 13.3 miles of roads and trails that were not previously on our system were inventoried in 1997.

For comparison purposes, a cursory analysis of the transportation system was completed for the Sierra Madre, Snowy Range, and Laramie Peak areas. Characteristic transportation areas are described below, and Map 6 depicts the locations of these areas within the Snowy Range and the Sierra Madre.

**Map 6. Characteristic Transportation Areas.**

### Sierra Madre:

User-created roads occur mainly in open, flat areas in aspen, sage, or ponderosa pine type vegetation. These vegetation types occur along the edge of the Forest in the same areas that are considered good winter range for deer or elk. Due to the absence of thick forest vegetation, high alpine areas are also subject to off-route travel.

The following Sierra Madre characteristic transportation areas contain primarily user-created roads and trails: **1) Cottonwood Rim/Battle Mountain; 2) Divide Peak** - User-created roads can be found south of the 453 (Divide Peak) road whereas roads constructed as a result of timber sales can be found north of road 4530. All roads constructed by the Forest Service have been closed with tank traps to comply with Forest Plan direction; **3) Haskins/Cow Creek Area; and 4) Holroyd/Cunningham Park.**

Roads within the remaining characteristic transportation areas were constructed primarily for timber sales or other management activities. These areas include: **5) Jack Creek/Jerry Acord; 6) Sandstone White Arrow Area** - Motorized travel is already restricted to designated routes in this area; consequently, it is not included in this analysis; **7) Hog Park; 8) Blackhall; and 9) Stage II** - This area includes pipeline access roads, Maintenance Level 3 roads (see Glossary), and many gravelled roads. The majority of the roads are gated and open only to Stage II workers and one private landowner.

### Snowy Range:

The Snowy Range seems to be less subject to off-route pressure than the Sierra Madre Range. This could be due to the fact that the area is heavily roaded and timbered. Hunting in the Snowy Range is occurring mostly off well-established primitive roads or from skid trails used for timber sales.

The following Snowy Range characteristic transportation areas contain primarily user-created roads and trails: **1) Pennock Mountain; 2) Pass Creek/Lee Creek** - This area is adjacent to Pennock Mountain and shares many of the same characteristics. However, there is some logging encroachment from the Cedar Pass road; **3) Snowy Range** - The Snowy Range characteristic transportation area mainly contains user-created roads, although there are some logging roads along the edge of the area. This area also contains old mining roads and the Snowy Range Non-motorized Closure area; **4) Centennial Ridge** - The east end of Centennial Ridge contains several old mining roads. However, user-created roads are apparent near Libby Flats/Silver Run Lake/Bear Lake; **5) Boswell to Albany** - This is steep foothills country with open vegetation such as sagebrush and ponderosa pine. Roads and trails are primarily user-created, including a well-established system of user-created motorcycle trails based out of Albany; and **6) Pike Pole/Pickaroon** - This area contains relatively few user-created roads and trails.

Roads within the final characteristic transportation area (**Main Snowy Range**) were constructed primarily for timber sales or other management activities. The road system in the Main Snowy Range was established through timber sales that began in the 1950's. There are, however, small

exceptions that include user-created roads. These include the west side of Barrett Ridge, the Overlook area, the Rock Creek corridor, and the area around Morgan and Arlington.

### Laramie Peak:

Most of the user-created roads occur in relatively flat, open areas in meadows and wetter sites. Damage varies each year, depending on moisture and use, with most damage occurring during the fall big game hunting seasons. Braided roads also occur in the wet areas. Specific examples include FDR 610 (Devil' Pass Road), FDR 696 (Elkhorn Creek Road), and the Bull Gap area off FDR 672.

Off-route travel in other areas of Laramie Peak is restricted naturally as a result of steep, rocky terrain and downed timber. However, there are two areas, Deer Creek and Warbonnet, which have recently been experiencing an increase in off-route ATV and motorcycle use. In these areas, chainsaws were being used cut trees to create ATV routes. While the construction of the trails was illegal, no restrictions were in place to prevent others from using the new trails. Consequently, a Supervisor's Order to restrict motorized use in these areas was written in 1998.

## **2. RECREATION**

The goal of recreationists using the Forest is to obtain satisfying experiences through recreational activities. Our goal as resource managers is to provide opportunities for obtaining those experiences. Through management of natural resource settings, and the activities which occur within them, we try to provide satisfying experiences. To obtain this goal, settings and probable experience opportunities have been set along a spectrum called the Recreation Opportunity Spectrum (ROS) (see Glossary). A broad spectrum of recreation opportunities, ranging from primitive to rural settings, are provided on the MBNF.

Recreationists using the Forest will find many opportunities and settings at their disposal. Opportunities include dispersed and developed camping, hunting, driving for pleasure, viewing scenery and wildlife, hiking, horse use, mountain biking, off highway vehicle use, fishing, snowmobiling, Nordic and alpine skiing, interpretation and environmental education, and developed and dispersed picnicking. These opportunities are provided in settings ranging from alpine, sub-alpine, montane, mountain shrub, and sagebrush grassland. Recreation opportunities affected by off-route vehicular use are described below.

### **Dispersed Camping and Picnicking**

Dispersed camping and picnicking is widespread throughout the Forest and occurs along streams and lakes as well as along Forest Development Roads and Trails. Different user groups have developed the existing sites based on their accessibility and the experiences they are seeking. It is estimated that roughly 5,025 dispersed picnic and campsites are located throughout the Forest.

We are finding increasing damage to soil and water resources caused by dispersed campers. We are also seeing an increase in the creation of dispersed sites, particularly during the big game hunting season. Many of these sites are located in sensitive areas along lakes and streams and in wet meadows, and much of the access to these sites has been by user-created routes. Continued use of these sites, i.e., going to and from camp, as well as use during wet seasons (e.g. spring, fall), is resulting in damage to the soil and water resource.

## **Trails and Trailheads**

There are 58 developed Trailheads located across the Forest which provide access to 317 miles of trails (this figure does not include snowmobile trails), 249 miles of non-motorized trails, and 68 miles of motorized trails. Horse users and hikers use most of these trails, but increased use by mountain bikers is occurring. Some of the trails are also used for cross-country skiing and snowmobile use in the winter.

Motorized trail opportunities that link with Forest Development Roads are also provided across the Forest. The main mode of motorized travel on the trails is by all terrain vehicles (ATVs) and motorcycles. In the past, most of the motorized vehicle users touring the Forest were family groups in 4-wheel drive, full-sized vehicles. However, in the last ten years, there has been a doubling to tripling of ATVs used for this same activity.

Our current motorized trail system was not designed to accommodate the increase in ATV use. Consequently, we continue to see ATVs used on non-motorized trails as well as the creation of user-created (non-system) trails. Because the cost of 4-wheel drive, full-sized vehicles is so high, people are reluctant to use them on our 4-wheel drive and other types of two-track roads. Instead, people are opting to use ATVs for their 4-wheel drive experiences because they are able to access areas more quickly, easily, and cheaply. An area that normally took two hours to get to in a full-sized vehicle now takes only thirty minutes on an ATV. Due to quicker and easier access, people continue to look for prolonged riding opportunities. When none are available, they start to venture off the roads and trails in order to create their own experiences.

## **Hunting**

Big game hunting on the Forest results in the highest number of visitors and the highest number of conflicts between motorized and non-motorized Forest users. Hunting also results in impacts to vegetation, soil, and water resources. Table 5 shows hunter numbers since 1985 and the number of days spent pursuing that activity (recreation days) for the hunt areas on and adjacent to the Forest.

With the increased number of hunters, roads and trails, and modes of travel that occur on and off roads and trails, it is becoming more difficult for individuals and groups to find secluded locations that do not result in frequent encounters with hunters.

## **Off Highway Vehicle (OHV) Use**

Monitoring of OHV use includes field observations by Forest personnel and reports from the public. Damage caused by OHV use (e.g. destruction of vegetation and the creation of ruts that cause erosion) generally occurs in two types of situations: 1) When travel occurs off of roads and trails; and 2) When people drive around obstacles on travelways (e.g. snow drifts or bog holes). The damage is generally the greatest when the ground is wet.

The Brush Creek/Hayden Ranger District continues to encounter areas of resource damage caused by OHVs. Damage includes impacts to soil and water resources, conflicts between motorized and non-motorized recreationists, a decrease in wildlife habitat effectiveness, and conflicts with private landowners. User conflicts and loss of wildlife habitat are the main effects

**Table 5. Number of Hunters and Number of Days Spent Pursuing That Activity.**

<i>West Side Sierra Madre - Mule Deer</i>							
	1985	1987	1989	1991	1993	1995	1997
Number of Hunters	4,281	4,984	5,745	4,365	4,730	2,574	3,990
Recreation Days	14,035	14,772	17,525	14,205	17,904	9,947	11,391
<i>East Side Sierra Madre &amp; Snowy Range - Mule Deer</i>							
	1985	1987	1989	1991	1993	1995	1997
Number of Hunters	2,004	4,270	4,489	4,231	5,412	2,754	3,586
Recreation Days	6,500	15,767	16,030	14,884	19,041	11,440	10,233
<i>Laramie Peak - Mule Deer</i>							
	1985	1987	1989	1991	1993	1995	1997
Number of Hunters	2,400	2,500	2,000	2,100	2,100	1,400	1,100
Recreation Days	6,700	6,100	5,900	7,800	6,000	5,000	4,800
<i>Sierra Madre - Elk</i>							
	1985	1987	1989	1991	1993	1995	1997
Number of Hunters	3,033	2,875	3,648	3,539	3,985	4,940	4,851
Recreation Days	12,875	15,187	19,578	17,794	20,364	24,031	26,651
<i>Snowy Range - Elk</i>							
	1985	1987	1989	1991	1993	1995	1997
Number of Hunters	5,408	4,672	5,076	5,378	6,855	5,559	8,396
Recreation Days	26,492	25,733	28,303	29,059	35,797	33,280	49,999
<i>Laramie Peak - Elk</i>							
	1985	1987	1989	1991	1993	1995	1997
Number of Hunters	1,200	1,000	1,000	1,000	1,350	1,650	1,700
Recreation Days	6,600	5,800	5,800	5,800	7,000	8,000	10,500

of OHV use. There are isolated incidents of damage to soil and water resources in wet areas, around road closures, and at dispersed campsites. However, many of the soil and water concerns are on existing roads and trails where use has been allowed to continue without road maintenance. Each field season, damaged areas are rehabilitated within the current budget constraints, which is becoming more difficult with cutbacks in budget and personnel.

There are several areas on the Brush Creek/Hayden District where OHV use is becoming problematic. The Pennock Mountain area, for example, is of particular concern to both the

Forest Service and the public because of user-created trails. Private land conflicts from trespass by off-route vehicles, as well as private access into the Forest by user-created roads and trails within this area, are also a concern.

Although the Pennock Mountain area has had travel restrictions in place since 1985, user conflicts, user-created roads and trails, and resource damage to soil, water, and wildlife resources continue to be a problem. The problems began and continue to this day due to lack of enforcement and a lack of Forest Service presence in the area. Further, the 1985 travel order for this area applied only to full size vehicles. In 1985, ATVs consisted of three wheels, and a limited number of people owned them. Consequently, there were not seen as a problem and were exempted from the 1985 travel order for the Pennock Mountain area. When the 1985 travel order was written, the Forest Service did not predict and, therefore, did not plan for the impacts of the four wheel ATV and the increase in the number of people who own them.

The Battle Creek area on the Sierra Madre range is another problem area because of the number of user-created roads and trails that are constructed each year. These unauthorized routes disperse wildlife and diminish hunting and recreational opportunities. The Roaring Fork trail is also experiencing resource impacts from motorized use. Although this trail is not maintained, designed, or designated as a motorized trail, motorized use does occur. The use also continues into the Houston Park Wilderness area. As a final example, the Forest Service continues to deal with motorized use conflicts between private landowners and Forest users in and around the Ryan Park area.

Each year, new motorized trails continue to be found throughout the Brush Creek/Hayden District. Motorized violations also continue to increase each year as does the resource damage created by unlimited and unmanaged OHV use.

With the advent of four-wheel drive ATVs, motorized vehicle use on the Laramie District has also increased over the last several years which is causing concern among non-motorized Forest users. It seems as though many of the serious hunters who are willing to hunt in remote terrain with the use of backpacks and/or horses are the ones who are most concerned about the use of ATVs. There are several remote areas on the Laramie District where the use of ATVs has changed the hunting experience for those who enjoy getting into these areas on foot or horseback. Centennial Ridge, Middle Fork Canyon, and the Three Mile areas are good examples.

Another problem area on the Laramie District is along Highway 230 near Wyocolo. In this area, there are many private inholdings and several hundred cabins within or next to the Forest. The majority of these people own ATVs and snowmobiles and they have developed their own maze of trails throughout the area. Many of the trails have been illegally pioneered, are poorly laid out, and receive no maintenance.

In general, the Laramie Ranger District does not have any system trails open to motorized use; thus, OHVs are expected to use roads and to obey the current travel management regulations. Because the District does not provide this type of motorized opportunity, a considerable amount

of illegal OHV use occurs, mostly during the hunting season in remote areas and on a year-round basis along highway 230.

The Douglas Ranger District is encountering a gradual increase of resource damage from OHV use. For example, last summer an illegally constructed ATV trail was discovered in the Warbonnet Peak area of the District. Roughly 1.5 miles of trail were cleared with a chainsaw which resulted in an estimated \$5,000 worth of damage to trees and soil resources. Other roads also continue to incur damage from motorized use, and the District is unable to repair the damage due to inadequate funding.

### 3. LAW ENFORCEMENT

Between 1986 and 1997, travel management violations (off-route and closed road) were documented on the MBNF. These violations were recorded in the Law Enforcement Management Attainment Reports System (LEMARS) as Incident Reports (IR), Warning Notices (WN), and Violation Notices (VN).

Data extracted from the LEMARS database indicated a slight decrease in the total number of documented violations from 1986 to 1987 (137 vs. 122), a steady number of violations from 1988 through 1993 (~38), and a significant increase in documented violations from 1994 through 1997 (92 vs. 384)<sup>5</sup>. See Graph 1. This increase in documented violations has been directly linked to the increase in the number of all terrain (ATV) and off-highway (OHV) vehicles observed on the Forest over the last several years.

The majority of ATVs and OHVs are being used for one of five reasons: 1) Pleasure riding by the recreational visitors to the Forest; 2) Pre-hunt scouting trips by hunters; 3) Retrieval of big game animals off closed roads and/or behind closed gates; 4) Hunting; and 5) Accessing hunt areas. Pre-hunt scouting and retrieval of big game are the most observed and documented violation types.

Table 6 displays the distribution of Travel Management violations recorded between 1986 and 1997 by Ranger District. Brush Creek/Hayden and Laramie District employees, Forest Protection Officers (FPOs), and Law Enforcement Officers (LEOs) recorded the following:

**Table 6. Travel Management Violations (1986 through 1997) by Ranger District<sup>6</sup>.**

Ranger District	No. of Violations	Percent of Total Violations
Brush Creek/Hayden	368	31.7
Laramie	793	68.3
<b>TOTAL</b>	<b>1,161</b>	<b>100</b>

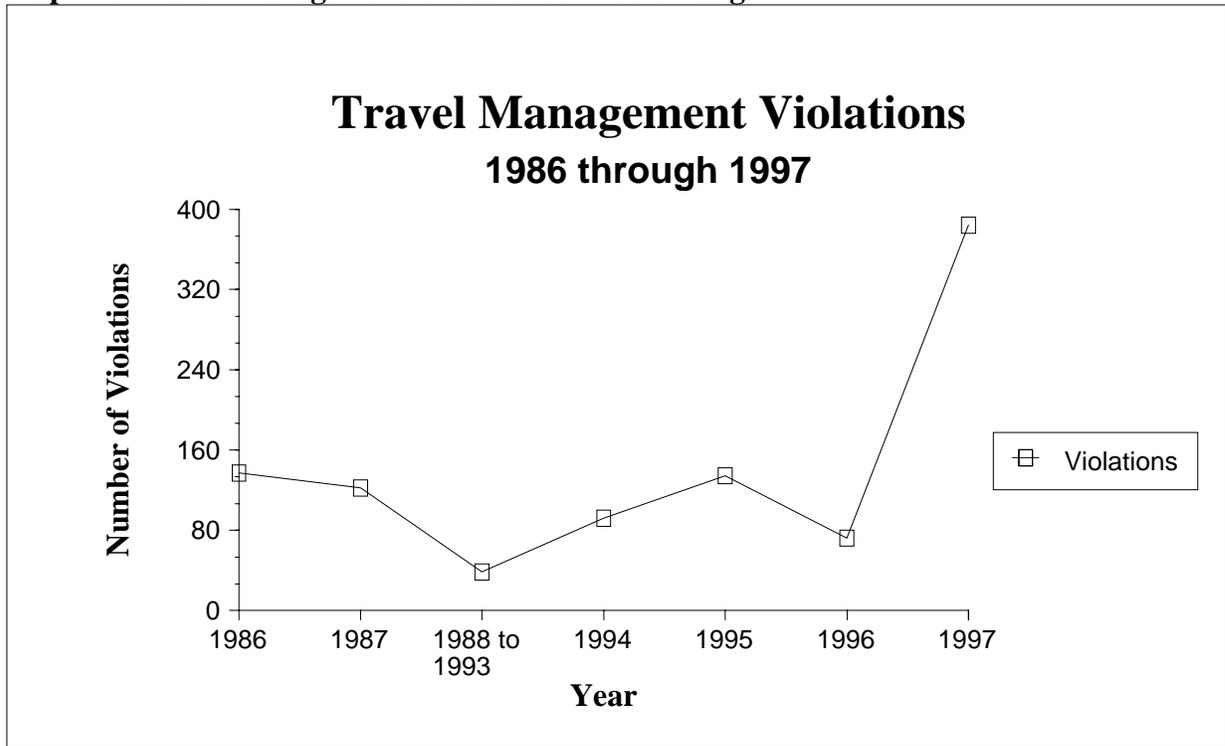
A large portion of the Snowy Range is steep and rocky (e.g. Medicine Bow Peak) which precludes use of OHVs or ATVs over a considerable number of acres. There are also fewer

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<sup>6</sup> This data represents violations recorded on the Laramie and Brush Creek/Hayden Ranger Districts only. Data were not available for the Laramie Peak area of the Forest.

closed roads on the Brush Creek side of the Brush Creek/Hayden (BCH) District than on the Hayden side or on the Laramie District. The wilderness areas on the Hayden side of the BCH District restrict use of OHVs and ATVs over a large number of acres. However, few (<2

**Graph 1. Travel Management Violations: 1986 through 1997**



percent) violations have been recorded along trails in the Houston Park and Platte River wilderness areas.

Three factors have influenced the number of violations recorded on the Laramie District. The Laramie District has: 1) Traditionally hired more FPOs to patrol on the Snowy Range; 2) Kept the FPOs in the field as enforcement officers later in the fall (during the hunting season); and 3) The Albany County Sheriff's Department has actively identified off-route and closed road violators and provided reports to the Forest Service law enforcement officers after their cooperative patrols. Together, these three factors have resulted in a greater number of IRs, WNs, and VNs being written by Laramie District employees.

**Professional Judgments of Law Enforcement Personnel Regarding Violation Motives**

MBNF Law Enforcement personnel judge that approximately 45 to 50 percent of all violations are documented and recorded each year. Thus, there are probably closer to 768+ violations (rather than 384 as documented in 1997) which occur each year on the BCH and Laramie Districts. This judgment is based on after-the-fact reports, comments by other public users, and direct field observations.

The attitude and willingness of the public to report violations may have an effect on violation figures. There appears to be a greater reluctance on the part of forest users to report violations on the Brush Creek/Hayden District than on the Laramie District. This may be a function of the larger population in and around the eastern side of the Forest and the willingness of the population base to report violations when they observe them.

There has also been an expressed attitude (particularly during the hunting season) that if the fine is low enough (currently \$50.00 if a fee collateral violation notice is written), it is worth the fine amount to knowingly violate travel restrictions to travel off-route or on a closed road to scout and retrieve big game animals. Further, a portion of the public also knows that the Forest Service does not have forfeiture authority. This means that we may seize an OHV or ATV as evidence at the time a violator is cited; however, we may not keep the vehicle if the individual is convicted in court. Thus, the violator is willing to be inconvenienced with the temporary loss of the OHV or ATV to scout and/or retrieve big game animals.

With the technological improvements (greater horsepower, all-wheel drive, electric winches, etc.) of OHVs and ATVs, the public is now able to get through deeper snow drifts, deeper mud, and farther off road than has been possible in the preceding 5 to 10 years. This trend in more powerful machines has also added to the problem of off-route and closed road violations as trails are cut through more difficult terrain. This trend is expected to continue in the foreseeable future.

#### 4. WILDLIFE

The nature of the topography, climate, and vegetation on the MBNF provides ecosystems which support a large number and variety of vertebrate species. Table 7 shows the number of vertebrate species occurring on the Forest, as indicated in the Forest Plan FEIS.

**Table 7. Number of Vertebrate Species on the Medicine Bow National Forest.**

Class	Total Species	Game and/or Furbearing Species
Mammals	77	30
Birds <sup>7</sup>	185	4
Reptiles	15	0
Amphibians	8	0
Fish	13	7

The diverse fauna consists of species that depend entirely on late successional forest, species which are found primarily in open habitats or early successional forest, and species which use a mixture of habitats to meet their needs. The latter two categories are often referred to as habitat generalists. Several species are also found in specialized habitats such as cliffs and caves. Fish and most amphibians are entirely restricted to streams, ponds, and other wet areas.

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<sup>7</sup> Includes migratory birds.

Elk and mule deer are the most common big game species, both of which are widely distributed across the Forest. White-tailed deer may also be found. Populations of bighorn sheep occur in the Encampment River canyon, in the Laramie Peak area, and along the North Platte River in the vicinity of Douglas Creek. Moose were released in North Park, Colorado, in the 1970's. Animals from that increasing herd have been dispersing into both the Sierra Madre and Medicine Bow Mountains since then. The most common mammalian predators on the Forest include coyote, black bear, mountain lion, bobcat, and American marten. Among the many bird species are raptors and Neotropical migrants, as well as game species, such as the wild turkey, sage grouse, and blue grouse.

The area that could be affected by the proposed travel management regulation changes also contains habitat that supports, or potentially supports, a variety of listed, candidate, and USFS sensitive species. The analysis and determination of potential effects of the Proposed Action or any alternatives on listed, candidate, and sensitive species will be documented in a Biological Evaluation.

### **Management Activities**

Management activities have affected wildlife by altering their physical environment and by affecting them behaviorally through disturbance. Modifications to the physical environment include changes in habitats due to fire suppression, fragmentation of habitats through timber harvest and road building, and changes in habitats due to grazing. Behavioral impacts are associated with such activities as hunting, snowmobiling, logging activities, and recreational activities in the form of roaded and off-road travel.

While we recognize that many factors have the potential to affect wildlife, this analysis is focused on the effects to wildlife that result from changes in motorized use patterns on the Forest. The major conflict between wildlife and motorized recreation is disturbance to wildlife. This disturbance can result in stress and displacement of animals, nest or territory abandonment, destruction of nests and habitat, interruption of breeding behavior, and death of animals.

### **Wildlife Habitat**

Management activities on the Forest have directly and indirectly altered wildlife habitats. Timber harvest has converted older forests to younger seral stages and has resulted in the loss of habitat for species which prefer older forest. It has also fragmented large blocks of habitat into a patchy landscape. Conversely, fire suppression activities have enabled many aspen stands to convert to conifer types which has resulted in a loss of vegetation (habitat) diversity. Roads also result in the direct loss of habitat for most wildlife species. Roads may also indirectly represent a loss of habitat due to the displacement effects caused by human disturbance, thus reducing the effectiveness of habitat along roads. The proliferation of user-created roads and trails, and increases in motorized off-route vehicle use, have resulted in increased disturbance to wildlife and reduced habitat effectiveness in some areas.

On a managed forest, a developed road and trail system is needed to provide adequate motorized access for a variety of management and recreational activities. The road system on the Medicine

Bow Forest has grown steadily over recent decades to accommodate these needs. As displayed on page 33 of this EA, the Forest currently contains over 2,800 miles of open, improved and unimproved roads and trails. In addition, there are approximately 700 miles of closed roads. There are also over 400 miles of road that were obliterated (see Glossary) because they were deemed unnecessary to meet multiple use management objectives.

The Forest has seen a large increase in the numbers of Forest users in recent decades and a large increase in the amount of motorized off-route vehicle use. Some of this off-route use has resulted in a network of user-created trails. These routes are not properly engineered and often pass through sensitive habitats such as alpine tundra, steep slopes, wet meadows, and other riparian habitats. Some of these routes are also characterized by "incremental creep." That is, they are pushed a little farther each year into previously unroaded areas through clearing or sometimes just through exploration and repeated use.

Motorized off-route vehicle use and the creation of user established roads/trails can impact wildlife habitat and wildlife habitat effectiveness in the following ways:

- Direct impacts on vegetation and habitats for all wildlife species;
- More roads and disturbance on winter range areas;
- A decrease in elk habitat effectiveness. Once remote and secure habitats become easily accessible;
- Displacement of wildlife to private lands. In some parts of the Forest, elk are pushed onto adjacent private lands where hunter access is limited and Wyoming Game and Fish Department (WGFD) harvest objectives are rarely met. This also results in decreased hunting opportunities and harvest for hunters on public lands;
- Elk spend more time on private lands and compete with domestic livestock for forage. This may result in more depredation claims submitted to the WGFD; and
- There has been an increase in people conflicts on the Forest, primarily between motorized off-route vehicle users and others preferring non-motorized recreational experiences (e.g. hiking, horseback riding, wildlife viewing, photography, etc.) and decreased opportunities for people who enjoy non-motorized recreational experiences.

## **5. SOIL AND WATER**

### **Soils**

The soils within the MBNF vary considerably in terms of physical and chemical characteristics. This variability is due, in large part, to the great contrast in elevation, topography, microclimate, moisture, parent material, and vegetation found across the Forest. For example, around Kennaday and Medicine Bow peaks, Pleistocene glaciation produced many glacial cirques containing shallow, acid soils. The rounded alpine summits above the cirques, which were largely unaffected by direct ice contact, are comprised of shallow to deep soils containing considerable rock fragments. Some of the mid-elevation upland areas contain a mantle of glacial till in the form of rolling moraines and wet depressions. The most extensive of these till deposits can be found in the area adjacent to and directly north of Sand Lake, the area southeast of Browns Peak, and by Rock Creek Knoll along the North Fork of the Little Laramie River. Soils on these landforms are deep and stony on the surface.

The North Laramie Range consists of ancient granite rock thrust through overlying Paleozoic and Mesozoic sandstones and limestones, remnants of which can be seen along the flanks of the range and to the east of Laramie peak in the Glendo area. This terminal uplift of the Front Range of the Rocky Mountains features contorted, highly fractured bedrock outcrops. Massive rocks characterize the top of Laramie Peak as well as the entire region of mountains to the northwest.

Geology, climate, and relief determine stability or instability of the land. Land instability results in some form of slope failure or mass wasting, which can be classified as a type of geologic hazard. These hazards have been categorized into Low Hazard areas (L), Moderately Hazardous areas (M), High Hazard areas (H), and Very High Hazard areas (V). The geologic hazard types can be thought of as stability constraints that nature has placed on our ability to use the resources contained in a particular area. Table 8 depicts the number of acres on the Forest that fall within the High Hazard or Very High Hazard categories.

**Table 8. Acres Falling Within High or Very High Geologic Hazard Categories.**

District	High Hazard (Acres)	Very High Hazard (Acres)
Brush Creek/Hayden	105,987	---
Laramie	52,658	---
Douglas	---	40,791
<b>TOTAL</b>	<b>158,672</b>	<b>40,791</b>

Although a large portion of the Forest falls within the most stable soil categories, roughly 199,436 acres (18.4 percent) have been or have the potential to be affected by mass movement (active, inactive, and currently stable land slides). This is not to say that no use should occur on these areas. However, design, location, and drainage features should be considered so as to mitigate the possible problem of mass movement.

Erosion hazard is the inherent susceptibility of a soil to erosive forces such as a raindrop or waterflow over the surface of the soil. The amount of hazard depends on particle size, distribution, rock fragment content, organic matter content, soil structure, permeability, slope gradient, and rainfall characteristics. The assessment completed for this analysis indicated that roughly 6.5 percent (70,900 acres) of the Forest contains highly erodible soils. The combination of soil material (very fine sand, silt, and clay) and soil permeability make these soil types highly erodible. Again, this is not to say that no use should occur on these areas, but design, location, and drainage features should be considered so as to mitigate possible soil erosion problems.

### Water

The MBNF is the headwaters for the Little Laramie River, the Encampment River, the Medicine Bow River, the Little Medicine Bow River, the North Laramie River, and the Little Snake River. These and other streams contribute water to major river basins, such as the Platte and Colorado Rivers. Streams range in character from ephemeral (lasting only a short time) to perennial (year-round). They also range in size from tiny headwater channels to major rivers such as the North Platte.

Lakes abound in glaciated terrain along the Snowy range. Sizes range from small ponds to those that are approximately 100 acres. Source water to these lakes is from snowmelt, streamflow, rainfall, and springs. Many different shorelines can be found along the lakes, including marshy shorelines and barren boulder fields.

In many areas, wetlands are generally limited to greenlines next to streams and lakes. However, some larger, isolated marshes and wet meadows can also be found in glaciated terrain. By definition, wetlands are biologically and morphologically diverse wet areas that support water-dependent plant species.

Riparian areas are the zones of lush, green vegetation that live or grow near water on the banks of streams, lakes, and rivers. Riparian ecosystems, aquatic ecosystems, wetlands, lake side zones, and floodplains have been considered one and the same for this analysis and will be referred to as riparian areas. Although these terms are used interchangeably, by strict ecological definition, they may not be the same in all instances.

Across the MBNF, roughly 87,800 acres, or 8 percent of the Forest, have been classified as riparian areas. While most of these acres (41,162) are located on the Laramie District, a significant amount of riparian acres (35,713) can also be found on the Brush Creek/Hayden District. The Douglas District contains 10,938 riparian acres.

In general, most water sources (streams, lakes, and riparian areas) on the Forest are in good condition. Exceptions exist in sensitive and easily accessible watersheds. Negative impacts include streambank disturbance, channel instability, shoreline disturbance, destroyed riparian vegetation, rutting of wet meadows, and increased sediment. Impact sources include all aspects of multiple use management, such as timber harvest, road construction, grazing, mining, and recreation, including off-route vehicle use. All of these are considered non-point sources of pollution and all act in the same fashion, i.e., they increase sediment in streams and lakes.

## **6. HERITAGE RESOURCES**

Over the last 25 years, field surveys for timber sales, land exchanges, and other projects have resulted in the identification and recording of approximately 3,120 heritage resource sites across the Forest. Of the total, 1,070 sites are prehistoric Native American sites dating between 200 and 11,000 years in age. Roughly 2,050 historic sites, i.e., 50 years in age or older, have also been recorded. These heritage properties are representative of important cultural themes, such as prehistoric settlement, historic exploration, trapping, logging, mining, livestock grazing, transportation, and the Depression era Civilian Conservation Corps.

It is common practice to initiate and complete heritage resource surveys only when site-specific projects are planned; consequently, to date, only 15 percent of the Forest has been inventoried for heritage properties. Where inventories have been completed, our knowledge of the resource and its condition is good. However, because a large portion of the Forest has not been inventoried, including much of the area where off-route vehicle travel has been allowed in the past, our overall knowledge of the extent and condition of heritage resources is poor.

Heritage resources are extremely fragile and can be adversely affected by a variety of factors, including natural erosion, livestock, and human activity. Heritage resources are particularly vulnerable to surface disturbances that can directly harm artifacts or indirectly accelerate erosional processes and permanently damage individual sites. Off-route travel results in surface disturbance through the creation of unauthorized trails; consequently, off-route travel has the potential to adversely affect and damage heritage resources.

Forest Plan Standards and Guidelines (page III-18) for heritage resource management call for, "Protection, find an adaptive use for, mitigate according to an approved mitigation plan, or interpret all cultural resources on National Forest System lands which are listed on the National Register of Historic Places, the National Register of Historic Landmarks, or have been determined to be eligible for the National Registers." In addition to defining management direction, this statement clearly describes the desired future condition for the resource.

Given the lack of data for off-route motorized travel and its level of adverse effects to heritage resources, it is not known whether we are in compliance with the Forest Plan Standards and Guidelines. Inventories of heavily used off-route areas will be required to accurately assess the amount of adverse effects to heritage resources by motorized travel.

## 7. SOCIAL IMPACTS

Travel management on the MBNF has been a contentious issue. Some people recreate on the Forest using some form of motorized travel while others recreate using non-motorized modes of travel. There are also those who engage in both motorized and non-motorized forms of recreation and some who use ATVs only during the fall hunting seasons. Strong feelings on the appropriateness of varying types of Forest travel are held by many.

Debate over travel management is certainly not new, and the MBNF is by no means the only Forest dealing with this issue. Some people have described travel management as one of the most difficult public lands issues to address. This situation exists for the same reason that many public lands issues are controversial -- the way people feel about the issue is often tied to their core values and beliefs. Because core values and beliefs are so strongly held, people become polarized when they encounter others with different points of view.

A brief review of some relevant quotations taken from two newspaper accounts of similar proposals in Utah and Montana reveals the depth of these feelings:

"Like an invading army, motorized recreationists are assaulting Montana's unprotected public wildlands," an MWA (Montana Wilderness Association) brochure maintains.<sup>8</sup>

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<sup>8</sup> The quotation is from the newspaper article "Forests grapple with trail dispute." McMillion, Scott, Associated Press. Casper Star-Tribune, 19 July 1998: B2.

“As pressure is put on by other user groups, motorized access has been restricted,” said Bob Stevenson, vice-president of the Big Sky Country Trail Preservers, a motorized user group. “What we're concerned with is that we don't lose any more areas.”<sup>9</sup>

“It's going to be a fight to the death,” Southern Utah Wilderness Alliance attorney Heidi MacIntosh said.<sup>10</sup>

“It seems like every week there's another closure,” Utah Trail Machine Association executive director Brian Louw said. “The government doesn't care (that) the outdoors are for everyone.”<sup>11</sup>

The social issues surrounding travel management in general include a desire for personal freedom with few restrictions, a desire to keep things the way they are, a concern about “what's next?,” “prescribed rights” (the idea that people tend to associate, as a right, recreation opportunities they have experienced in the past), a desire to not hear or see motorized vehicles in the backcountry, concern that increased restrictions might further concentrate use and increase visitor conflicts, and even perceptions people have about other people who recreate differently, hold different values, and who think differently than they do. This issue fits the classic definition of a “wicked problem,” one that is complex, strikes at people's core values and possibly livelihood, and for which there is no single correct solution, only more or less useful courses of action.<sup>12</sup> While all sides of the social equation need to be considered, no decision can optimize the desires of all interested parties.

The following is a discussion of some of the specific social issues at play concerning the three mountain ranges on the MBNF considered in this analysis.<sup>13</sup>

#### Sierra Madre:

Many people who recreate in the Sierra Madres are from Rawlins, the Platte River Valley, Rock Springs, Laramie, Cheyenne, and northern Colorado. The primary forms of recreation use in this mountain range are hiking, fishing, camping, and motorized recreation. Other types of recreation include viewing of wildlife, antler hunting, driving for pleasure, and river use. In general, recreation use is low in the summer and increases dramatically during the fall hunting season.

For many, the Sierra Madres represent one of the “last free areas,” an area with few restrictions. This draws many of the current recreationists to the area, including many local residents who

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<sup>9</sup> Ibid.

<sup>10</sup> The quotation is from the newspaper article “Restrictions taking the fun out of off-roading, jet-skiing.” Beacham, Greg, Associated Press. Casper Star-Tribune, 27 July 1998: A4.

<sup>11</sup> Ibid.

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<sup>12</sup> Allen, G. M. And E. M. Gould, Jr. “Complexity, wickedness, and public forests.” Journal of Forestry 84-4 (1986): 20-23.

<sup>13</sup> The three mountain ranges are the Snowy Range, Sierra Madres, and Laramie Peak. The Pole Mountain area has travel restrictions in place and was not considered in this analysis.

value the area for this reason. A sense of discovering new places is an essential part of the recreation experience for many of these individuals.

### Snowy Range:

Many people who recreate in the Snowy Range are from Laramie, Cheyenne, the Platte River Valley, the Front Range of Colorado, as well as other areas out-of-state. Of the three mountain ranges, the Snowy Range is the most heavily roaded and provides the most abundant motorized opportunities.

In general, more non-motorized based recreation occurs in the backcountry than motorized based recreation. The major forms of backcountry recreation are hiking and mountain biking in the summer and skiing and snowmobiling in the winter. Because of the emphasis on non-motorized recreation, more people visiting the Snowy Range would likely prefer that some type of restriction be placed on motorized travel than those visiting the other two mountain ranges on the Forest.

Despite the popularity of non-motorized activities, motorcycle and ATV use does occur in the summer. An organized motorized recreation group uses this area, particularly on the east side of the Snowy Range. In addition, a large number of ATV users live in numerous private land inholdings in the Snowy Range, and they access the Forest from their land.

Camping, fishing, hunting, and wildlife viewing also occur, and driving for pleasure along the Snowy Range Highway is very popular.

### Laramie Peak:

Many people who recreate in the Laramie Peak area are from Douglas, Casper, Wheatland, and Esterbrook. Local residents appear to be the principal users of the mountain range when compared to those visiting the Snowy Range and the Sierra Madres. However, despite local use, trailhead register and campground comment cards reveal fairly heavy visitation from Nebraska, and other out of state visitation is steadily rising.

Public land in the Laramie Peak area is mixed with private land to a much greater degree than in the other two mountain ranges. Many private landowners are concerned with maintaining current motorized access, especially for emergency services.

Recreation use in the area during the summer is low, with activities centered around camping, fishing, and driving for pleasure. Use increases dramatically during the fall hunting season.

## **8. ECONOMICS**

The affected environment considered in this analysis includes the counties immediately adjacent to the MBNF. A more detailed description of these counties and their economic environment can be found on pages III-5 through III-15 of the Medicine Bow National Forest Final

Environmental Impact Statement (FEIS). The FEIS is located in the project file at the Medicine Bow National Forest, 2468 Jackson Street, Laramie, Wyoming, 82070.

## ***CHAPTER IV. ENVIRONMENTAL CONSEQUENCES***

### ***Introduction***

This chapter describes the consequences or environmental impacts of implementing the Proposed Action and each alternative. The Proposed Action and the alternatives were designed to address one or more of the issues described in Chapter I. The issues suggest a need for response in several resource areas/disciplines. They are:

- **Transportation**
- **Recreation**
- **Law Enforcement**
- **Wildlife**
- **Soil and Water**
- **Heritage Resources**
- **Social Impacts**
- **Economics**

Under each resource area/discipline, direct, indirect, and cumulative impacts (see definitions below) are described for the Proposed Action and each alternative. The area of analysis for cumulative effects can differ for each issue.

Definitions:        Direct Effects are caused by the action and occur at the same time and place.

Indirect Effects are caused by the action and occur later in time and farther removed in distance.

Cumulative Effects are impacts on the environment that result from incremental impacts of the action when added to other past, present, and reasonably foreseeable future action, regardless of what agency (Federal or non-Federal) or person undertakes such other actions.

To allow flexibility in decision making, the effects of the alternatives are typically displayed by Mountain Range (Snowy Range, Sierra Madre, and Laramie Peak) or, in the case of Alternative 2, by Wyoming Game and Fish Department elk hunt areas (see Map 7, page 56). Hunt areas were selected for Alternative 2 because game retrieval is an activity strictly associated with hunting, hunt area boundaries generally do not change, and they are well known by hunters. By displaying the effects in this manner, the decision maker will be able to apply the features associated with the selected alternative to the entire Forest or to specific portions of it.

### ***General Effects***

The effects of implementing the Proposed Action and the alternatives will vary in different parts of the Forest; consequently, several indicators were developed to help evaluate these effects. The indicators were used to make relative comparisons for the Snowy Range, Laramie Peak, and

the Sierra Madre Mountains since these are the three areas that would be affected by a change in the travel regulations. In some cases, data have been included for the Pole Mountain area. This data is for informational purposes only since travel regulations in the Pole Mountain area would not be affected by any of the alternatives. Indicators include: 1) Amount of area affected in each mountain range; 2) Motorized Access; and 3) Representative Watersheds.

**1. Amount of Area Affected in Each Mountain Range**

Table 9 shows the total amount of National Forest System (NFS) lands in each mountain range and the percent of the area occupied by NFS ownership. NFS lands expressed as a percentage of the mountain range are the percentages of NFS lands within the administrative boundary of the Forest.

**Table 9. Total NFS Lands and Percent NFS Ownership by Mountain Range.**

<b>Mountain Range</b>	<b>NFS Lands (acres)</b>	<b>NFS as % of Mountain Range</b>
Snowy Range	511,385	96.3
Sierra Madre	334,861	92.5
Laramie Peak	179,108	41.2
Pole Mountain	55,184	99.4
<b>TOTAL</b>	<b>1,080,610</b>	<b>82.4</b>

Table 9 shows that NFS lands occupy a very high percentage of both the Snowy Range and Sierra Madre Mountains. However the Laramie Peak area is located in an area of highly mixed ownership, with only about 41 percent of the area being occupied by NFS lands. The remainder of the area is split primarily between state and private ownership, with some Bureau of Land Management administered areas. Table 10 shows existing travel restrictions and the percent of restricted area within each mountain range that could be affected by implementation of the Proposed Action.

**Table 10. Existing Travel Restrictions and Percent of Restricted Area Within Each Mountain Range That Could Be Affected By The Proposed Action.**

<b>Mountain Range</b>		<b>No Motorized Travel Restrictions</b>	<b>All Off-route, Except Snowmobiles</b>	<b>All Off-route</b>	<b>Wilderness Area</b>
Snowy Range	Total Acres:	386,791	67,981	40,272	37,473
	Percent	73	13	8	7
Sierra Madre	Total Acres:	244,888	76,227	0	41,187
	Percent:	68	21	0	11
Laramie Peak	Total Acres:	154,145	24,963	0	0
	Percent:	86	14	0	0
Pole Mtn.	Total Acres:	0	55,184	0	0
	Percent:	0	100	0	0
<b>TOTAL</b>	<b>Total Acres:</b>	<b>785,824</b>	<b>224,355</b>	<b>40,272</b>	<b>78,660</b>

**NOTE:** The figures for the Snowy Range and Sierra Madre include a small amount of inholdings that occur within the administrative boundary of the Forest. The figures for Laramie Peak and Pole Mountain are NFS lands only. Implementation of the Proposed Action or any of the action alternatives would not affect these inholdings.

As shown in Tables 9 and 10, the majority of the areas that would be affected by the Proposed Action are in the Snowy Range and the Sierra Madre Mountains. A high percentage of the NFS lands would be affected on Laramie Peak but, due to the high level of mixed ownership (see Table 9), a much smaller percent of the total area would be affected.

**2. Motorized Access**

The second indicator used to evaluate the effects of the alternatives is the amount of motorized access available on the Forest. On a managed forest, a developed road and trail system is needed to provide adequate motorized access for a variety of management and recreational activities. The amount of motorized access and where it occurs is related to several issues associated with this project. On one hand, the Forest needs to provide a range of recreational experiences and opportunities, including motorized access, for a variety of Forest users. On the other hand, the amount of motorized access affects wildlife habitat, other resources, and the solitude enjoyed by non-motorized Forest users. The challenge is to maintain the quality of both.

One way to measure the amount of motorized access is to look at the total amount of roads that occur on the Forest. Table 11 shows the miles of open, closed, and obliterated roads by mountain range. Currently there are over 2,800 miles of open roads on the Forest. Approximately 84 percent of these roads occur on the Sierra Madres and the Snowy Range.

**Table 11. Miles of Open, Closed, and Obliterated Roads by Mountain Range.**

Mountain Range	Open Roads	Closed Roads	Obliterated Roads
Snowy Range	1,551	155	98
Sierra Madre	834	534	310
Laramie Peak	230	0	0
Pole Mountain	224	--	--
<b>TOTALS</b>	2,839	689	408

A second way to measure access is to look at the amount of existing roads that occur in the 762,670 acre area that would be affected by the Proposed Action. Table 12 shows the miles of roads within the area that would be affected by the Proposed Action, as well as the unadjusted open road density for the area. Roaded access would not change as a result of the Proposed Action since no roads would be opened or closed.

**Table 12. Miles of Roads and Unadjusted Open Road Density Within the Area Affected by the Proposed Action.**

Area	Open Roads and Trails	Closed Roads	Unadjusted Open Road Density
762,670 ac.	1,907	502	1.60 mi./sq. mi.

A final way to measure access is to estimate the amount of off-route motorized access that would still be provided in the 762,670 acre area affected by the alternatives. Table 13 shows the amount of off-route motorized access that would still be available under the Proposed Action and the alternatives.

**Table 13. Acres of Off-route Motorized Access Available by Alternative (the values for the alternatives are discussed in the Wildlife section of this Chapter).**

<b>Proposed Action</b>	<b>Alt. 1</b>	<b>Alt. 2<sup>14</sup></b>	<b>Alt. 3</b>	<b>Alt. 4</b>
138,691	762,670	746,433	46,230	132,509 (173,675)

Even though the Proposed Action would restrict motorized travel to existing roads and trails, 18 percent (138,691 acres) of the affected area would still have some off-route motorized access available. This estimate is based on the total miles of open roads and motorized trails in the affected area (see Table 12) and the 300 foot buffer on either side of the roads where off-route travel would be permitted for activities such as dispersed camping, firewood gathering, and game retrieval. Values for the other alternatives will be discussed in more detail in the Wildlife section of this Chapter.

### **3. Representative Areas**

In order to demonstrate the effects of the alternatives, two representative areas were selected for site-specific analysis. The areas consist of several sixth level watersheds that make up contiguous geographic areas representing a range of management emphases. Management activities, recreational opportunities, and user-created roads in the representative areas are similar to what can be found in other areas of the Forest. Therefore, the effects of the alternatives on the representative areas provide a general estimate of the effects that could be expected in other areas contained within the Forest.

The first area selected for analysis is **Pennock Mountain**, including the Cedar Pass area. In the past, management activities in this area have focused primarily on a variety of recreational and grazing management activities, with very little timber harvest. The second area selected for detailed analysis is the **Spring Creek** watershed. Past management in this area included heavy timber harvest, grazing, and a variety of recreational activities. The Pennock and Spring Creek areas are 79 and 83 percent forested, respectively. Representative area locations are displayed on Map 7.

Table 14 contains a summary of roads in these two watersheds. Included in this table is information on open, closed, and obliterated road miles, as well as unadjusted and adjusted open road densities.

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<sup>14</sup> The acres of off-road motorized access displayed under Alternative 2 would be available only during the big game hunting season for game retrieval purposes only. Off-road motorized travel, with the exception of the 300 foot buffer on either side of roads, would not be allowed at any other time.

**Map 7. Representative Area Locations.**

**Table 14. Miles of Open, Closed, and Obliterated Roads and Adjusted and Unadjusted Open Road Densities (mi./sq. mi.) in the Pennock and Spring Creek Representative Areas.**

<b>Watershed</b>	<b>Area (sq. mi.)</b>	<b>Open Road Miles</b>	<b>Closed Road Miles</b>	<b>Obliterated Miles</b>	<b>Total Road Miles</b>	<b>Unadjusted Open Road Density</b>	<b>Adjusted Road Open Density</b>
Pennock	30.49	49.41	3.92	6.82	60.15	1.62	0.20
Spring Ck	43.82	62.86	43.99	36.39	143.24	1.43	0.68

The Pennock and Spring Creek areas have approximately 49.4 and 62.9 miles of open road, respectively, which equates to unadjusted open road densities of 1.62 and 1.43 miles per square miles, respectively. The difference between adjusted and unadjusted open road density values is based on the amount of use (Forest Plan, page III-76) which represents the amount of disturbance from traffic on open roads. The amount of access provided by open roads, as measured by unadjusted open road density, is slightly higher in the Pennock area which has had little timber harvest in the past.

One difference between the two watersheds is that most of the recently created roads in the Spring Creek area have been properly engineered and designed for management activities associated with the timber program. Most of these roads were closed upon completion of timber harvest. Approximately 28.6 miles of user-created roads (20 percent of the 143 total miles) exist in this area. Only 0.75 miles have been created since 1985.

In the Pennock area, the estimate for user-created roads is 51.2 miles (85 percent of the 60 total miles). Many of these are historic, and we do not have accurate records on either the creation date or the dates when the roads were inventoried. However, 13.3 miles of roads and trails that were not previously on our system were inventoried in 1997. Thus, it would be safe to assume that this represents a minimum estimate of those created since 1985. One in particular showed up on the 1973 Visitor Map as a hiking trail and has since been widened into an ATV trail.

These data indicate that higher percentages of user-created roads, and greater numbers of recently created roads (since 1985), exist in the Pennock area than in the Spring Creek area. This is worth noting because the Pennock area does not have a well-developed road system resulting from timber harvest activities. Thus, it reflects the trend of more Forest users using more motorized transportation to access more remote areas. Access that was once mostly by foot or horseback has become increasingly motorized. The effects of the Proposed Action would be to stop that trend.

***A. EFFECTS TO RESOURCE AREAS/DISCIPLINES***

**1. TRANSPORTATION**

**A. ISSUES**

This section provides information related to the following issues identified in Chapter I of this EA:

- *Adverse resource impacts caused by unrestricted off-route vehicular use;*
- *Conflicts between motorized and non-motorized Forest users;*
- *Inconsistent regulations and lack of consistent signing and enforcement; and*
- *Conflicts with the Forest Plan and the Rocky Mountain Regional Guide.*

## **B. EFFECTS ASSOCIATED WITH THE ALTERNATIVES**

### **Features Common to All Alternatives:**

The MBNF has an extensive road system with good access provided by major roads and secondary roads. All routes causing unacceptable resource impacts would be closed immediately; however, no routes would be added to the FTS. Consequently, road densities would be minimally affected. Existing seasonal and permanent *road closures* would remain in effect. Site-specific decisions about road and trail management would continue to be made as part of future watershed analyses with interdisciplinary review and public input. Page 30 of this EA lists recommended priority areas for future site-specific travel management analyses.

### **Use of unlicensed OHV's on Forest Roads and Trails:**

Implementation of any but the "No Action" alternative would restrict all forms of motorized use, including Off Highway Vehicles (OHVs), to designated roads and trails during most of the year. As such, it is critical that clear and consistent direction be provided with regard to which designated routes upon which OHVs (unlicensed, non-street legal motorcycles and ATVs) can legally operate.

Wyoming State Law requires that all OHVs operating on "Public Roads" be licensed, insured, "street legal", and be operated by licensed drivers. The Law is complex in its definition of what constitutes a "public" road, and the actual State provision requires considerable interpretation with regard to which Forest Roads should be considered "public." Interpretations and enforcement vary by county and agency making management of OHV travel on the Forest difficult and inconsistent. However, Forest development roads are not public roads in the same sense as roads that are under the jurisdiction of public road agencies, such as states or counties. Forest development roads are not intended to meet the transportation needs of the public at large. Instead, they are constructed and maintained only for the protection, administration, and utilization of National Forest System lands and the use and development of its resources (23 U.S.C. 101). Although the roads are generally open and available for public use, that use is at the discretion of the Secretary of Agriculture. Through authorities delegated from the Secretary, the Forest Supervisor may restrict or control use to meet specific management direction.

## **PROPOSED ACTION: *Restrict Motorized Vehicle Use to Designated Routes***

### **Effects Common to the Entire Analysis Area:**

Under the Proposed Action, existing uses on designated roads and trails not causing unacceptable resource impacts would continue, and off-route vehicle use would be restricted. The creation of additional unplanned roads and trails through repeated off road use would be reduced and eventually eliminated through education and enforcement of the new travel regulations. Restricting the creation of these unplanned routes would allow the Forest Service to concentrate inventories, mapping, signing, enforcement, and maintenance manpower and budget on a known set of travelways. Limited budgets could be used to identify and correct existing stream degradation and riparian damage instead of chasing newly created problem areas. As existing user-created roads are evaluated (e.g., during future site-specific travel management analyses) and assimilated into the road management system, safety and maintenance concerns would be addressed on a scheduled basis. Regulations, signing, and enforcement would be consistent with Region-wide travel management strategies.

Providing safe, yet challenging routes for a variety of OHV riders is an important part of managing travel on the Forest. The restriction of motorized use off of designated roads would eliminate the off-road/trail recreational experience and reduce access options. It could also increase safety concerns from the consolidation of multiple motorized uses (ATVs and full sized vehicles) on the same routes. These effects would be mitigated by:

- 1) Implementing an extensive signing program consisting of entrance signs, National Forest route markers, travel management signs/posters indicating recommended, authorized, and prohibited uses on Forest roads and trails, regulator signs designating routes as open or specifically closed to OHV use, and standard black on yellow warning signs which indicate mixed traffic or call attention to hazards on or adjacent to the roadway. These signs would be consistent throughout the Region, thus making comprehension and enforcement more straight-forward. Maps showing allowed use on Forest roads and trails would be produced and readily available to the public.

### **Effects by Mountain Range:**

Partial implementation of this alternative (e.g. Snowy Range only, Sierra Madre only, Laramie Peak only, or a combination of the three) would most likely shift off-route use to those areas wherein off-route travel would still be allowed. There would also be problems associated with comprehension and enforcement of existing regulations since the new regulations would not be applied equally across the Forest.

#### **Sierra Madre:**

The Sierra Madre Range includes areas similar to both the Spring Creek and Pennock representative areas (see EA pages 55 through 57). As mentioned on page 36, user-created routes in the Sierra Madres typically occur mainly in open, flat areas in aspen, sage, or ponderosa

pine type vegetation and in alpine areas above timberline. The Proposed Action would be effective at limiting new user-created routes in these open areas (e.g. Cottonwood Rim/Battle Mountain area). However, since construction of user-created routes is naturally limited in heavily timbered areas, the effects of the Proposed Action would not be as great in those areas.

The transportation system in the Sierra Madre was developed more recently than in the Snowy Range, with a noticeable expansion in the mid-1970's to 80's, and there are still areas where the character is less developed. This alternative would attempt to retain the character of the less developed areas by limiting the creation of additional user-created roads.

#### Snowy Range:

Roads associated with timber harvest and other management activities have made the Snowy Range easily accessible. Because the area has a well-developed transportation system (see Table 11, page 53), the effects of limiting off-route travel would not be felt as strongly in the Snowy Range as they would be in the Sierra Madre Range. This is because the Sierra Madre Range contains more primitive areas wherein motorized access is not limited. Perhaps as a consequence, the primitive areas that remain in the Snowy Range either have existing travel restrictions in place (such as Snowy Range, most of Sheep Mountain and Pole Mountain) or interest in managing off-route travel in those areas (e.g. Pennock Mountain) has been expressed.

The creation of additional motorized trails around small communities in the Forest such as Ryan Park, Wyocolo, Gramm, or Albany would be restricted.

#### Laramie Peak:

Implementation and enforcement of the new travel regulations could be difficult in areas of Laramie Peak with fragmented ownership patterns. Most of the roads in the Laramie Peak unit originate on State or private lands which make management and maintenance difficult. In order for effective enforcement of the Proposed Action, signing and sign maintenance would need to be extensive.

### ***ALTERNATIVE 1: No Action - Existing Travel Regulations Would Remain Unchanged***

#### **Effects Common to the Entire Analysis Area:**

Current impacts and conflicts, including conflicts between non-motorized and motorized users, would increase as population centers around the MBNF increase. Motorized access would continue to expand as the network of user-created roads expands. The potential for resource damage, safety, maintenance, inventory, signing, and law enforcement related concerns would also increase proportionately as unrestricted motorized use increases and additional unplanned roads and trails are created through repeated use.

In addition, if the No Action alternative is chosen for all or portions of the MBNF, travel regulations would be inconsistent with those on neighboring Districts and other Region 2 Forests

which already have or are in the process of implementing off-route travel restrictions in accordance with Regional Guidance. The Rangeland Renewable Resources Planning Act of 1974 as amended by the National Forest Management Act requires the publication of forest management Standards and Guidelines at the Regional level and adoption of those Standards and Guidelines at the Forest level. This helps ensure a consistent approach to land use planning across the Rocky Mountain Region. The Rocky Mountain Regional Guide published in 1992 meets this requirement and provides guidance on a variety of forest planning and management issues. Of particular interest to this analysis are the Regional guidelines for travel management policies. These guidelines, although general in nature, are intended to eliminate visitor confusion about the intent, implementation, and enforcement of travel management across various Forest and District boundaries within Region 2.

Under the No Action alternative the MBNF would be the only Region 2 Forest to allow wheeled vehicle travel off of designated routes on the majority of the Forest. This could lead to confusion by our visiting public and, perhaps more significantly, could concentrate OHV usage from other Forests that have restrictions onto the MBNF. This would lead to increased user conflicts, resource damage, and increased costs associated with a continually growing, uncontrolled network of roads and trails.

### **Effects by Mountain Range:**

#### Sierra Madre:

Because of natural barriers, which tend to inhibit off-route travel, motorized use would not change substantially in the timbered areas of the Sierra Madre Range. However, the Sierra Madre Range has many unforested areas, such as the Cottonwood Rim/Battle Mountain and Holroyd/Cunningham Park areas. The character of those areas could change over time with the continued creation of user-created roads.

#### Snowy Range:

As stated earlier, the Snowy Range has fewer primitive areas, such as Pennock Mountain; thus, the Spring Creek area may be more characteristic of the Snowy Range. As with the Proposed Action, the effects of implementing the No Action alternative would not be as great in the Snowy Range as they would be in the Sierra Madre Range because of less potential for off-route travel. Of course there are still many areas along the Forest's edge where resource damage is occurring during wet weather, such as the area between Owen Creek and Lake Owen, or in the wet meadows north of Foxpark. This kind of use would continue to occur under the No Action alternative.

#### Laramie Peak:

Although Laramie Peak is fairly accessible to Casper residents, it seems to be far enough removed from the population centers of the Front Range, Laramie, and Cheyenne that it is not subject to the same pressure by off-route enthusiasts as other places on the Forest. However, there are some areas that are sustaining resource damage due to off-route travel, especially

during the big game hunting season. This kind of activity would continue under this alternative. As other areas of the Forest are perceived to be more crowded, Laramie Peak could begin to see an increase in the use of ATV's and other off-route vehicles and, consequently, more conflicts between users.

## **ALTERNATIVE 2: *Allow Use of Off-route Vehicles for Big Game Retrieval***

### **Effects Common to the Entire Analysis Area:**

Under this alternative, motorized vehicles 48" in width (or less) would be allowed to travel behind gated roads for game retrieval in areas *without* current travel restrictions. This would require a revision to existing Supervisor's Orders which originally closed the roads. Miles of gated roads to which this would apply equals 360 miles. The rationale for allowing use on gated roads is that, if we recognize that there is a valid need to allow game retrieval with ATV's, there would be less overall impact to the resources if ATV's travel on existing roads and trails than if they are forced to travel alongside those roads. In other words, the need to allow game retrieval would replace the reason for the original road closure. In places that contain existing area closures, game retrieval would not be allowed. Please refer to Map 4 on page 23.

It is difficult to estimate the amount of traffic that would occur on gated roads for game retrieval. Variables include the proximity of the downed game to a gated road and the number of hunters which might be successful in any given area. In most cases, in our densely roaded Forest, the easiest route for retrieving downed game will be by road - either open or closed. There are typically fewer gates in unforested areas, so game retrieval in those areas would likely occur more by off-route use. In the timbered areas, there would likely be more use of gated or open roads.

It is possible that the decision maker could decide to allow game retrieval as described under Alternative 2, but decide that motorized use would *not* be allowed on gated roads. This would have the effect of shifting motorized use off of gated roads, but possibly parallel to those roads. Current closure orders would remain in effect.

Other effects of implementing Alternative 2 would be the same as those listed under the Proposed Action (see pages 59 and 60), with the following additions. Allowing off-route travel for game retrieval could result in the continued creation of unplanned roads and trails and the potential for resource damage, user conflicts, increased maintenance and signing needs. Enforcement would be difficult and require additional resources. It may also be perceived as allowing a unique set of the recreating public special rights. The concept of allowing game retrieval on closed Forest roads, although only for a short period of time and only by a limited number of users, could negate any rehabilitation efforts that may have been undertaken to slow or stop erosion. More importantly, it brings into question the intent of the original closure. Forest roads are closed, using the NEPA or Forest Order process, for a variety of sound reasons which include: the protection of big game habitat and fisheries, prevention of roadbed damage and the reduction of erosion during wet weather, to insure user safety, resolve user conflicts,

reduce maintenance costs and road investment loss. To allow even limited use would negate this reasoning.

Additionally, allowing a segment of users to violate Forest road closures, even for a short period of time, would have a negative effect on our education and enforcement efforts relative to travel management and other Forest laws and regulations. Finally, allowing the use of OHVs for game retrieval would conflict with Regional travel management policies and with how other Districts and Forests are implementing the policies. This could lead to confusion by our visiting public and, perhaps more significantly, could concentrate OHV usage from other Forests that do not allow motorized vehicle use for game retrieval onto the MBNF.

### **Effects by Mountain Range:**

#### Sierra Madre: (includes Hunt Areas 13-15, and 21) (see Map 8)

The Sierra Madre contains 134.2 miles of gated roads upon which game retrieval could be allowed. In the Spring Creek representative area, which is located in Hunt Area 15, there are 35.71 miles of gated roads that could be used for game retrieval. This would increase total miles of roads available for motorized travel from 62.86 miles to 98.57 miles, an increase of about 57 percent. This is fairly typical of the heavily forested areas where roads have been built for timber sales and closed after the sale to be in compliance with the Forest Plan. Gates are also an effective closure method in more heavily timbered landscapes.

#### Snowy Range: (includes Hunt Areas 9-12, and 110)

The Snowy Range contains 225.8 miles of gated roads upon which game retrieval could be allowed. One area with a particular concentration of gated roads is southwest of the Sand Lake road (FDR 101) and north of the Snowy Range Highway 130 in Hunt Area 10. Motorized access into that area could increase significantly under this alternative.

This alternative could allow travel on 64 miles of gated roads between Highways 130 and 230 that were drill-seeded in 1989 and 1991. All of these roads are located within Hunt Area 9 (South Snowy Range). Drill seeding is a very effective way of stabilizing a road through revegetation of grasses. Resource damage that might occur on these roads as a result of game retrieval activities would be handled in the same way that off-route resource damage would be handled. That is, specific areas or roads identified through monitoring as having been damaged would be closed and rehabilitated.

Hunt Area 11 (Medicine Bow River) is a Limited Quota area that has traditionally been popular with hunters on ATV's. It is expected that game retrieval on ATV's would continue to be popular in this area under this alternative.

Under Alternative 2, the Pennock Mountain area in Hunt Area 12 would be excluded from game retrieval. Although it is excluded, it does contain 3.92 miles of gated roads. This information is worth noting because the Pennock Mountain area is similar to other areas on the Forest. Had this area been considered for game retrieval, this would have increased the total miles of roads

available for motorized travel from 49.47 miles to 53.33 miles, an increase of about 8 percent. This is typical of the non-forested landscapes along the edge of the Forest where gates would not be as effective and there hasn't been as much timber sale activity.

Laramie Peak: (includes Hunt Areas 19, 20, and 7)

There is only one gated road on the Laramie Peak unit, and it is a seasonal closure that is not closed until after hunting season. Therefore, increased access as a result of this alternative would be occurring off-route only.

Map 8. Wyoming Game and Fish Department Elk Hunt Area Locations.

### **ALTERNATIVE 3: *Reduce Off-route Travel Restriction from 300 Feet to 100 Feet***

#### **Effects Common to the Entire Analysis Area:**

This alternative would prove more restrictive in unforested areas, where off-route use is currently occurring, since off-route use in heavily wooded areas is already naturally restricted. Unless the Forest Supervisor applied the 100 foot restriction consistently across the Forest, it would be inconsistent with the current "300 foot width" restriction in existing white arrow areas. It would also be inconsistent with the majority of other Forests that allow 300' off of existing roads. Consequently, implementation of this alternative would require additional education, signing, and enforcement in the short term.

We are in the process of mapping well-used dispersed campsites and will have a better handle on whether most of those are within 100 feet of existing roads or beyond 100 feet. An inventory of dispersed sites within the Fall Creek/Bird Creek analysis area on the east-central Snowy Range did show, however, that most sites were within 100 feet of the road. Sites which might be beyond 100 feet in other areas usually have a well developed road to the site by now, and the road would already have been mapped. Consequently, those sites would still be usable under this alternative. However, no new sites beyond 100 feet of existing roads would be allowed if they required a motorized vehicle for access.

#### **Effects by Mountain Range:**

Effects by mountain range would be similar to those stated under "Effects Common to the Entire Analysis Area."

### **ALTERNATIVE 4 - *Travel Restrictions in the Snowy Range, Sierra Madre, and in Defined Blocks of Land on Laramie Peak.***

Effects for the Sierra Madre and Snowy Range mountain ranges are anticipated to be the same as those described under the Proposed Action.

#### **Laramie Peak:**

In general, areas of the Laramie Peak unit that have been excluded under this alternative are either remote blocks with no Forest Service easements or access or they are in areas with a highly fragmented ownership pattern. In areas with no access, opportunities for the creation of additional user-created roads or trails are very low to begin with and are unlikely to change.

In areas of fragmented ownership, user-created roads may continue to expand. Only one area with resource damage caused by off-route travel would be excluded under this alternative (Warbonnet Peak). Applying travel management restrictions in areas of mixed ownership can be difficult to apply and enforce because of the lack of certainty about whose land you're on. In addition, most roads in these areas originate on state and private land and are difficult for the Forest Service to manage and maintain.



### **C. IRREVERSIBLE and IRRETRIEVABLE IMPACTS**

There would be no irreversible and irretrievable impacts to the transportation resource under any of the proposed alternatives.

### **D. FOREST PLAN CONSISTENCY**

There are no Forest Plan Transportation Standards and Guidelines that would be affected by the alternatives considered in this EA. The 1985 Travel Map would need to be amended under all but the No Action alternative. Since the alternatives do not include any options for closing or opening roads or trails, road densities would not be affected.

### **E. CUMULATIVE EFFECTS**

No new roads would be constructed, obliterated, opened, or closed as a result of this analysis, and only those user-created routes causing unacceptable resource impacts would be immediately closed. However, the environmental effects of our existing transportation system and the potential addition of user-created roads/trails, combined with future road and trail construction, would have an inherent set of potential environmental consequences. These include: resource damage to adjacent streams and wet meadow areas from existing roads and motorized trails; potential safety issues; increased inventory, signing, maintenance, and law enforcement requirements resulting from the addition of user created roads to our transportation network; and the potential resource impacts from future road construction.

#### **Effects from the Existing Transportation System:**

Past management activities on the MBNF have resulted in a heavily roaded landscape. Research indicates that low standard Forest Service haul, harvest, and recreational roads are the single largest contributors of sediment to streams from non point source activities. Many of these existing low standard Forest Service roads were either inherited user-created roads or were constructed before ecologically sound design standards were in place. While the intended purpose of the roads was to provide access for a variety of legitimate Forest uses, an unintended effect of the outdated planning and design philosophies used in the construction of some of these roads was the potential for long lasting effects to neighboring ecosystems. Some of these roads are poorly located with steep grades and little or no drainage. Others, historic and recreational user-created roads in particular, tend to parallel watercourses, consist of multiple passes through riparian areas, supply sediment to streams, and have the potential to alter both the hydrologic and ecologic function of the wetlands.

Because of the many inherited user-created roads and roads constructed with outdated planning and design philosophies, the Forest initiated an intensive inventory of the transportation system in the mid-1980's. The purpose of the inventory was to have a more accurate picture of the transportation system, including primitive, 4WD and user-created routes. As a result of the inventory, we identified several "excess" roads, consisting mostly of old log skidding roads which ended in clearcuts and which had not been closed following timber sales. We also identified parallel routes that ended up in the same spot, usually as a result of erosion on the

original route. At the same time, we began receiving money to rip and seed some of these roads to reduce soil and water problems and to increase habitat effectiveness for wildlife. In some places, we also began using ripping and seeding as a method of closure instead of gates. In other places, we removed gates to reduce the "double standard" perception that exists with gates, i.e. that loggers and Forest Service personnel may use the road, but no one else can.

As we began closing roads through ripping and seeding, we began hearing concerns that the only roads we were closing were old 2-track roads, and that people were losing the opportunity to travel on remote, primitive roads. As a consequence, we now consider all roads, including those built for timber sales, when we evaluate which roads should be closed through ripping and seeding.

### **Effects of Allowing User-Created Routes to Remain Open Prior to Site-Specific Analysis:**

It is Forest Service policy to maintain, within budget constraints, all Forest Development Roads in a condition that safely accommodates intended use. Intended use and desired maintenance levels are documented in road management objectives (RMOs) assigned during the transportation planning process. RMOs are assigned in retrospect to Forest Development Roads constructed prior to 1990. Most low standard dirt roads are intended for travel by high clearance and 4WD vehicles where passenger car traffic is not a consideration. Low standard Forest Development Roads receive periodic inspections for hazards and potential resource damage and receive maintenance as needed for their intended use. Vegetative cover is managed for sight distance, roads are cleared of downed trees, and slides and slumps are repaired or removed to allow passage of high clearance vehicles and prevent resource damage. User comfort and convenience are not a consideration. When funding constraints prevent adequate maintenance, these roads are closed until such maintenance can be performed.

Allowing post 1990 user-created roads that are not causing unacceptable resource impacts to remain open prior to being individually analyzed and evaluated bypasses the above road management guidelines. Road condition surveys have not been completed and the necessity for the road has not been determined. Road maintenance levels have not been assigned and road maintenance dollars have not been allocated. As such, road hazards may be present, weather conditions may render the road impassable, and safe passage cannot be assumed. The chance of mechanical problems or accidents is increased off of maintained routes and where interactions between different types of users is not anticipated or controlled. Additional manpower and resources would be required for inventory, mapping, signing, and law enforcement of these user-created roads. Allowing user-created roads and trails to remain open prior to site-specific analysis may also encourage continued disregard for existing rules and regulations concerning travel management.

Some of the effects stated above would be short term in nature and eliminated entirely once these roads are evaluated during site-specific travel management analyses. As these roads and trails are evaluated during future analyses, problem areas would be identified and resolved. Future analyses would also provide an opportunity to identify additional areas suitable for motorized trail routes.

### **Effects of Future Road Construction:**

While environmental consequences will always be associated with road building, a great deal of effort has recently been applied to the development of low impact design and road construction techniques which incorporate environmental values. Roads constructed after 1987 must comply with Federal and State Clean Water Act Best Management Practices (BMPs) and Forest Service guidelines that emphasize these processes. Eight of the 15 BMPs mandated in the Federal Water Pollution Control Act (33 CFR 323.4) specifically address road construction activities.

Monitoring reports on roads and trails that have been properly located and designed in accordance with BMPs indicate that maintenance problems and resource damage associated with their construction and existence have been significantly reduced. Further, studies indicate that thorough reconnaissance, good planning, and wise route selection are the keys to minimizing the impacts of roads on streams and wetlands. Since the Proposed Action would limit motorized travel to designated routes and restrict the development of new user-created routes, future road/trail construction would be in accordance with BMPs and Forest Service guidelines. Consequently, maintenance problems and resource damage associated with future road construction should be significantly reduced. On the other hand, if the No Action alternative is selected, maintenance problems and resource damage associated with user-created routes could still be an issue. Although the creation of new routes is and would continue to be illegal under the No Action alternative, off-route vehicular travel often produces new routes as a result of multiple passes over the same area. These new, "user-created," routes would not be properly designed and location may be questionable.

### **PROPOSED ACTION: *Restrict Motorized Vehicle Use to Designated Routes***

Motorized access would be decreased under the Proposed Action, especially in areas containing open vegetation and in areas where user-created routes are closed immediately due to unacceptable resource impacts. However, access from roads within the Sierra Madre range has increased substantially over the last 20 to 25 years. What has been lost is not "access" per se, but the primitive character of the trip. Restricting motorized travel to existing roads and trails would mean that Forest users would no longer have the opportunity to travel "cross-country" in order to have a primitive experience. Forest managers would be responsible for maintaining that type of travel experience on existing routes.

### **ALTERNATIVE 1: *No Action - Existing Travel Regulations Would Remain Unchanged***

Motorized access would continue to increase as the network of user-created roads expands. However, the remaining primitive areas of the Forest would decrease as user-created roads continued to infringe on remote areas. The ability of vehicles to travel off-route for all activities would make the computation of road densities, when analyzing habitat effectiveness, rather meaningless.

### **ALTERNATIVE 2: *Allow Use of Off-route Vehicles for Big Game Retrieval***

The cumulative effect of game retrieval using gated roads, coupled with other management activities, such as pre-commercial thinning, timber stand improvement, or firewood collection which might result in opening gated roads, would increase actual road densities. As described above, however, allowing off-route travel would make the road density figure questionable. By allowing some off-route use, there would be more opportunities for non-compliance with travel restrictions, making enforcement more difficult.

If Alternative 2 is selected, it would be difficult for the Forest Service to convey the reasons why the need for motorized game retrieval is more important than the reasons for the original road closures and the reasons for restricting off-route travel in the first place. As we make a case that we need to restrict off-route travel, and state that most of the user conflicts and resource damage are occurring during hunting season, it seems counter intuitive to allow motorized game retrieval off-route during the hunting season. Particularly since similar concessions are not being made for other ATV and OHV users who like to ride during other times of the year. These may or may not be the same riders who use ATV's during the hunting season. Users who are riding ATV's during the summer are generally traveling when conditions are dry, and when user conflicts are not related to a quality hunt. However, there are no exemptions that would allow them to ride off-route. The message is that the perceived need is not as great.

### **ALTERNATIVE 3: *Reduce Off-route Travel Restriction from 300 Feet to 100 Feet***

Cumulative effects would be similar to those described for the Proposed Action, with a relative decrease in motorized access.

### **ALTERNATIVE 4 - *Travel Restrictions in the Snowy Range, Sierra Madre, and in Defined Blocks of Land on Laramie Peak.***

Cumulative effects for the Snowy Range and Sierra Madre would be similar to those described under the Proposed Action. On the Laramie Peak unit, those areas not included under Alternative 4 would probably see increased recreational OHV pressure over the long term, as they would be the only places off-route travel would be allowed. However, it is unlikely that hunting patterns would change.

### **F. ECONOMIC COSTS and/or BENEFITS RELATED TO THE TRANSPORTATION SYSTEM:**

Chapter IV, pages 111 through 113 contain additional information related to the cost of implementing the alternatives.

### **PROPOSED ACTION: *Restrict Motorized Vehicle Use to Designated Routes***

Road and maintenance funds would be focused on existing roads and trails so, with the exception of inflation, these costs should not increase. Additional costs would be incurred to sign all existing travel routes with a "designated route" marker (a Carsonite post with a road number on it). There would also be a cost associated with maintaining the signs. Most of the signs are already in place; however, additional work is needed to sign about 20 percent of the roads on the Snowy Range and Sierra Madre and about 50 percent of the roads on Laramie Peak. The initial cost to map uninventoried roads and purchase and install Carsonite posts is estimated to be \$47,500. In addition, new signs would be required at Forest entrances to explain travel restrictions. The initial cost of purchasing and installing the entrance signs is estimated to be approximately \$18,000.

### ***ALTERNATIVE 1: No Action - Existing Travel Regulations Would Remain Unchanged***

In areas where off-route travel would be allowed, impacts to the land, wildlife, or vegetation are probable. Where unacceptable resource impacts occur off-route, the benefitting function (such as wildlife or watershed) must fund the rehabilitation of the resource. Road maintenance funds are available to close "non-system" roads through ripping and seeding, but trail maintenance funds may not be used to close or rehabilitate "non-system" trails. As more and more user-created roads are added to the transportation inventory, maintenance and signing dollars get stretched farther and farther. Consequently, it may be many years before some roads or trails get any attention. Expenses associated with mapping and signing new, user-created roads, in addition to database work would also be needed on a continuing basis.

"Designated route" markers (signs) are not an important part of this alternative; thus, the expense of signing might not be as high as for the Proposed Action. However, this would depend on how each District decides to manage their sign program. Travel management entrance signs would not be required, except for existing areas with travel restrictions.

### ***ALTERNATIVE 2: Allow Use of Off-route Vehicles for Big Game Retrieval***

Costs for this alternative would be similar to the Proposed Action, with Carsonite signs and entrance signs necessary for project implementation. However, additional costs would be incurred to post regulations with respect to game retrieval. There would also be expenses associated with enforcement activities, as well as rehabilitation of sites or roads where unacceptable resource damage occurs as a result of game retrieval activities. This would likely be the most expensive alternative to implement.

### ***ALTERNATIVE 3: Reduce Off-route Travel Restriction from 300 Feet to 100 Feet***

Costs for this alternative, with respect to transportation, would be almost identical to the Proposed Action. Road and trail maintenance funds would be focused on existing routes, and signing costs would be similar. There could be more signs necessary to notify users of the

different width restrictions between existing "white arrow" areas, and the areas with the 100 foot restriction, unless a change is made to implement the 100 foot restriction Forest-wide.

#### ***ALTERNATIVE 4 - Travel Restrictions in the Snowy Range, Sierra Madre, and in Defined Blocks of Land on Laramie Peak.***

Costs for this alternative would be almost identical to the Proposed Action, with the only difference being implementation on the Laramie Peak unit. There would be less signing necessary on the Laramie Peak unit; however, there could be additional rehabilitation costs in those areas where travel restrictions are not implemented.

## **2. RECREATION**

### **A. ISSUES**

This section provides information related to the following issues identified in Chapter I of this EA:

- *Conflicts with private landowners;*
- *Adverse resource impacts caused by unrestricted off-route vehicular use;*
- *Conflicts between motorized and non-motorized Forest users;*
- *Limitations on personal freedom;*
- *Game retrieval opportunities;*
- *The Proposed Action discriminates against the elderly and people with disabilities; and*
- *Inconsistent regulations and lack of consistent signing and law enforcement.*

### **B. EFFECTS ASSOCIATED WITH THE ALTERNATIVES**

The recreational use of off-highway vehicles is growing rapidly on public lands. Between 1982 and 1983, studies showed that 19.4 million people participated in off-route driving. Between 1994 and 1995, this same use had increased to 27.9 million people, an increase of 43.8 percent. We, as resource managers, the general public, and off-route enthusiast themselves are viewing these trends as eroding traditional experiences on the MBNF. Under all alternatives, we will need to continue to work with the general public and clubs in order to provide opportunities for people seeking this activity; however, off-route travel should not occur at the expense of the resources we manage and other forms of recreation.

#### **Effects Common to All Alternatives:**

User-created routes causing unacceptable resource impacts would be immediately closed.

The creation of unauthorized routes would continue to be prohibited under all alternatives.

With any alternative, communication, education, and interpretation efforts would continue to reduce resource damage and user conflicts.

**PROPOSED ACTION: *Restrict Motorized Vehicle Use to Designated Routes***

Restricting off-route motorized travel to designated routes and closing user-created routes causing resource impacts would help preserve the remaining semi-primitive non-motorized (SPNM) (see Glossary) areas on the Forest. With the development of ATVs and sport utility vehicles (SUV's), semi-primitive non-motorized opportunities have decreased dramatically on the Forest over the last 10 to 15 years. For example, at Pennock Mountain, which is to be managed as a SPNM area, user-created roads and trails, and increases in off-route motorized use, have changed the area to a semi-primitive motorized (see Glossary) setting. Of the 19,514 acres contained within Pennock Mountain, only 1,893 acres currently meet the definition of SPNM. In addition, only 9.7 percent of the Pennock Mountain area is farther than 1/2 mile from a road or trail that is open to motorized use. In the Spring Creek area, 19.5 percent of the area is farther than 1/2 mile from roads or trails that are open to motorized use. The closeness of motorized roads and trails and the fact that the areas are open to off-route motorized travel have caused many of our user conflicts and loss of solitude.

Closely located roads and trails that are open to motorized use are not unique to the Pennock and Spring Creek areas. For example, Table 15 displays acres per mountain range, acres farther than 1/2 mile from a motorized route, and percent of the mountain range that is farther than 1/2 mile from a motorized route.

Because off-route travel would not be allowed under the Proposed Action, hunters would have to use existing motorized roads and trails for game retrieval. Off-route game retrieval would not be allowed. With our current motorized road and trail system, there are very few acres within the analysis area farther than 1/2 mile from a road or trail open to motorized use. Thus, unless an animal was downed in a wilderness area, cases in which a hunter had to retrieve a downed animal that was more than 1/2 mile from a road would be relatively few.

**Table 15. Acres Per Mountain Range, Acres Farther than 1/2 Mile from a Motorized Route, and Percent of Area Farther than 1/2 Mile from a Motorized Route.**

<b>Mountain Range</b>	<b>Total Acres</b>	<b>Acres Farther than 1/2 Mile From a Motorized Route<sup>15</sup></b>	<b>Percent of Area Farther than 1/2 Mile From a Motorized Route</b>
Snowy Range	511,385	101,287	20
Sierra Madre	334,861	80,463	24

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<sup>15</sup> Excludes wilderness area acres.

Laramie Peak	179,607	74,855	42
<b>TOTAL</b>	1,025,853	256,605	25

**NOTE:** The acres shown reflect Forest Development motorized routes only and not the motorized routes that are located on private and other public lands adjacent to National Forest System lands.

**Other Effects Associated With the Proposed Action Include:**

- Restricting off-route travel would reduce the creation of user-created motorized routes through repeated use of the same portions of ground.
- Dispersed recreationists would have greater opportunities for solitude and fewer conflicts with other Forest visitors. Sportsmen, hikers, OHV enthusiasts, horse users, fisherman, and hunters would have fewer conflicts, improved resources, and greater opportunities for solitude.
- Opportunities for dispersed camping, firewood collection, game retrieval, and picnicking within 300 feet of designated motorized routes would remain. With the exception of the Pole Mountain area, this distance would be consistent with other areas of the Forest wherein off-route travel is restricted.
- Travel management regulations and restrictions would be much easier for the general forest visitor to understand and follow if motorized use were restricted to roads and trails through consistent policy. Consistency would be improved between other Districts and Forests.
- Damage to soil, water, and vegetative resources would be reduced and aesthetics would be improved over time.

**ALTERNATIVE 1: *No Action - Existing Travel Regulations Would Remain Unchanged***

Cross-country motorized recreational opportunities would continue to be available. Hunters would be able to retrieve downed game with any motorized means in areas open to off-route travel provided that resource damage does not occur.

Under the No Action alternative, the Forest Service and the public would continue to see the creation of future, unauthorized roads and trails through repeated use of the same portions of ground. For example, the Pennock Mountain area contains 8.8 miles of Forest Service created motorized routes and 51.2 miles of user-created (unclassified) motorized routes. The Spring Creek area contains 114.4 miles of Forest Service created motorized routes and 28.6 miles of user-created (unclassified) motorized routes. With unrestricted off-route motorized use, these trends would continue.

There would be a continuous loss of opportunities for solitude to dispersed recreationists and continued conflicts between Forest visitors. Sportsmen, hikers, OHV enthusiasts, horse users,

fisherman, and hunters would be faced with more conflicts, less satisfying experiences, and a degraded resource. Loss of solitude, user conflicts, and a degraded resource would continue to increase as off-route motorized use increases over time. However, the elderly and the physically disadvantaged would continue to be able to access remote areas of the Forest and would be able to retrieve downed game without impairment.

There would be continued confusion to recreation users with regards to travel management policy and restrictions. There would also be continued damage to soil and water resources that occur from motorized off-route use. Finally, conflicts with adjacent private landowners would continue due to off-route use creating an opportunity for trespass. The current road system allows for legal access across private lands where it is needed.

## **ALTERNATIVE 2: *Allow Use of Off-route Vehicles for Big Game Retrieval***

The effects of big game retrieval were analyzed by Wyoming Game and Fish Department elk hunt areas (see Map 8, EA page 64). Implementation of Alternative 2 would result in the following effects:

### **Effects Common to All Hunt Areas:**

- Allowing game retrieval behind all gated roads could send a conflicting message to the public regarding the original intent of the closure. Further, allowing a segment of users to violate Forest road closures, even for a short period of time, would have a negative effect on our education and enforcement efforts relative to travel management and other Forest laws and regulations;
- Game retrieval would allow personal freedom to hunters to make a choice on their game retrieval method;
- Alternative 2 would allow a method of game retrieval for those people who are elderly and/or who have physical limitations;
- User-created game retrieval trails could be created through repeated use of the same portion of ground;
- User conflicts could still arise due implementation of Alternative 2. However, the aspects listed for game retrieval should eliminate many of the user conflicts (see pages 86 and 87); and
- Game retrieval would not be allowed in hunt areas where current travel restrictions are in place. This restriction may be confusing to hunters if proper signing is not done.

### **Effects to Specific Hunt Areas:**

#### **Sierra Madre:**

Hunt Area 21 - West Half Sierra Madre: Hunt area 21 is comprised largely of current travel restriction areas and the Huston Park Wilderness area. Game retrieval would not be allowed in these restricted areas. With the current mix of existing restrictions, there would be continued confusion to hunters with regards to travel management policy and game retrieval restrictions.

Hunt Area 15 - North East Sierra Madre: Hunt area 15 contains no current travel management restrictions or wilderness areas. Proposed travel management regulations and game retrieval restrictions would be easy for hunters to understand and follow.

Hunt Area 14 - South Central Sierra Madre: Hunt area 14 contains approximately half of the Huston Park Wilderness, all of the Encampment River Wilderness, and several small travel restriction areas. Because of the mix of travel restriction and wilderness areas, hunters could

become confused over where off-route travel for game retrieval would and would not be allowed.

Hunt Area 13 - South East Sierra Madre: Hunt area 13 contains no current travel restrictions or wilderness areas. Proposed travel management regulations and game retrieval restrictions would be much easier for hunters to understand and follow.

### **Snowy Range:**

Hunt Area 110 - South West Snowy Range: Hunt area 110 contains all of the Platte River and Savage Run Wilderness Areas, a small portion of the Rob Roy Reservoir white arrow area, and a small portion of the Medicine Bow Peak motorized closure area. This area also contains a large number of gated roads. Both wilderness areas are well marked, and public understanding of wilderness restrictions are generally understood. Off-route travel for game retrieval would not be allowed in the wilderness areas, the Rob Roy white arrow area, or the Medicine Bow Peak motorized closure area. However, improved signing of these areas would make it easier for hunters to understand and follow the proposed travel regulations and game retrieval restrictions than in some of the other hunt areas on the Forest.

Hunt Area 9 - South East Snowy Range: Hunt area 9 contains the Rob Roy Reservoir white arrow area, a portion of the Medicine Bow Peak motorized closure area, and the Sheep Mountain Game Refuge, most of which is closed to motorized use. This hunt area also contains a large number of gated roads. Because motorized vehicles would not be allowed to travel off-route for game retrieval in the Rob Roy area, in the Medicine Bow Peak motorized closure area, and in most of the Sheep Mountain Game Refuge, proper signing of areas where game retrieval would and would not be allowed would be necessary to reduce hunter confusion.

Hunt Area 10 - North East Snowy Range: Hunt area 10 contains the Rock Creek white arrow area and a portion of the Medicine Bow Peak motorized closure area. This hunt area also contains a large number of gated roads. As with other hunt areas, hunters could become confused with respect to where game retrieval would and would not be allowed.

Hunt Area 11 - North Central Snowy Range: This hunt area contains a portion of the Medicine Bow Peak motorized closure area and the Gold Hill and Banner Lakes white arrow areas. Like other hunt areas with existing travel restrictions, proper signing would be necessary to prevent confusion as to where game retrieval could and could not occur.

Hunt Area 12 - North West Snowy Range: This hunt area contains the Pennock Mountain area which is excluded from the game retrieval alternative. It also contains the Cedar Pass white arrow area, the Brush Creek Ski Trails motorized closure area, portions of the Medicine Bow Peak motorized closure area, and a portion of the Gold Hill white arrow area. The large number of current motorized restrictions in this hunt area could cause confusion over where game retrieval would and would not be allowed. Signing and maintenance of signs would be costly and time consuming.

### **Laramie Peak:**

Hunt Area 7 - South Laramie Peak: The Laramie Peak motorized closure area, which encompasses the majority of public land in this hunt area, is located in hunt area 7. With the current mix of travel restrictions in hunt area 7, there would be continued confusion to hunters with regards to travel management policy and game retrieval restrictions. There could also be increases in motorized trespass into the non-motorized area by hunters not knowing where the boundary is. It would be cost prohibitive to sign the entire boundary of this area. The mixed land ownership pattern would contribute to the difficulty of signing and maintenance of the boundary.

Hunt Area 20 - Central Laramie Peak: Hunt area 20 contains no current travel management restriction areas. Proposed travel management regulations and the aspects of game retrieval would be much easier for hunters to understand and follow.

Hunt Area 19 - North Laramie Peak: Hunt area 19 contains no current travel management restriction areas. Proposed travel management regulations and the aspects of game retrieval would be much easier for hunters to understand and follow.

### ***ALTERNATIVE 3: Reduce Off-route Travel Restriction from 300 Feet to 100 Feet***

Restricting off-route motorized travel to 100 feet on either side of road or trail for dispersed camping, picnicking, firewood collection, and game retrieval would be inconsistent with current white arrow restrictions on the Brush Creek/Hayden District where the limit is 300 feet. It would, however, be consistent with the Pole Mountain white arrow area.

Some existing dispersed sites would be more difficult to access because they are located outside the 100 feet limit.

Many of our arterial and collector roads have had extensive firewood gathering, and it is becoming difficult to find firewood within 100 feet of the road. Restricting firewood gathering to 100 feet could cause the loss of firewood gathering opportunities.

Restricting dispersed recreational opportunities to 100 feet could eliminate the creation of roads and trails leading to dispersed sites. It seems these sites get pushed farther off the road each year and new roads or trails are created.

Game retrieval should not be significantly affected by reducing the off-route travel allowance from 300 feet to 100 feet.

### ***ALTERNATIVE 4 - Travel Restrictions in the Snowy Range, Sierra Madre, and in Defined Blocks of Land on Laramie Peak.***

The effects listed for the Proposed Action would apply to the blocks of land where off-route travel would be restricted. The effects listed under the No Action alternative would apply to those blocks of land where off-route motorized travel would still be allowed. Site-specific effects with implementation of Alternative 4 would result in the following:

Implementation of this alternative would give preferential treatment to private land owners who have inholdings and/or private land adjacent to areas where off-route motorized travel would not be restricted. Whereas private landowners would be able to enjoy off-route motorized opportunities in these areas, the general public, who do not own private land, would not be able to use the off-route status of these lands unless they were given permission.

The Forest Service would still be obligated to manage the blocks of land where proposed travel restrictions would not apply even though they are difficult to manage due to access and enforcement.

### **C. IRREVERSIBLE and IRRETRIEVABLE IMPACTS**

There would be no irreversible and irretrievable impacts to the recreation resource under any of the proposed alternatives.

### **D. FOREST PLAN CONSISTENCY**

A review of the general direction and Standards and Guidelines listed in the Forest Direction section of the Medicine Bow National Forest Land and Resource Management Plan (Forest Plan) was completed for the recreation resource. Requirements associated with specific Management Area Direction for the recreation resource were also examined.

### ***PROPOSED ACTION: Restrict Motorized Vehicle Use to Designated Routes***

The Proposed Action complies with the Forest Plan as it relates to Management Area 3A, semi-primitive non-motorized (SPNM) areas. Management emphasis in Management Area 3A is for SPNM recreation in roaded and unroaded areas.

The analysis area is comprised of approximately 4,271 SPNM acres. Forest Plan general direction for dispersed recreation management in a 3A area (page III-115) states: "Emphasize SPNM recreation opportunities. Specific land areas or travel routes may be opened seasonally and with specific authorization to accomplish resource management activities. The area is never open for motorized recreation activities except for snowmobiles operating on snow when such use is compatible with the overall recreation and wildlife management objectives." Forest Plan Standards and Guidelines for dispersed recreation management in a 3A area (page III-115) state: "Prohibit or restrict motorized vehicle use."

Forest Plan general direction for dispersed recreation management in Management Areas 5A, 5B, 6A, 6B, 7C, 7E, and 9A states: "Provide semi-primitive non-motorized recreation

opportunities in all areas more than 1/2 mile away from roads and trails open to motorized recreation use." In SPNM settings, snowmobiling is the only type of motorized recreation that is allowed. In areas within 1/2 mile of roads and trails open to motorized use rural, roaded natural, and semi-primitive motorized opportunities can be provided. In rural, roaded natural, and semi-primitive motorized settings, motorized travel may be restricted, seasonally prohibited, or restricted to designated routes to protect physical or biological resources." The Proposed Action complies with Forest Plan general direction as it relates to dispersed recreation management.

#### ***ALTERNATIVE 1: No Action - Existing Travel Regulations Would Remain Unchanged***

Alternative 1 does not comply with the Forest Plan as it relates to management area 3A, semi-primitive non-motorized (SPNM) areas. Forest Plan general direction and Standards and Guidelines for Management Area 3A are described under the Proposed Action.

Alternative 1 does not comply with Forest Plan direction in Management Areas 5A, 5B, 6A, 6B, 7C, 7E, and 9A. Please refer to the Proposed Action for a description of Forest Plan direction in these Management Areas. Alternative 1 does not comply with Forest Plan general direction in those areas farther than 1/2 mile away from roads and trails open to motorized use. However, all other areas within 1/2 mile from roads and trails open for motorized use do comply with Forest Plan general direction for dispersed recreation management.

#### ***ALTERNATIVE 2: Allow Use of Off-route Vehicles for Big Game Retrieval***

Alternative 2 complies with the Forest Plan as it relates to dispersed recreation general direction for areas within 1/2 mile of roads and trails open to motorized use. However, Alternative 2 does not comply with the Forest Plan as it relates to dispersed recreation general direction for those areas farther than 1/2 mile from roads and trails open to motorized use where game retrieval might occur. Further, in Management Area 3A (semi primitive non-motorized), Alternative 2 does not comply with Forest Plan Standards and Guidelines for 3A areas. Forest Plan general direction and Standards and Guidelines for 3A areas and dispersed recreation management are described under the Proposed Action.

#### ***ALTERNATIVE 3: Reduce Off-route Travel Restriction from 300 Feet to 100 Feet***

Alternative 3 complies with the Forest Plan as it relates to the recreation resource.

#### ***ALTERNATIVE 4 - Travel Restrictions in the Snowy Range, Sierra Madre, and in Defined Blocks of Land on Laramie Peak.***

Alternative 4 complies with the Forest Plan in defined blocks where travel restrictions would be enforced. In all other areas, Forest Plan consistency information, as stated under the No Action alternative, would apply.

### **E. CUMULATIVE EFFECTS**

Motorized opportunities would continue to be provided on designated routes and trails on the MBNF. Many of these routes and trails provide a wide range of opportunities for the novice and expert alike.

Past management has resulted in a heavily roaded Forest with ample access opportunities for all types of motorized users and types of equipment. However, allowing off-route motorized use in an already heavily roaded environment has caused many resource concerns. This fact, coupled with effects of other management activities, has made it difficult for resource managers to care for the land.

The elimination of off-route motorized use would have a positive cumulative effect on Forest resources and resource values. Over time, user conflicts, opportunities for solitude, soil and water, and wildlife habitat resources would improve. Without off-route motorized travel restrictions, user conflicts, opportunities for solitude, soil and water, and wildlife habitat resources would continue to degrade.

The overall effect of allowing game retrieval in hunt areas that already have a mix of motorized closures and restrictions would be confusing to the public and would create a difficult management situation.

## **3. LAW ENFORCEMENT**

### **A. ISSUES**

This section provides information related to the following issues identified in Chapter I of this EA:

- *Conflicts between motorized and non-motorized Forest users; and*
- *Inconsistent regulations and lack of consistent signing and law enforcement.*

### **B. EFFECTS ASSOCIATED WITH THE ALTERNATIVES**

#### **Features Common to All Action Alternatives (Proposed Action and Alternatives 2 through 4):**

Changes to the 1985 Travel Management Map would improve law enforcement efforts by providing the public with up-to-date and consistent travel management information Forest-wide. This would decrease the confusion that presently exists with travel management on the Forest, thereby improving the law enforcement contacts Forest Protection Officers (FPOs) and Law Enforcement Officers (LEOs) make with Forest visitors.

#### **Features Common to all Alternatives, Including the No Action Alternative:**

**1) All Federal And Wyoming State laws applying to motorized vehicle use must be followed.**

Title 36 Code of Federal Regulations (CFR), Parts 261.12 and 261.13 regulate the operation of motorized vehicles on Forest Development Roads (FDR) and off FDR roads, respectively. Additionally, Wyoming State Statutes (31-1-101 (E) and (K)) apply to the operation of all motorized vehicles on Forest roads because all designated roads are considered "open roads" by Federal and State law. In order to legally operate an OHV on any designated Forest Service road, the operator must be a licensed driver with a motorcycle endorsement on their license, and the OHV must be legal by State definition, i.e., it must have a license plate attached to the vehicle, the vehicle operator must have proof of insurance, and the OHV must have a head light, tail and brake lights, a rear view mirror, and a horn.

**2) Education and ethics programs regarding travel on the National Forest would be increased.**

Implementation of these types of programs would improve law enforcement efforts. These types of programs generally result in cooperation from the public. Additionally, they increase the public's willingness to report violators to Forest Service personnel.

**3) Forest Service law enforcement efforts would be maintained or increased.**

Success would be dependent on the MBNF's commitment to doing a complete job. A complete job in law enforcement is a three pronged effort which must include all Forest, as well as, enforcement personnel. To be successful on the ground, the three elements that must work together include: 1) Providing the public with consistent and up-to-date education and travel management information; 2) Prevention through complete and on-the-ground engineering (i.e., proper closures, proper signing, and on-going maintenance of closures, signs, etc.); and 3) Fair, consistent, and progressive enforcement with support from Forest personnel.

**4) Forest users would be involved with regulation enforcement through peer pressure and information gathering. Clubs, manufacturers, individuals, and retailers would be asked to help.**

Successful implementation of this element would be in direct proportion to the effort put forth through public education by the Forest Service and OHV organizations. Over the past 3 to 4 years, the public has reported a greater number of violations. In part, this has been due to the "Tread Lightly" educational programs presented by the Forest Service. It is reasonable to assume

that peer pressure would continue with educational programs and citizen assistance to law enforcement.

### **Specific Effects Associated With the Alternatives:**

#### **PROPOSED ACTION: *Restrict Motorized Vehicle Use to Designated Routes***

The effects of implementing the Proposed Action would benefit law enforcement in three areas: 1) It would eliminate existing confusion and ambiguity over a large portion of the Forest where different travel management restrictions are currently applied; 2) It would allow consistent and uniform enforcement of regulations across the Forest; and 3) It would reduce the enforcement arguments presented by Forest users when a law enforcement contact related to OHV use is made by a FPO or a LEO.

#### **ALTERNATIVE 1: *No Action - Existing Travel Regulations Would Remain Unchanged***

Implementation of the No Action alternative would keep the status-quo related to law enforcement and motorized travel on and off Forest roads.

Currently, we do not have a Title 36 CFR, Part 261.12, Subpart A, prohibition which regulates motor vehicle (e.g. OHVs) operation on FDRs and trails. There are, however, Subpart A prohibitions that could apply to the operation of motorized vehicles off of Forest routes (i.e., 36 CFR 261.13). Generally, FPOs and LEOs have not used these prohibitions to regulate operation of OHVs off-route.

The confusion related to travel management areas, and restrictions on those areas, would remain with implementation of the No Action alternative.

In the past, the No Action alternative has created confrontational situations between enforcement personnel and Forest users because of a misunderstanding on the users part about what restrictions apply and interpretation of the regulations. Implementation of the No Action alternative would allow these situations to continue.

#### **ALTERNATIVE 2: *Allow Use of Off-route Vehicles for Big Game Retrieval***

Implementation of this alternative would create an unenforceable situation for law enforcement personnel for several reasons. Some of the major problems would be:

- How, and who, would determine when resource damage occurs;
- At current funding levels, there are not enough FPO or LEO personnel to monitor and enforce the time limitations associated with Alternative 2;
- Pursuant to current Forest Service policy, FPOs may only perform enforcement duties in pairs during non-daylight hours. LEOs, on the other hand, may perform enforcement

duties after daylight hours. Because there is only one field LEO assigned to the entire Forest, enforcement of the 1/2 hour after sunset to midnight allowance of OHVs behind locked gates would be unenforceable; and

- Without a firearm restriction while using an OHV to retrieve a downed animal, we would be allowing (by default) hunters to hunt from an OHV while a second individual retrieves the downed animal.

Because of these problems, Alternative 2 would create a no-win situation for law enforcement personnel.

### ***ALTERNATIVE 3: Reduce Off-route Travel Restriction from 300 Feet to 100 Feet***

The only gray area subject to interpretation under Alternative 3 would be what constitutes resource damage. This determination would be left to the discretion of law enforcement personnel.

Implementation of Alternative 3 would greatly simplify the interpretation of what constitutes a violation of travel management regulations for Forest users and FPO and LEO personnel. It would also create consistent management on the Forest with respect to the Pole Mountain area where we currently restrict off-route travel to 100 feet or less.

### ***ALTERNATIVE 4 - Travel Restrictions in the Snowy Range, Sierra Madre, and in Defined Blocks of Land on Laramie Peak***

Implementation of Alternative 4 has the potential to confuse the public, thereby creating confrontational situations between Forest users and FPO and LEO personnel. This would be particularly true when the Forest user is not from the local area and would be unfamiliar with the area he or she is using.

### **C. IRREVERSIBLE and IRRETRIEVABLE IMPACTS**

There would be no irreversible and irretrievable impacts to law enforcement under any of the proposed alternatives.

### **D. FOREST PLAN CONSISTENCY**

All of the alternatives, as they relate to law enforcement, are consistent with the Forest Plan.

### **E. CUMULATIVE EFFECTS**

Under all alternatives, increased public education efforts and more consistent enforcement of Forest-wide travel management regulations would reduce confrontations between Forest users and FPO and LEO personnel. The greatest improvements would be seen under the Proposed

Action and Alternative 3 since consistent travel management regulations would apply across the entire Forest. Although improved conditions would still be realized under the remaining alternatives, the effects would not be as great since travel regulations would be different in different areas of the Forest. Consequently, there would still be some degree of confusion and confrontations.

## **4. WILDLIFE**

### **A. ISSUES**

This section provides information related to the following issues identified in Chapter I of this EA:

- *Wildlife habitat effectiveness;*
- *Game retrieval opportunities;*
- *Conflicts between motorized and non-motorized Forest users;*
- *Conflicts with private landowners; and*
- *Adverse resource impacts caused by unrestricted off-route vehicular use.*

### **B. EFFECTS ASSOCIATED WITH THE ALTERNATIVES**

#### **PROPOSED ACTION: *Restrict Motorized Vehicle Use to Designated Routes***

##### **Effects Common to the Entire Analysis Area:**

Under the Proposed Action, roaded access would change minimally since no roads or trails would be added to the FTS and only user-created roads and trails causing unacceptable resource impacts would be immediately closed. Therefore, the effects of existing open roads on wildlife and wildlife habitats would not change substantially. However, the reduction in off-route motorized vehicle use that would occur under the Proposed Action would have a positive effect on wildlife and wildlife habitats. For example, implementation of the Proposed Action would allow off-route motorized travel on only 138,691 of the 762,670 acres currently available for such activity (see Table 13, page 54).

##### **Site-specific Effects (Pennock Mountain and Spring Creek Representative Areas):**

As mentioned on page 54 of this EA, the Pennock Mountain and Spring Creek areas were selected for site-specific analysis. Management activities, recreational opportunities, and user-created roads in these areas are similar to what can be found in other areas of the Forest.

Therefore, the effects of the alternatives on these areas provide a general estimate of the effects that could be expected in other areas of the Forest.

Table 16 contains a summary of the roads contained in the two representative areas. Included in this Table is information on open, closed, and obliterated road miles, as well as unadjusted and adjusted open road densities.

**Table 16. Miles of Open, Closed, and Obliterated Roads and Adjusted and Unadjusted Open Road Densities (mi./sq. mi.) in the Pennock and Spring Creek Representative Areas.**

Watershed	Area (sq. mi.)	Open Road Miles	Closed Road Miles	Obliterated Miles	Total Road Miles	Unadjusted Open Road Density	Adjusted Road Open Density
Pennock	30.49	49.41	3.92	6.82	60.15	1.62	0.20
Spring Ck	43.82	62.86	43.99	36.39	143.24	1.43	0.68

The Pennock and Spring Creek areas have approximately 49.4 and 62.9 miles of open road, respectively, which equates to unadjusted open road densities of 1.62 and 1.43 miles per square miles, respectively. The difference between adjusted and unadjusted open road density values is based on the amount of use (Forest Plan, page III-76) which represents the amount of disturbance from traffic on open roads. The amount of access provided by open roads, as measured by unadjusted open road density, is slightly higher in the Pennock area which has had little timber harvest in the past.

One difference between the two areas is that most of the recently created roads in the Spring Creek area have been properly engineered and designed for management activities associated with the timber program. Most of these roads were closed upon completion of timber harvest. Approximately 28.6 miles of user-created roads (20 percent of the 143 total miles) exist in this area. Only 0.75 miles have been created since 1985.

In the Pennock area, the estimate for user-created roads is 51.2 miles (85 percent of the 60 total miles). Many of these are historic, and we do not have accurate records on either the creation date or the dates when the roads were inventoried. However, 13.3 miles of roads and trails that were not previously on our system were inventoried in 1997. Thus, it would be safe to assume that this represents a minimum estimate of those created since 1985.

Under the Proposed Action, effects on wildlife and wildlife habitats from existing open motorized roads and trails would be similar. This assertion is based on unadjusted open road densities since these values are similar in the two representative areas. The greatest difference between the two areas would be the end of future user-created roads (assuming effective compliance and enforcement) in the Pennock area. This did not appear to be as big of a problem in the Spring Creek area, which over the years has had a well-developed road system.

### Elk Security Areas

Hillis et al. (1991) state that elk security areas should be at least 250 acres in size. Roughly 30 percent of the Forest should be maintained as security areas if the Forest is to be managed for

effective elk habitat. If existing security areas are smaller than 250 acres, management activities should be directed to achieve larger blocks. Effectiveness declines if the security area is within one-half mile of open roads or if closed roads bisect the area. Terrain features can mitigate impacts of roads to some degree. Security is defined as the protection, in any situation, that allows elk to remain in a defined area despite an increase in stress or disturbance associated with hunting or other human activities (Lyon and Christensen 1990). The current Forest Plan does not have a land allocation for specific security areas. Designation of such areas would have to be accomplished through the Forest Planning process.

The Pennock and Spring Creek areas were analyzed using one criterion for elk security areas. A geographic information system (GIS) was used to measure how much of the two areas are within one-half mile of an open road or motorized trail. Table 17 shows the amount of the Pennock and Spring Creek areas that are within one-half mile of an open road or motorized trail. Based on this single criterion, a relatively small portion of these areas fits the definition of elk security area.

**Table 17. Amount of Area Within 1/2 mile of an Open Road or Motorized Trail in the Pennock and Spring Creek Representative Areas.**

<b>Watershed</b>	<b>Total Area (acres)</b>	<b>Acres (%) Within 1/2 Mile of Open Road or Motorized Trail</b>
Pennock	19,514	17,621 (90.3)
Spring Creek	28,043	22,553 (80.4)

Even though total road miles in the Spring Creek area is higher than in Pennock Mountain, a greater proportion of the Spring Creek area is greater than one-half mile from an open road. The reason for this is simple: Under a highly managed transportation system, like that of Spring Creek, many of the roads that were constructed for timber harvest were closed after the sale (see Table 16, page 82). Conversely, the Pennock Mountain area has experienced increased road miles, primarily user-created roads, with few closures or obliterations (see Glossary).

Because of Forest Plan Management Area emphases, areas like Pennock Mountain have the greatest potential to contribute to security habitat for elk. Management Areas contained within the Pennock Mountain area include: Habitat for management indicator species (4B), forested and non-forested winter range (5A and 5B), aspen management (4D), and riparian management (9A). However, continued increases in off-route motorized travel and user-created roads occurring as a result of existing travel regulations are not consistent with these Management Area emphases. Consequently, by restricting motorized travel to designated routes, the Proposed Action would make areas like Pennock Mountain consistent with Forest Plan Management Area emphases. It would also increase elk security habitat by reducing future user-created roads which, in effect, would increase the amount of undisturbed acres that are more than one-half mile from a road.

### **Elk Habitat Effectiveness**

Elk habitat effectiveness is another measure of the ability of different habitats to meet elk growth and welfare requirements. Elk habitat effectiveness in and of itself is often misapplied as a measure of security during hunting season. Habitat effectiveness is defined as the percentage of available habitat that is usable by elk outside the hunting season (Lyon and Christensen 1992). Summer range includes the habitat used by elk from about late green-up until they move to winter ranges. Summer range is the complete matrix upon which elk herds depend for growth, reproduction, and thrift. Management focus is on maintaining the ability of the habitat to meet elk needs for forage, water, seclusion, and special features such as licks and moist areas (Christensen et al. 1993). Forest Service lands that support summer range are the basis for State elk management. Elk security areas and elk and deer habitat effectiveness are further discussed in the Wildlife cumulative effects section.

### ***ALTERNATIVE 1: No Action - Existing Travel Regulations Would Remain Unchanged***

The 762,670 acres subject to travel restrictions in the Proposed Action would remain open to off-route motorized travel (see Table 13, page 55) under the No Action alternative. A variety of unrestricted cross country motorized recreational opportunities would continue to be available. Many hunting and fishing areas would continue to be accessed by motorized means. Hunters would be able to retrieve downed game with any motorized means in areas open to off-route travel provided that resource damage does not occur.

All of the open roads (1,907 miles) identified in Table 12 (page 54) would continue to be available for motorized travel. Although it would still be illegal to drive on the closed roads identified in Table 12, it would be legal to drive beside them.

It is assumed that Forest use, as well as amounts of motorized off-route vehicle use, would continue to increase. Consequently, there would be a corresponding loss of opportunities for solitude to dispersed recreationists and continued conflicts between Forest visitors. These are two factors that appear to increase off-route motorized use into more secluded areas as people search for solitude. When access to these areas receives repeated use, the result is a continued proliferation of user-created roads and motorized trails.

Under these circumstances, resource degradation would continue in the form of disturbance to wildlife and damage to wildlife habitats, including the soil and water resources. As more and more habitats that were once remote and secure become easily accessible, elk habitat effectiveness would continue to decline. The displacement of wildlife to private lands can be expected to continue or increase.

### ***ALTERNATIVE 2: Allow Use of Off-route Vehicles for Big Game Retrieval***

#### **Effects Common to the Entire Analysis Area:**

All aspects of the Proposed Action apply to Alternative 2. The only difference between the two alternatives is that under Alternative 2, off-route motorized vehicles 48 inches in width or less

would be allowed to travel off of designated roads and trails during the big game hunting season. Off-route motorized travel would be allowed for game retrieval only, providing resource damage does not occur. For the purposes of this alternative, big game is defined as elk, deer, antelope, moose, and bighorn sheep. Aspects of Alternative 2 are described on pages 86 and 87 of this EA.

Differences between this alternative and the No Action alternative explain some of the rationale for the game retrieval alternative. Under the No Action alternative (Alternative 1), unlimited off-route motorized access would continue for a variety of recreational activities including, hunting, accessing remote hunting or fishing areas, game retrieval, sight-seeing, exploring, hill climbing, etc. This use would occur during the entire snow-free period. Under Alternative 2, off-route motorized travel beyond the 300 foot limit would occur only while retrieving downed big game animals during fall hunting seasons. The assumption is that this level of off-route motorized use represents a significant reduction in the amount of use that currently exists. Thus, it is assumed that reduced off-route motorized opportunities would stop or reduce impacts to wildlife habitat effectiveness, resource damage, and conflicts with various Forest users and landowners. However, non-compliance and effective enforcement are potential problems associated with game retrieval.

The aspects associated with Alternative 2 were developed to minimize impacts of game retrieval and to help ensure compliance with travel management regulations.

- The 48 inch vehicle width was included to restrict game retrieval primarily to ATVs. ATVs are smaller, lighter, and have lower tire air pressure than full-sized vehicles; consequently, their use results in fewer resource impacts. Some motorcycle use for game retrieval could also be expected to occur;
- Allowing ATVs behind gated roads (the off-route vehicle would have to find its way around the gate) was included to reduce resource damage. It is assumed that motorized use of gated roads would result in less cross-country, hence less resource damage;
- The time restrictions were included to reduce disturbance to wildlife and to reduce conflicts between successful hunters transporting game and those still hunting. Even though hunting occurs throughout the day, the morning and evening periods are generally the preferred and most successful periods. The evening retrieval period would end at midnight in order to give animals a period of time free from disturbance. Big game animals often feed and travel at night;
- The validated carcass tag requirement was included to ensure that hunters are actually retrieving a downed animal and to discourage people to hunt from their ATV. This requirement is consistent with Wyoming Game and Fish Department (WGFD) regulations; and
- The one vehicle requirement was designed to minimize the amount of motorized disturbance at any one time and to further reduce the temptation for an accompanying hunter to hunt from an ATV.

All of the effects described under the Proposed Action would apply to Alternative 2. Additional differences between the Proposed Action and Alternative 2 are described below.

**Effects by Mountain Range and Hunt Areas:**

Since game retrieval is an activity strictly associated with hunting, the effects were analyzed on a WGFD elk hunt area basis. Table 18 displays, by mountain range, hunt areas that could potentially be affected by this alternative.

**Table 18. Acres and Percent of Each Mountain Range, by WGFD Elk Hunt Area, That Could be Affected by Alternative 2.**

Mtn. Range/ Hunt Area	No Restriction	All Off-route Except Snowmobiles	All Off-route	Wilderness Area	Hunt Area Total Acres
<b>Sierra Madre</b>					
HA 13	48,391 (100)	7 (T)	0	0	48,398
HA 14	51,011 (68)	2,456 (3)	0	21,807 (29)	75,275
HA 15	55,953 (99)	581 (1)	0	0	56,534
HA 21	89,533 (49)	73,183 (40)	0	19,380 (11)	182,096
<b>Snowy Range</b>					
HA 9	112,137 (81)	3,900 (3)	23,172 (17)	0	139,209
HA 10	53,281 (83)	10,854 (17)	0	0	64,135
HA 11	36,083 (63)	21,235 (37)	0	0	57,318
HA 12	46,725 (50)	30,095 (32)	17,100 (18)	0	93,920
HA 110	138,565 (78)	1,897 (1)	0	37,473 (21)	177,935
<b>Laramie Peak</b>					
HA 7	37,548 (60)	24,963 (40)	0	0	62,511
HA 19	8,989 (100)	0	0	0	8,989
HA 20	107,608 (100)	0	0	0	107,608
<b>Pole Mtn.</b>					
HA 6	0	55,184 (100)	0	0	55,184

Sierra Madre:

Although game retrieval would be allowed in almost all of hunt areas 13 and 15, it would only be allowed in 68 percent of hunt area 14. The Encampment River Wilderness area and part of the Huston Park Wilderness area occupy 29 percent of hunt area 14, while another 3 percent of the hunt area currently has off-route travel restrictions in place. Game retrieval would be allowed in 49 percent of hunt area 21. The Huston Park Wilderness Area occupies 11 percent of hunt area 21 and, another 40 percent of the hunt area has existing off-route travel restrictions in place. Hunt area 21, which is on the west side of the Sierra Madre Mountains, has been identified as an area where a lot of off-route motorized travel and proliferation of user created roads has occurred. Please refer to the Transportation System analysis for a more detailed discussion of the locations of user-created roads.

Snowy Range:

Under Alternative 2, game retrieval would be allowed in approximately 80 percent of Snowy Range hunt areas 9, 10, and 110. The portions of hunt areas 9 and 10 that have existing off-route travel restrictions are in white-arrow areas. In hunt area 110, most of the existing restrictions are in the Savage Run and Platte River Wilderness Areas. Game retrieval would be allowed in 63 and 50 percent of hunt areas 11 and 12, respectively. The remaining portions of these two hunt areas have existing travel restrictions.

### Laramie Peak:

Game retrieval would be allowed throughout hunt areas 19 and 20 in the Laramie Peak area. However, game retrieval would be allowed in only 60 percent of hunt area 7, since the remaining 40 percent has off-route travel restrictions in place (e.g., Ashenfelder Basin and South Mountain areas).

As stated in Chapter II and at the beginning of Chapter IV, implementation of Alternative 2 (or any alternative) could occur in several ways: 1) Implementation on the entire 762,670 acres that currently do not have travel restrictions in place; 2) Implementation by mountain range; or 3) Implementation by hunt area. If implemented by mountain range, some confusion could result since all three mountain ranges contain existing white-arrow areas. Since most hunters generally know what hunt area they are in, implementation at the hunt area level may provide a convenient opportunity for full or partial implementation of Alternative 2.

Due to existing travel regulations, game retrieval would be easier to comprehend and enforce in certain hunt areas than others. For example, in the Snowy Range, hunt areas 9, 10, 11, and 12 all contain a fairly high proportion of areas outside of wilderness that have existing travel restrictions in place (17 to 50 percent). Since game retrieval would not be allowed in restricted areas, knowing where game retrieval could occur could be confusing. On the other hand, 22 percent of hunt area 110 contains existing travel restrictions; however, 21 percent of the restricted area is in wilderness (see Table 18). Generally, hunters are aware of wilderness areas and of the rules and regulations that apply. Furthermore, wilderness areas are well marked on the MBNF visitor maps as well as on the ground. Since this leaves only about one percent of hunt area 110 that contains existing travel regulations (white-arrow) outside of wilderness areas, game retrieval would be easy to understand and enforce in this hunt area. For similar reasons, game retrieval opportunities in hunt areas 13 and 15 in the Sierra Madre mountains, and in hunt area 20 in the Laramie Peak area, would be easy to comprehend and enforce. For the most part, these areas do not have existing travel regulations in place; therefore, game retrieval could occur throughout most of these areas.

Of the 762,670 acres that currently do not have travel restrictions in place, 746,433 would remain open to limited off-route motorized travel under Alternative 2 (Table 13, page 55). As in the Proposed Action, off-route travel would be allowed within 300 feet of designated routes for purposes such as dispersed camping and firewood gathering. The remainder of the area, beyond the 300 foot limit, would also be open to off-route motorized travel for the purposes of game retrieval during the hunting season. There is, however, one exception. In the Pennock Mountain area, off-route motorized travel would be restricted to within 300 feet of designated roads and trails exclusively. No game retrieval beyond 300 feet would be allowed. Under this alternative, open road access in the 762,670 acre area affected by the proposed regulation changes would still be 1,907 miles in the summer. However, due to existing area closures during hunting season in the Battle Creek, Beaver/Etna, and Bear Creek areas, open road access is 1,820 miles during the hunting season (see Table 23, page 100).

Table 12 (page 54) shows the miles of open and closed roads in the 762,670 acre area currently open to off-route motorized travel. Under Alternative 2, all open and closed roads (2,409 miles) would be legally accessible for motorized travel. It is possible that some obliterated roads could also be driven on.

**Site-specific Effects (Pennock Mountain and Spring Creek Representative Areas):**

An examination of the road information contained in Table 14 (page 57) indicates the range of effects that Alternative 2 could have on areas having different management emphases. The Pennock Mountain area has 49.41 miles of open roads, 3.92 miles of closed roads, and 6.82 miles of obliterated roads for a total road density of 60.15 miles. The Spring Creek area has 62.86 miles of open roads, 43.99 miles of closed roads, and 36.39 miles of obliterated roads for a total road density of 143.24 miles.

Obviously, all open roads in these areas would be available for game retrieval under Alternative 2. All of the closed roads (gated) could also be available for game retrieval. The reason obliterated roads are listed in this part of the analysis is as follows. In some cases, roads are totally obliterated. Total obliteration involves deep ripping of the road prism, recontouring, and seeding. Since road construction involves a large financial investment, and there may be a need for the road for multiple-use management activities in future decades, frequently only a short segment at the beginning of the road is obliterated and obstructed. The remaining portion of the road is left intact and allowed to revegetate naturally. Sometimes surface scarification and seeding treatments are applied to speed up revegetation and stabilization processes, but the road prism is left intact for future use. Many of these obliterated roads are still passable by an ATV and could potentially be driven on for the purposes of game retrieval if Alternative 2 is selected. Therefore, the amount of open, closed, and obliterated roads that are potentially available for game retrieval add up to 60.15 miles in the Pennock area and 143.24 in the Spring Creek area.

One advantage of allowing motorized travel behind gated roads (the off-route vehicle would have to find its way around the gate or obstruction) is that less cross-country travel would be expected. On the other hand, a disadvantage is that there is potential for damage to recovering vegetation on closed or obliterated roads. These closures were designed to meet specific wildlife habitat needs, provide areas of non-motorized recreation, or address soil and water concerns. This could also represent significant financial loss on those that have been recontoured, scarified, and/or seeded.

**ALTERNATIVE 3: *Reduce Off-route Travel Restriction from 300 Feet to 100 Feet***

**Effects Common to the Entire Analysis Area:**

Alternative 3 is very similar to the Proposed Action. The only difference is that motorized travel off of designated routes would be reduced from 300 feet to 100 feet, providing resource damage does not occur. The reason for the development of this alternative is because many people felt that the restrictions contained in the Proposed Action did not go far enough in reducing the effects of off-route motorized travel. In addition, many people desired that the user-created roads that have appeared in the last 10-20 years be closed and obliterated. Road closure,

however, is not part of the Proposed Action. Any road closures, openings, or design of new motorized trails would occur in future, more site-specific analyses.

The effects of this alternative would be similar to those described under the Proposed Action. Under Alternative 3, 6 percent (46,230 acres) of the 762,670 acre area not currently subject to off-route motorized travel restrictions would still have some off-route motorized access (Table 13, page 55). This estimate is based on the total miles of open roads and motorized trails in the affected area (Table 12, page 54), and the 100 foot buffer on either side of these roads where off-route travel would be permitted for activities such as dispersed camping, firewood gathering, game retrieval, and picnicking.

Compared to the Proposed Action and the other alternatives, Alternative 3 would have the least impact on wildlife and wildlife habitats, including soil and water resources.

#### **Site-specific Effects (Pennock Mountain and Spring Creek Representative Areas):**

The effects of Alternative 3 were also analyzed for the Pennock and Spring Creek analysis areas. Under Alternative 3, 5.9 percent (1,159 acres) of the Pennock area and 5.3 percent (1,480 acres) of the Spring Creek area would still have off-route motorized access. This estimate is based on the total miles of open roads and motorized trails in these watersheds (Table 14, page 57), and the 100 foot buffer on either side of these roads where off-route travel is permitted for activities such as dispersed camping, firewood gathering, game retrieval, and picnicking.

#### **ALTERNATIVE 4 - *Travel Restrictions in the Snowy Range, Sierra Madre, and in Defined Blocks of Land on Laramie Peak.***

##### **Effects Common to the Entire Analysis Area:**

Under Alternative 4, all aspects of the Proposed Action would apply in the Snowy Range and Sierra Madre Mountains. However, aspects of the Proposed Action would apply only to defined blocks of land in the Laramie Peak area.

This alternative is essentially the same as the Proposed Action with one exception; under this alternative, the amount of acres affected in the Laramie Peak area would be less than in the Proposed Action. Rather than 179,108 acres of NFS lands affected by the Proposed Action, as shown in Table 9 (page 53), only 137,942 acres of the Laramie Peak area would be affected under Alternative 4. The areas that were dropped from the Laramie Peak area under Alternative 4 are primarily isolated parcels of NFS lands that have little or no roaded access, or where the USFS does not have legal easements across private lands.

As mentioned above, portions of the Laramie Peak area would not be affected by the proposed regulation changes under Alternative 4. Tables 13 (page 55) and 23 (page 101) show that 132,509 acres in the area affected by the proposed changes (762,670 total acres) would still have off-route motorized access. This estimate is based on the total miles of open roads and motorized trails in the affected area and the 300 foot buffer on either side of these roads where

off-route travel would be permitted for activities such as dispersed camping, firewood gathering, and game retrieval. This may appear more restrictive than the Proposed Action; however, Alternative 4 is actually less restrictive than the Proposed action since the area in which the proposed regulation changes would have an effect is smaller. In terms of the entire 762,670 acre area, 41,166 acres of the Laramie Peak area were not included in the defined blocks under Alternative 4. These acres would still be available for off-route motorized access, bringing the total of acres available for off-route motorized travel up to 173,675 acres under this alternative. Similarly, open road access in the entire 762,670 acre area would still be 1,907 miles under Alternative 4. However, in the smaller, specific areas affected by the proposed regulation changes (which excludes portions of the Laramie Peak area), open road access would be 1,822 miles (see Table 23).

The effects of this alternative on wildlife and wildlife habitats would be very similar to the Proposed Action. The difference between this alternative and the Proposed Action would be that the areas outside of the "included blocks" would, in effect, be treated the same as if the No Action alternative were selected. However, the effects would be small because high levels of off-route use do not occur in the excluded areas due to their isolated nature and/or their limited public access.

#### **C. IRREVERSIBLE and IRRETRIEVABLE IMPACTS**

None of the alternatives analyzed in this EA would result in irreversible and irretrievable impacts to the wildlife resource. Although the proliferation of user-created routes would likely continue if the No Action alternative or Alternatives 2 and 4 were selected, the resulting effect of reduced habitat effectiveness would not be irreversible or irretrievable. This effect could be reversed, over time, if a future decision were to restrict off-route motorized travel across the entire Forest.

#### **D. FOREST PLAN CONSISTENCY**

Since no habitat alterations are associated with the Proposed Action, most of the Forest Plan Standards and Guidelines associated with hiding cover, thermal cover, foraging areas, and habitat improvements would not be affected. Habitat effectiveness is one exception since it is affected by roads and motorized travel. As stated in the Existing Condition Report for Wildlife (March 23, 1998, report page 6), the analysis of the effects of the Proposed Action and the alternatives on wildlife resources focuses on changes in motorized use patterns on the MBNF. Motorized use has a high potential to affect wildlife and wildlife habitats.

Both the General Direction and Standards and Guidelines listed in the Forest Direction and Management Area Direction sections of the Forest Plan were reviewed. The Proposed Action and each of the alternatives were evaluated for compliance with the requirements of the Forest Plan. Some of the General Direction and Standards and Guidelines pertinent to this analysis are contained in Appendix B. General Direction and associated Standards and Guidelines in the Forest Direction section are applicable across the Forest and generally represent minimum requirements. General Direction and associated Standards and Guidelines listed under the Management Area Direction section of Appendix B are often more stringent to meet specific management area resource management objectives.

Table 19 contains an evaluation of Forest Plan consistency for the Proposed Action as well as all of the alternatives. It is based on a review of Forest Plan General Direction and Standards and Guidelines pertaining to the effects on wildlife and wildlife habitats contained in Appendix B.

**Table 19. Forest Plan Consistency for the Proposed Action and the Alternatives. C = compliance. NC = non-compliance. PC = possible compliance. See text for further discussion.**

<b>Proposed Action</b>	<b>Alternative 1</b>	<b>Alternative 2</b>	<b>Alternative 3</b>	<b>Alternative 4</b>
C	NC	PC	C	C

The Proposed Action and Alternatives 3 and 4 comply with Forest Plan Standards and Guidelines related to wildlife and wildlife habitats. Alternative 2 is in possible compliance. Alternative 2 carries one assumption that, if true, would indicate compliance with Forest Plan Standards and Guidelines. This assumption is that the effects of off-route motorized travel associated with game retrieval (only) beyond the 300 foot buffer allowed for other off-route activities would be low enough that the problems identified in the Purpose and Need statement (pages 10 and 11) would not continue. If this alternative is selected, a recommended mitigation item would be to monitor these effects for at least 3 years after implementation. If wildlife habitat effectiveness, user conflicts, landowner conflicts, or resource damage problems continue, then game retrieval should be revoked.

Finally, this analysis indicates that Alternative 1 (No Action) is not consistent with the Forest Plan. Continued unlimited, unrestricted off-route motorized travel would result in the continuation or increase of the problems identified in the Purpose and Need statement. It would result in a continued proliferation of user-created motorized trails. It would lead to a continued decline in wildlife habitat effectiveness (see discussion in cumulative effects section). It would also lead to continued resource damage. It would not be consistent with resource management objectives contained in the Forest Direction section of the Forest Plan, nor with Management Area Direction, especially for Management Areas 3A, 4B, 4D, 5A, 5B, and 9A (please refer to Appendix B).

**E. CUMULATIVE EFFECTS**

**Effects Common to the Entire Analysis Area:**

The appearance of the existing landscape is the product of natural events such as fire and plant successional processes, as well as the effects of human related activities such as wildfire, timber harvest, grazing of domestic animals, fire suppression, road building, and recreational activities. The existing condition represents the cumulative effects of these natural and human caused processes and events. Since the combined environmental effects of all human related activities may be more substantial than those caused by individual actions, cumulative effects must be considered.

In general, the Council on Environmental Quality sees the off-route vehicle problem as one of the most serious public land use problems that we face... (Sheridan 1979, cited in Bury 1980).

Multiple negative factors on wildlife must be considered. Off-route vehicles do not operate in a vacuum nor in areas unused for other purposes. For example, wildlife populations on public lands are subject to hunting or control activities in some places (certain predators). They are also in competition with livestock for food, water, and cover. Wildlife may be restricted in range or carrying capacity due to agriculture, roadways, and habitat alteration. Thus, off-route vehicle disruption of habitat is an additional factor interacting with several other forces detrimental to wildlife (Bury 1980).

Knight and Cole (1991) suggest three ways that animals can be impacted by recreational activities, including habitat modification, pollution, and disturbance. Recreational activities can result in habitat modification by disturbing vegetation and soil and by changing microclimates. Another way recreational activities alter wildlife is through pollution, such as people discarding food or deliberately feeding animals. Finally, wildlife can be affected by recreationists through disturbance. Disturbance can be intentional (e.g., photographing wildlife, nature viewing, hiking through an animal's territory) or unintentional. Unintentional disturbance is probably the primary means by which nonconsumptive recreational activities impact wildlife.

The most extreme, immediate wildlife response to recreational disturbance is death. Although this is the intended result of consumptive activities, nonconsumptive activities can also result in the death of animals. In general, however, this is not a significant effect (Knight and Cole 1991). Another immediate response of wildlife to recreational disturbance is change in behavior. One behavioral change is abandonment of disturbed areas in favor of undisturbed sites (Knight and Cole 1991). Elk tend to be more disturbed by people engaged with out-of-vehicle activities than by traffic or equipment on Forest Service system roads. Logging and recreation roads with traffic moving mostly during the daytime had little effect on elk activity within 400 meters once elk became used to them. Elk preferred to be at least one-half mile from out-of-vehicle human activities (Ward 1973, 1976, 1985).

Displacement into new environments can lead to a number of further behavioral changes, such as altered feeding ecology. On the MBNF, Ward (1985) showed that when displaced, elk often move to other areas that are already occupied, placing additional demands on food supplies. New access routes with no traffic controls are the most serious problems contributing to this situation. Increased off-route motorized access on the Forest can worsen the problem. For example, Yarmoloy et al. (1988) disturbed radio-collared female mule deer with an ATV and noted that harassed deer altered feeding and spatial-use patterns, while undisturbed animals maintained normal usage. The harassed mule deer shifted feeding times more into the night, used cover more frequently, left their home ranges more often, and increased flight distance from the ATV. Additionally, disturbed deer experienced decreased reproduction the following year.

Disturbance can also reduce the vigor of individuals and ultimately result in death. Elevated heart rates, energy expended in disturbance flights, and reduction of energy input through disturbance will all increase energy expenditures or decrease energy acquisition (Knight and Cole 1991, MacArthur et al. 1982, Gabrielsen and Smith 1995, Ward and Cupal 1979).

To reduce recreation-related displacement, managers should control the proximity, frequency, duration, and seasonal timing of disturbances (Gutzwiller 1995). The severity of most

recreational impacts on animal habitat is influenced by the amount of use that occurs. Since impact levels generally increase as use levels increase, indirect influences on wildlife could be limited by controlling the amount of recreation allowed. The nature and severity of recreational impacts are influenced by both the type and spatial extent of use. Motorized recreational activities are generally much more disruptive than non-motorized activities. Motorized use can be prohibited in areas of concern or restricted to particular roads, trails or locations. This confinement strategy is one of the most commonly employed techniques in recreation management (Cole and Landres 1995).

### Elk Security Areas

Elk security areas were examined for the Pennock Mountain and Spring Creek areas. A geographic information system (GIS) was also used to analyze the amount of security habitat existing in the three mountain ranges included in this analysis. The analysis is for the entire mountain ranges and not just the area that could be affected by the Proposed Action (762,670 acres). Maps 9, 10, and 11 show elk security areas for the Snowy Range, Sierra Madre Mountains, and Laramie Peak area, respectively. Table 20 shows the corresponding acres and percentages of each mountain range that provide security habitat. Maps 9 through 11 and the data in Table 20 are also broken down by elk hunt area.

**Table 20. Acres (and Percent) of Elk Security Areas Shown by Mountain Range and by Hunt Area.**

Mountain Range	Hunt Area	Security Areas	Total Acres At Least 1/4 Mile From an Open Road
<b>Sierra Madre</b>	13	10,838 (22)	23,525 (49)
	14	34,432 (46)	49,426 (66)
	15	12,397 (22)	27,750 (49)
	21	59,488 (33)	97,699 (54)
<b>Total:</b>		117,155 (32)	198,400 (55)
<b>Snowy Range</b>	9	32,106 (23)	55,356 (40)
	10	27,734 (43)	41,386 (65)
	11	20,314 (35)	31,045 (54)
	12	8,551 (9)	31,094 (33)
	110	41,903 (24)	77,329 (43)
<b>Total:</b>		130,608 (25)	236,210 (44)
<b>Laramie Peak</b>	7	26,905 (43)	39,607 (63)
	19	3,140 (35)	5,173 (58)
	20	44,810 (42)	71,280 (66)
<b>Total:</b>		74,855 (42)	116,060 (65)

Security areas shown in Maps 9 through 11 and described in Table 20, are blocks of habitat at least 250 acres in size and are at least one-half mile from an open road, as described by Hillis et al. (1991). Additional areas that are at least one-fourth mile from an open road are also shown in order to depict the amount of area with little or no effect on elk from motorized traffic on open Forest roads, as described by Ward (1973, 1976, 1985). It should be noted that the areas at least

one-fourth mile from an open road are not the same as security areas. They are shown for information and comparative purposes only.

The amount of area providing elk security habitat ranges between 22 and 46 percent in all hunt areas on the MBNF with one exception; hunt area 12 in the Snowy Range provides nine percent (see Table 20). Similarly, the amount of elk security habitat by mountain range ranges from 25 to 42 percent. The Laramie Peak area has the highest percent (42) of NFS lands providing elk security, and the Sierra Madre has the greatest number of acres at 117,155. However, this represents only 32 percent of NFS lands.

Much of the area providing elk security habitat is associated with wilderness areas, former RARE II (roadless) areas, the Sheep Mountain wildlife refuge, and the Ashenfelder Basin area. Much of the elk security habitat outside of these areas contains closed timber sale roads, which lessens their value as elk security to some degree.

**[Map 9. Snowy Range elk security areas \(as defined by Hillis et al. 1991\).](#)**

**Map 10. Sierra Madre elk security areas (as defined by Hillis et al. 1991).**

**Map 11. Laramie Peak Elk Security Areas (as defined by Hillis et al. 1991).**

### Elk Habitat Effectiveness

Additional examination of the Pennock Mountain and Spring Creek analysis areas was completed to further demonstrate cumulative effects. Some aspects of the **Representative Areas** analysis section (beginning on page 55) also pertain to cumulative effects.

In this analysis, miles of user-created roads are shown for the Pennock and Spring Creek representative areas. Table 21 provides a summary of user-created roads in these two areas.

**Table 21. Percent of all Roads that are User-Created and Percent of User-Created Roads Established Since 1985.**

	<b>Spring Creek</b>	<b>Pennock</b>
<b>% of Roads That are User-Created</b>	20	85
<b>% of User-created Roads Established Since 1985</b>	2.6	26.0

The data in Table 21 suggest that there are higher percentages of user-created roads and greater numbers of recently developed user-created roads (since 1985) in some areas of the Forest than others (e.g, Pennock Mountain). Unlike the Spring Creek area, areas like Pennock Mountain do not have a well-developed road system resulting from more intensified timber management. Please refer to the Transportation System section for a listing of other areas on the Forest where high percentages of user-created roads exist. This reflects a trend of more Forest visitors using more motorized transportation to access more remote areas. Access that was once mostly by foot or horseback has become increasingly motorized. The effects of the Proposed Action and Alternatives 3 and 4 would drastically reduce or halt this trend. The same would apply to Alternative 2 if the assumptions described in the Forest Plan Consistency section hold true.

Another difference between the Pennock Mountain and Spring Creek representative areas is the total miles of all roads that occur within the two areas (constructed and user-created). Increased open road densities provide increased opportunities for off-route motorized vehicle use. The Spring Creek area, which has had considerable timber harvest in the past, has a total of 143 miles of roads (including closed and obliterated miles), whereas the Pennock area has 60 miles. Areas of the Forest that are subject to more intensive multiple use management, including timber harvest, have more total roads than areas without harvest. Through the management of road closures and obliterations, however, open road densities are somewhat similar in both areas (see Table 14, page 54).

Roads are undoubtedly the most significant consideration on elk summer range (Christensen et al. 1993). Relatively sophisticated technologies exist for calculating habitat effectiveness. Christensen et al. (1993) give several sources of information for habitat effectiveness and the major factors that influence it. Their first recommendation in evaluating habitat effectiveness is to include a road model in the analysis.

Some models used to evaluate habitat effectiveness use only open road density (e.g., Lyon 1983). Others include cover and foraging area information. Elk and mule deer habitat effectiveness

were evaluated using the USFS Region 2 Habitat Capability computer model (HABCAP). HABCAP takes into consideration the amounts of hiding cover, foraging areas, and roads. Although this model is not expected to produce accurate predictions of actual populations of wildlife species, it is useful in comparing the relative magnitude of changes in existing habitat. Only elk and mule deer were included in the analysis because they are the only two species for which HABCAP includes road miles.

A disadvantage in this analysis is that HABCAP uses open road density information. During the last two years, and during open houses for the public, as many of the user-created routes were identified as possible and included on the Forest's road and trail system. All of these roads and trails were included in this analysis. It simply is not possible, however, to include off-route motorized travel in the analysis.

Table 22 shows the results of a series of runs using the HABCAP model to estimate elk and mule deer habitat effectiveness in the Pennock and Spring Creek representative areas. In order to try to show the cumulative effects of roads on wildlife habitats within the two areas, and for the different alternatives, analyses were done under a set of different scenarios. The scenarios that were analyzed include: 1) No roads; 2) Adjusted open road values; 3) Unadjusted open road values; 4) Adjusted values for game retrieval (all roads); and 5) Unadjusted values for game retrieval (all roads). Since the Proposed Action does not involve alteration of cover or foraging areas, vegetation values remained constant. The only thing that changed was road density.

**Table 22. Cumulative Effects Analysis of Roads in the Pennock and Spring Creek Representative Areas.**

	<b>Pennock</b>	<b>Pennock</b>	<b>Spring Creek</b>	<b>Spring Creek</b>
	<b>Mule Deer</b>	<b>Elk</b>	<b>Mule Deer</b>	<b>Elk</b>
<b>1 - No Roads</b>	.78	.58	.73	.38
<b>2 - Roads (Adjusted)</b>	.77	.50	.71	.26
<b>3 - Roads (Unadjusted) .</b>	.73	.30	.68	.21
<b>4 - Game Retrieval (Adjusted)</b>	.77	.50	.70	.25
<b>5 - Game Retrieval (Unadjusted)</b>	.68	.26	.59	.13

Mule deer are more tolerant of motorized vehicle use and human disturbance than are elk (Ward 1985). This is reflected in the higher values for mule deer in Table 22. Although the values for elk are lower, they respond similarly to those for mule deer under the various scenarios presented in Table 22. Therefore, only changes in elk habitat effectiveness were included in the remainder of this discussion.

As previously mentioned, the first scenario involved running the model with no roads at all. This was done to evaluate the habitats based on cover and forage values alone. The elk HABCAP

values in this run are 0.58 and 0.38 for the Pennock Mountain and Spring Creek areas, respectively.

The second HABCAP run (see Table 22) included existing adjusted open road values. Road values are adjusted based on level of use (MBNF LRMP III-76). With the addition of open road miles in the analysis, HABCAP values for elk decrease to 0.50 and 0.26 in the two representative areas, respectively. This is the existing condition habitat effectiveness. These values would not change under the Proposed Action or Alternatives 3 and 4 since no roads would be opened or closed. Under Alternative 1 (No Action), habitat effectiveness would decline over time with the continued proliferation of user-created roads. Values in all alternatives would be compounded (reduced) by off-route motorized travel, which would occur to varying degrees depending on the alternative (see Table 13, page 54). Habitat effectiveness would decline more in Alternatives 1, 2, 4, the Proposed Action, and Alternative 3 (in descending order of impact) based on the amount of off-route motorized access.

The third run was performed to see what the effects of the existing road miles would be on elk if the roads were all heavily traveled. That is, if they were all heavily traveled roads, there would be no adjustment factor. The HABCAP values under this hypothetical scenario decreased to 0.30 and 0.21 in the Pennock Mountain and Spring Creek areas, respectively.

The fourth HABCAP run presented in Table 22 is an estimate of the effects of Alternative 2. Under a game retrieval scenario, all open and closed roads were included in the analysis since all closed roads would potentially be available for motorized travel. This HABCAP run used adjusted road values. HABCAP values show no change between the existing condition and a game retrieval scenario in the Pennock Mountain area and only a very small change in the Spring Creek area. Even though the additional miles of roads is quite large in the Spring Creek area (all closed and obliterated roads that could potentially be driven on (see Table 14, page 54), the change in the HABCAP value was small due to the adjustment factor. One mile of road with very low use (less than one vehicle per day average) counts as only 0.05 miles of road (MBNF LRMP III-76). One must keep in mind, however, that HABCAP is unable to evaluate the effect of off-route, motorized used associated with game retrieval.

Similar to the third run, the fifth HABCAP run in Table 22 is a hypothetical run in which it was assumed that all roads in the two areas would be heavily traveled under Alternative 2. HABCAP values showed the greatest decrease under this scenario.

### **Summary Table for Effects to Wildlife**

Table 23 contains a summary of the effects of the Proposed Action and all of the alternatives on wildlife resources. It also includes a ranking of the relative effects by alternative. Several factors are included in this ranking which provide the basis for a comparison of the relative effects of roaded and off-road motorized vehicular traffic on wildlife and wildlife habitats. These factors include: 1) The amount of open road access that would be available in the 762,670 acre area not currently subject to off-route motorized travel restrictions; 2) The amount of off-route motorized access that would be available, which varies by alternative. This value is expressed as the percent of the area that would be available for off-route game retrieval; and 3)

The total miles of road potentially available for game retrieval are presented. The values in Table 23 are discussed in the analyses of the effects of the Proposed Action and each alternative throughout this section (Wildlife) of Chapter IV.

**Table 23. Summary of Factors Affecting Wildlife and Wildlife Habitats.**

	<b>Proposed Action</b>	<b>Alt. 1</b>	<b>Alt. 2</b>	<b>Alt. 3</b>	<b>Alt. 4</b>
<b>Affected Acres</b>	762,670	762,670	762,670	762,670	721,500
<b>Open Road Access (mi)</b>	1,907	1,907	1,820 (1,907)	1,907	1,822 (1,907)
<b>Off-route Motorized Access (ac)</b>	138,691	762,670	746,433	46,230	132,509
<b>Game Retrieval (% area)</b>	18	100	98	6	18
<b>Game Retrieval (road miles)</b>	1,907	1,907	2,409	1,907	1,822
<b>Relative Rank of Impacts to Wildlife</b>	<b>2</b>	<b>5(a)</b>	<b>4</b>	<b>1</b>	<b>3</b>

(a) Not consistent with the Forest Plan.

**NOTE:** Ranked values are relative effects on wildlife, where 1 is the alternative having the least impact on wildlife and wildlife habitats, and 5 is the alternative having the greatest impact.

**F. THREATENED, ENDANGERED, PROPOSED AND SENSITIVE SPECIES**

On March 19, 1993 the Regional Forester issued Interim Directive No. 2600-93-1 which designated a sensitive species list for Region 2 (R2) of the Forest Service. This Directive was updated by R2 Supplement No. 2600-94-2. Forest Service policy regarding Biological Evaluation is in FSM 2672.4 as follows:

Biological Evaluation. As part of the NEPA decision making process, review proposed Forest Service programs or activities in sufficient detail to determine how an action or proposed action will affect any species which is listed under the Endangered Species Act, proposed for such Federal listing, or designated in Region 2 as sensitive.

The analysis and determination of potential effects of the Proposed Action and the alternatives on listed, proposed, candidate, and other sensitive species were documented in a Biological Evaluation (BE). The BE is on file in the Laramie Ranger District office, 2468 Jackson Street, Laramie, Wyoming.

## 5. SOIL AND WATER

### A. ISSUES

This section provides information related to the following issues identified in Chapter I of this EA:

- *Adverse resource impacts caused by unrestricted off-route vehicular use.*

### B. EFFECTS ASSOCIATED WITH THE ALTERNATIVES

#### **Effects Common to the Entire Analysis Area:**

When off-route travel is repeated over the same path, vegetation can be crushed and bruised which can affect plant vigor. Roots can also become exposed and damaged. Results can vary and can range from less individual plant growth to loss of a species in an area. Trees can be cut down or pushed over to clear paths. In wet areas, soils may become compacted and plants may be unable to germinate in the impacted area. Loss of vegetation in wet areas may result in these sites drying up. Non-native or undesirable plant seeds may also be introduced. These impacts are associated with the path of travel and result in “user-created” roads and trails. When motorized travel is spread out over a large area, the impacts are too with most impacts occurring during wet soil conditions. If the disturbance is not repeated, natural regeneration may occur in areas with productive soils. However, areas containing less productive soils may show signs of the disturbance caused by off-route travel for years.

On the MBNF, motorized routes have reduced riparian and wetland areas. Roads of all kinds have fragmented many wet meadows, and these roads have drained away surface water or altered subterranean flows. Consequently, some wet meadows have lost their ability to retain water and are now dry.

People are naturally drawn to water and riparian areas. As a result, some off-route travel paths cross streams and wetlands which can lead to loss of vegetation, soil structure (through compaction), bank stability, and increased sedimentation. Streambanks and lake and reservoir shorelines that receive heavy motorized use could become denuded of vegetation, soils could become compacted and rutted, and increased sediment could enter the water. Increased sediment could negatively impact fisheries by reducing available oxygen and potentially covering spawning gravel

Trampling and removal of vegetation are generally the first consequences of trail formation. Trampling often increases the bulk density of the soil, which, in turn, decreases soil porosity. It also results in changes to moisture content, aeration, and the availability of soil nutrients in such a way that further vegetation losses often occur.

Accelerated soil erosion becomes the primary problem once vegetation is lost, especially when water moves down a trail rather than being diverted from the tread. Since slope gradient and soil loss are positively correlated, the steeper the trail, the greater the soil loss. The erosion rate is

also influenced by the position of the trail with respect to the top or bottom of a slope and the gradient of the slope along and across the trail.

Based on work from the Wenatchee National Forest in Washington state, Dunnell (1980) pointed out that most resource damage from off-route vehicle use is caused by improper trail location rather than by improper use. This is true of many of the user-created trails found across the MBNF. Because of their location (e.g. wet areas, steep hill climbs, etc.), many of the user-created trails produce more erosion than roads or trails that have been constructed using proper trail design and drainage techniques. Often the user-created trails either cross or run perpendicular to steep slopes which results in accelerated erosion potential. Other trails have stream crossings that are not hardened, i.e., they have muddy bottoms rather than rocky bottoms, thus contributing sediment directly into the water course.

Examples of areas wherein the above described soil impacts are occurring on the MBNF include areas shown as “6” on the 1985 Medicine Bow Travel Map. These are lands west of the continental divide in the Sierra Madre range, Jack Creek, Nuggett Creek, North Spring Creek, Wood Mountain, Bear Mountain, McNulty Creek, Big Creek, and Holroyd Creek. The Forest Plan states the following: “Resource protection shall be obtained through information and education and prompt closure of areas and roads to motorized travel when soils become saturated or excessive damage is likely.”

#### **PROPOSED ACTION: *Restrict Motorized Vehicle Use to Designated Routes***

The Proposed Action would have a positive effect on watershed health due to the reduction of future user-created routes. User-created routes are not designed according to Forest Plan Standards and Guidelines; consequently, they often do not include proper drainage structures. Improper drainage can result in higher than normal erosion rates and increased surface flow. Since user-created routes would be illegal under the Proposed Action, these effects would be minimized, thereby improving watershed health.

#### **ALTERNATIVE 1: *No Action - Existing Travel Regulations Would Remain Unchanged***

Under the No Action alternative, existing travel regulations would remain in force. Consequently, use of OHVs off of designated roads and trails would continue to be allowed on 762,670 acres of the MBNF. Unrestricted OHV use would result in a large number of connected disturbed areas (i.e., user-created routes) which would cause increased sediment in the stream network. Increased sediment would result from improper design and route location and the lack of drainage structures. As a result of improper design, location, and drainage, the 18 percent of the analysis area currently experiencing some degree of mass movement (see EA page 46) could be further impacted with the continued proliferation of user-created routes.

Existing direct effects of user-created routes, such as delivery of sediment to the stream system through disturbed areas, expansion of the channel network through conversion of subsurface flow to surface flow, and soil compaction would continue under the No Action alternative. Indirect effects would include a decline in aquatic habitat due to sediment deposition, increased

flows during runoff events, and a decline in vegetative vigor due to soil compaction. Determining the relative amounts of sediment derived from the existing trails is difficult due to the variation in local controls. Wilson and Seney (1994) found that the quantity of sediment eroded from trails was largely dependent on site-specific geomorphic variables and soils, but that sediment yields from wet trails were typically higher than from drier trails.

Recreational impacts to riparian areas would continue under the No Action alternative. Green (1998) sampled riparian areas at different recreational use levels and found that, at high use levels, bare soil accounted for 82 percent of the ground cover as compared to 4.9 percent at medium use and 1.4 percent at low use. Those riparian areas that are impacted by recreational use would be slow to recover under the No Action alternative.

#### ***ALTERNATIVE 2: Allow Use of Off-route Vehicles for Big Game Retrieval***

Under Alternative 2, the effects of user-created routes would be reduced from current levels (e.g. No Action alternative). Similar to the Proposed Action, erosion rates and sedimentation would be reduced from current levels. The actual effects of using off-road vehicles for big game retrieval would depend upon such factors as soil moistures, amount of snow, or depth of frozen soil.

#### ***ALTERNATIVE 3: Reduce Off-route Travel Restriction from 300 Feet to 100 Feet***

The effects of Alternative 3 would be similar to those described under the Proposed Action.

#### ***ALTERNATIVE 4 - Travel Restrictions in the Snowy Range, Sierra Madre, and in Defined Blocks of Land on Laramie Peak.***

The effects of Alternative 4 would be similar to those described under the Proposed Action.

### **C. IRREVERSIBLE and IRRETRIEVABLE IMPACTS**

None of the alternatives would result in irretrievable or irreversible impacts to the soil or water resource.

### **D. FOREST PLAN CONSISTENCY**

All of the action alternatives (Proposed Action and Alternatives 2 through 4) would require OHV operators to remain on designated routes for all or a majority of the year. This would greatly reduce the proliferation of user-created routes. Consequently, the action alternatives would comply with Forest Plan Standards and Guidelines for the soil and water resource. Under the No Action alternative, it is likely that user-created routes would continue to be developed. Experience has shown that these routes are not developed according to Forest Plan Standards and

Guidelines. Consequently, they are often improperly designed and located and do not include proper drainage structures. As a result of these factors, the No Action alternative would not be consistent with the Forest Plan.

## **E. CUMULATIVE EFFECTS**

The Proposed Action and Alternatives 2 through 4 would result in cumulative beneficial effects to the soil and water due to the reduction of future user-created routes. As user-created routes continued to be developed under the No Action alternative, however, erosion rates would continue to increase, sediment levels would increase, and areas of the Forest currently experiencing some degree of mass movement could be further impacted. Thus, the No Action alternative would result in negative cumulative effects to the soil and water resource.

## **6. HERITAGE RESOURCES**

### **A. ISSUES**

This section provides information related to the following issues identified in Chapter I of this EA:

- *Adverse resource impacts caused by unrestricted off-route vehicular use.*

### **B. EFFECTS ASSOCIATED WITH THE ALTERNATIVES**

#### **Effects Common to All Alternatives:**

A wide variety of heritage resources, ranging from Native American campsites to historic logging camps and mining towns dot the landscape of the MBNF. These sites provide the link between past, current, and future generations. These sites are very fragile and can be damaged by a variety of natural and human caused impacts. These resources are nonrenewable, and once they have been damaged, they cannot be restored to their original character. Protection of significant heritage resources is called for by the Forest Plan and by a series of Federal cultural resource protection laws.

Damage to heritage resources sites or properties can take several forms. Artifacts can be broken as vehicles drive over them. Artifacts can also be illegally removed from these sites. The most important aspect of a heritage site is the spatial relationship between artifacts or between artifacts and site features such as buildings or fire hearths. It is the spatial relationship between artifacts and associated features which archaeologists study and which yield the most important information on past ways of life and cultures. Once intact artifact deposits are disturbed, the spatial relationships or "context" is lost forever.

We have documented damage to heritage resources by off-route vehicle travel on the MBNF. What we do not know is the extent of damage to heritage resources by off-route travel over the entire Forest. Heritage resource inventories would be needed to accurately assess the amount of damage. A majority of our inventories have been conducted in forested areas where off-route travel is less intensive and site density lighter.

The selection of a new travel management policy restricting off-route travel would increase the protection of heritage resources. Without extensive inventories, however, the alternatives below

can only be ranked in a relative and qualitative order with regards to heritage resource protection. If ranked from most to least protective, the alternatives would be as follows: Alternative 3, Proposed Action, Alternative 4, Alternative 2, and Alternative 1 (No Action).

**PROPOSED ACTION: *Restrict Motorized Vehicle Use to Designated Routes***

Under the Proposed Action, heritage resources would be provided with greater protection than currently afforded. As an example, accelerated erosion, which can expose heritage sites, would be reduced from current levels. Potential adverse effects to heritage resources on Forest routes and user-created routes would be identified during inventories for landscape analyses such as timber sales, grazing allotments, site-specific travel management analyses, or other projects. Damage to heritage resources in the 300-foot corridors along established routes could also be identified during project level inventories.

**ALTERNATIVE 1: *No Action - Existing Travel Regulations Would Remain Unchanged***

Selection of the No Action alternative would result in current levels of off-route travel and an increase in this activity over time. Damage to fragile heritage resources would continue and likely increase over time. Prehistoric sites are difficult to see and, in most cases, the recreational vehicle user would be unaware of the archaeological site and the damage that is resulting from off-route vehicular use. Heritage resource properties are nonrenewable resources. Once damaged, these properties cannot be returned to their original condition. The No Action alternative would not meet Forest Plan direction for the protection of significant heritage resources in those areas where off-route travel is unrestricted.

Off-route vehicle use also has the potential to result in increased soil erosion which can accelerate erosion of intact archaeological deposits. This is a specific concern for prehistoric sites occurring in meadows or riparian zones. These sites are particularly vulnerable to severe damage when soils are wet. As stated above, once a nonrenewable heritage property has been damaged through erosion, it cannot be restored to its original quality.

**ALTERNATIVE 2: *Allow Use of Off-route Vehicles for Big Game Retrieval***

Under Alternative 2, damage to heritage resources would be reduced from current levels. Similar to the Proposed Action, accelerated erosion, which can expose heritage sites, would be reduced from current levels. Potential damage to heritage resources would be limited to existing Forest Service routes, existing user-created routes, and those areas impacted during game retrieval. Potential effects to heritage resources on the designated travel routes would be identified during the landscape analyses mentioned above. If user-created routes are established for game retrieval, those areas would also be inventoried for heritage resource damage.

**ALTERNATIVE 3: *Reduce Off-route Travel Restriction from 300 Feet to 100 Feet***

Due to the reduced off-route travel restriction from 300 feet to 100 feet, Alternative 3 would offer the greatest potential for heritage resource protection and would most closely follow Forest Plan direction for the resource. Accelerated erosion, which can expose heritage sites, would be reduced from current levels the most under this alternative. Potential adverse effects to heritage resources on designated routes would be identified during future landscape analyses.

#### ***ALTERNATIVE 4 - Travel Restrictions in the Snowy Range, Sierra Madre, and in Defined Blocks of Land on Laramie Peak.***

In addition to off-route travel restrictions applying to the Snowy Range and the Sierra Madre, this alternative would include defined blocks of land on the Douglas Ranger District. Areas that were not defined were excluded from the travel restrictions primarily due to lack of access. These hard to access areas are probably suffering relatively less heritage resource damage from off-route travel than those portions of the Forest with good access. Heritage resource inventories would be needed to confirm or refute this assumption.

#### **C. IRREVERSIBLE and IRRETRIEVABLE IMPACTS**

As mentioned above, heritage resources are nonrenewable; once damaged, they cannot be restored to their original quality. Although some level of damage could still occur from motorized travel on user-created routes, Alternative 3, followed by the Proposed Action, Alternative 4, and Alternative 2 would reduce irreversible and irretrievable impacts to heritage resources from current levels. The reduced damage would be the result of restricted off-route travel. On the other hand, selection of the No Action alternative would result in current levels of off-route travel and an increase in this activity over time. Consequently, irreversible and irretrievable impacts to heritage resources would continue and likely increase over time under the No Action alternative.

#### **D. FOREST PLAN CONSISTENCY**

The Standard and Guideline for heritage resource management (Forest Plan page III-18) calls for, "Protection, find an adaptive use for, mitigate according to an approved mitigation plan, or interpret all cultural resources on NFS lands which are listed on the National Register of Historic Places, the National Register of Historic Landmarks, or have been determined to be eligible for the National Registers." Given the lack of data for off-route motorized travel and its level of adverse effects to heritage resources, it is not known whether we are in compliance with the Forest Plan or not. Inventories of heavily used off-route areas will be required to accurately assess the amount of adverse effects to heritage resources by motorized travel. It is safe to say, however, that the No Action alternative would not meet Forest Plan Standards and Guidelines for the protection of heritage resources in those areas where off-route travel would remain unrestricted.

#### **E. CUMULATIVE EFFECTS**

Over time, selection of the Proposed Action or Alternatives 2 through 4 would reduce potential damage to heritage resources. On the other hand, selection of the No Action alternative would increase the potential for damage to heritage resources over time.

## 7. SOCIAL IMPACTS

### A. ISSUES

This section provides information related to the following issues identified in Chapter I of this EA:

- *Conflicts between motorized and non-motorized Forest users; and*
- *Limitations on personal freedom.*

### B. EFFECTS ASSOCIATED WITH THE ALTERNATIVES

#### **PROPOSED ACTION: *Restrict Motorized Vehicle Use to Designated Routes***

Under the Proposed Action, motorized users would lose the ability to travel off-route more than 300 feet for game retrieval, firewood collection, and antler hunting. The loss of these recreation opportunities may be interpreted by some as a loss of personal freedom. Non-motorized Forest visitors who wish not to see or hear motorized vehicles would have many more opportunities to have that experience than currently exist.

#### **ALTERNATIVE 1: *No Action - Existing Travel Regulations Would Remain Unchanged***

If the No Action alternative is selected, there would be no change to the current social environment relating to travel on the MBNF. Forest visitors who enjoy off-route motorized travel would continue to experience current opportunities, including off-route access for recreation, firewood gathering, antler hunting, and other activities. Non-motorized recreationists not wishing to see or hear motorized vehicles would continue to have their recreation experience negatively impacted, and visitor conflicts between motorized and non-motorized recreationists would likely continue.

The primary social effect to motorized visitors relating to any of the action alternatives (Proposed Action and Alternatives 2 through 4) is the loss, in some form, of motorized opportunities people are now experiencing on the MBNF. Conversely, non-motorized Forest visitors who wish not to see or hear motorized vehicles would be able to have that experience to a greater degree.

#### **ALTERNATIVE 2: *Allow Use of Off-route Vehicles for Big Game Retrieval***

Under the game retrieval alternative, hunters using ATVs would be able to continue to enjoy current opportunities to retrieve game off-route. Hunters using pickup trucks would not be able to enjoy this opportunity. Non-motorized hunters who wish to not be within the sight or sound of motorized use may be negatively impacted. Otherwise, the effects are similar to those described for the Proposed Action.

### ***ALTERNATIVE 3: Reduce Off-route Travel Restriction from 300 Feet to 100 Feet***

Due to the restriction of off-route travel to 100 feet on either side of designated routes, motorized off-route users would be more affected under Alternative 3 than under any other alternative. Non-motorized forest visitors who wish not to be within the sight or sound of motorized use would have the greatest benefit.

### ***ALTERNATIVE 4 - Travel Restrictions in the Snowy Range, Sierra Madre, and in Defined Blocks of Land on Laramie Peak.***

The effects under Alternative 4 would be similar to those discussed for the Proposed Action, with the exception of undefined areas on Laramie Peak. In those areas, Forest visitors using motorized forms of travel would be able to experience most current opportunities. Visitor conflicts between motorized and non-motorized recreationists would likely continue. Owners of private land inholdings who enjoy motorized off-route travel in areas not affected by this alternative may be favored over other users due to ease of access to the Forest from their properties.

### **C. CUMULATIVE EFFECTS**

Off-route travel by recreational users is just one activity affecting the resources and character of the Medicine Bow National Forest. Other management activities have also had, and continue to have, varying degrees of impact on the Forest. For example, while the majority of roads in the Pennock area are user-created roads (of undetermined age), the majority of roads in the Spring Creek area are timber sale roads (see page 3). According to figures derived from the Medicine Bow Forest annual monitoring reports, 2.2 miles of general use and 92.0 miles of timber sale roads were constructed from 1986 through 1996, while 67.3 miles of general use and 107.9 miles of timber sale roads were reconstructed during the same timeframe.

The major change in the character of the Snowy Range began to occur during large scale logging operations in the 1950's. Similar timber sale activity was a little slower moving into the Sierra Madre Range, beginning in the 1970's. For example, in the Spring Creek area, there are 6 collector roads which were either constructed or improved since 1985 to accommodate logging. To comply with the Forest Plan, these roads were closed following sale activity. Gravel roads were being constructed for timber sales into the late 1980's, and the Coon Creek and Deep-Jack (public-works) roads were constructed in the 1980's. In addition, the Federal Highway Department did major reconstruction on both Highway 130 (the Snowy Range Highway - with route relocation, and widening) and Highway 70 (the Battle Highway - relocated, widened and paved a previously graveled road) in the 1980's and 1990's.

Following this period of "building-out" the transportation system, there was an internal shift to reevaluate transportation needs. As a result, in the mid-1980's an intensive inventory of all roads was begun to provide a more accurate picture of the road system, including primitive, 4-wheel drive and user-created routes. Several "excess" roads, consisting mainly of old log skidding

roads which ended in clearcuts and which had not been closed following timber sales were identified. Parallel routes that ended up in the same spot, usually as a result of erosion on the original route, were also identified. Consequently, the Forest started to receive money to rip and seed some of these roads to reduce soil and water problems and to increase habitat effectiveness for wildlife. This method of closure was also used instead of gates in some places, and some gates were removed to reduce the perception of a double standard that exists with gates (that loggers and Forest Service personnel may use the road, but no one else).

As roads were closed via ripping and seeding, people expressed concern that only old 2-track roads were being closed and that they were losing the opportunity to travel on remote, primitive roads. As a consequence, all roads, including those built for timber sales, are now evaluated for closure through ripping and seeding.

Through the cumulative activities of the timber program, fairly recent completion of the transportation system in the Sierra Madre range, road closures through gates or seeding and scarification, and now the rise in popularity of ATV's, users have seen an accelerated pace of change on the Medicine Bow National Forest, and particularly the Sierra Madre. Many users are reacting to this by rejecting the notion of a "managed" forest and regret the loss of the Forest of their younger days.

To quote from the Grand Mesa National Forest Travel Management EA: "Generally people are not as emotionally involved in recreation opportunities they may gain sometime in the future as they are in recreation opportunities they have experienced in the past. People tend to associate, as a right, recreation opportunities they have experienced in the past. The term for this is prescribed rights. While prescribed rights to recreation opportunities have no legal standing, they are very important to people who experience them. Therefore, while creating additional opportunities for people to enjoy a given form of recreation is important and beneficial, taking away an opportunity affects people more deeply. The primary social effect of the travel management alternatives is the possible loss of recreation opportunities people are now experiencing on the [Forest]."

While the forest of some people's memories may not be attainable, the desired outcome is a balance between a managed forest and maintaining a forest where visitors can "get away from it all", view wildlife, have clean water, have a quality hunt, find solitude, or otherwise enjoy their favorite pastime. An effort is also being made to provide a range of travel experiences, balanced with the needs for other management activities. Site-specific decisions about route closures or conversions to ATV trails will continue to be made under separate analyses.

## **E. ECONOMICS**

### **A. ISSUES**

This section provides information related to the following issues identified in Chapter I of this EA:

- *No issues related to economics were identified in Chapter I.*



## **B. EFFECTS ASSOCIATED WITH THE ALTERNATIVES**

### **Valuation of Amenities**

Non-commodity or amenity resources or values are difficult to quantify in economic terms since they are not exchanged in the marketplace. Off-route motorized opportunities, such as dispersed camping, driving for pleasure, viewing wildlife, and so on have personal value, but opinions vary as to the relative amounts of such values and what role they should play in decision making and setting priorities for the Forest.

Economic analysis of any issue is not enough. It must be matched by a consideration of social or cultural acceptability. It is possible to identify those individuals or groups that feel that they would either benefit or lose by the proposed travel regulation changes. This was accomplished by analyzing the comment letters and listening to the discussions that took place at the Open House meetings. However, it is not possible to develop a neat measure of economic welfare or a definite measure of what is best. Does one group have a superior right to the benefits as compared with another? Does the backcountry enthusiast have a more legitimate claim than the off-road motorized enthusiast? The answers to such questions involves one's personal values and, ultimately, is a matter of judgment. Not everyone would answer in the same way.

Because non-commodity values, such as off-route motorized recreation, cannot be quantified, the economic analysis contained in this EA includes only tangible costs associated with implementing the various alternatives. Table 24 displays the costs associated with implementing the alternatives analyzed in this EA.

**Table 24. Costs Associated With Implementing the Alternatives Analyzed in this EA.**

	<b>Proposed Action</b>	<b>Alt. 1</b>	<b>Alt. 2</b>	<b>Alt. 3</b>	<b>Alt. 4</b>
<b>Cost by Alternative</b>	\$97,000 or \$202,000(1)	\$24,600	\$97,000+(2)	\$97,000+(3)	\$82,450(4)

(1) Upper end costs for the Proposed Action include one additional Law Enforcement Officer (LEO) with 50 percent time (\$26,000) and two additional travel management employees (\$64,000), one at Saratoga and one at Laramie. As the budget allows, additional education programs could be developed (\$5,000), as could information programs like newspaper articles, pamphlets, and an 800 reporting number (\$10,000). Total cost would be \$105,000.

(2) The effect of allowing game retrieval on Forest Service costs are not known at this time. It is known, however, that regulation enforcement would be more complex; consequently, the cost of providing information to the public could be higher.

(3) Law enforcement costs would likely increase under Alternative 3 due to the change in the off-route travel allowance, i.e., from 300 feet to 100 feet.

(4) Roughly 15 percent of the Laramie Peak Unit would not be subject to the regulation changes; therefore, law enforcement efforts and signing costs would be reduced.

## **Costs Common to All Alternatives and Not Included in Table 24**

The following costs do not vary by alternative and are not included in the figures displayed in Table 24. However, they are discussed here to demonstrate the contribution to the overall effort of providing information related to roads, trails, and travel.

- During the hunting season, Forest Protection Officers (FPOs) cost the Laramie and Douglas Ranger District offices \$10,000 per year. FPO costs at the Brush Creek/Hayden Ranger District are \$28,000. Total cost between the three Districts is \$48,000 per year. Equipment costs associated with hunter patrol equals \$20,000 per year.
- Information services provided at the Ranger District offices cost \$38,000 per year. It is estimated that receptionists spend one-third of their time answering questions and providing information related to travel management. Information services provided at the offices would remain the same under all alternatives.
- The LEO stationed in Encampment currently spends 40 percent of her time on roads and travel issues. This amounts to \$21,000 per year.
- Visitor Centers are located in Centennial near the Forest boundary, at the west boundary of the Snowy Range, at Kennaday Peak, at the Sandstone work center, and at the Merchants Association in Encampment. At a minimum, the Visitor Centers are open May through September and during the hunting season. Roughly one-half of the questions asked at the Visitor Centers are road, trail, and travel related. The total cost to operate the Visitor Centers is \$15,000; therefore, the amount attributed to travel management is \$7,500.

## **Costs Not Considered in the Economic Analysis**

- Road signing, inventory, database maintenance, road and travel planning costs. These costs were discussed in the Transportation section of the EA.
- Currently, the Laramie and the Brush Creek/Hayden Ranger Districts employ four FPOs throughout the summer, and the Douglas District employs one FPO. These employees all have other duties besides travel management, including campground compliance, firewood administration, fire prevention, and other National Forest regulation compliance. Consequently, full salary costs were not included as part of this analysis.

## **Specific Costs Associated With the Proposed Action and Alternatives 2 Through 4**

### **PROPOSED ACTION: *Restrict Motorized Vehicle Use to Designated Routes***

The Proposed Action would include eight FPOs dedicated to travel management June through October. Total cost for these employees during the 5 month period would be \$56,000. Two of the FPOs would be stationed north of Highway 130, two would be south of the highway, two would be in the Sierra Madre mountains, and the remaining two would work on Laramie Peak.

The FPOs could be mobilized where needed. Vehicle costs would total \$18,000 per year, and another \$5,000 would be spent on equipment and supplies, such as ATV maintenance. Portal signs explaining the proposed regulation changes would also be needed under the Proposed action. Cost of installation would be \$18,000. All of these costs total \$97,000 (see Table 24). Costs would be dependent on budgets and would be expected to decrease after 3 to 5 years.

As mentioned previously, the higher cost displayed in Table 24 includes 50 percent of one additional Law Enforcement Officer's time (\$26,000) and two additional travel management employees (one in Laramie and one in Saratoga for \$64,000). As the budget would allow, additional education programs could be developed for \$5,000, and another \$10,000 could be spent on information programs, such as news articles, pamphlets, and an 800 number for the public to report travel management violators. All of these "extras" would bring the total cost of the Proposed Action up to \$202,000 per year. These costs would be expected to decrease within 3 to 5 years.

### ***ALTERNATIVE 1: No Action - Existing Travel Regulations Would Remain Unchanged***

Current Medicine Bow National Forest hunting season FPO costs are \$10,000 each at Laramie and Douglas and \$28,000 at the Brush Creek/Hayden Ranger District for a total cost of \$48,000. FPO costs for the remainder of the year are \$14,000, and equipment costs are \$20,000. Total FPO costs are \$82,000. Under existing regulations, 70 percent of law enforcement time is spent in areas where area travel restrictions exist (30 percent of the Forest), and 30 percent of time is spent where off-route travel is currently allowed (70 percent of the Forest). Since the No Action alternative applies to the 70 percent of the Forest wherein 30 percent of law enforcement time is spent, the No Action alternative would cost \$24,600 to implement (30 percent of \$82,000).

### ***ALTERNATIVE 2: Allow Use of Off-route Vehicles for Big Game Retrieval***

It is difficult to determine whether or not allowing off-route motorized use for game retrieval would increase or decrease the costs displayed in Table 24. However, it is assumed that regulation enforcement would be more complex because of the "aspects" associated with Alternative 2 (see EA page 22). Consequently, it is also assumed that the cost of providing the public with consistent and up-to-date information could be higher under Alternative 2 than under the Proposed Action or Alternatives 1 and 4.

### ***ALTERNATIVE 3: Reduce Off-route Travel Restriction from 300 Feet to 100 Feet***

Implementation costs could be slightly higher under Alternative 3 than under the Proposed Action or Alternatives 1 and 4. Currently, people are accustomed to the 300 foot off-route travel allowance. Since off-route travel restrictions would be reduced from 300 feet to 100 feet under Alternative 3, it is assumed that additional education efforts and information dissemination would be required. Additional signing would also be required.



**ALTERNATIVE 4 - *Travel Restrictions in the Snowy Range, Sierra Madre, and in Defined Blocks of Land on Laramie Peak.***

Under Alternative 4, travel regulations would be implemented in defined blocks only. Undefined blocks represent roughly 15 percent of the Laramie Peak unit. Consequently, costs associated with implementing Alternative 4 were reduced by 15 percent (from \$97,000 to \$82,450).

**Effects on the Local Economy**

Implementation of any alternative analyzed in this EA is not expected to impact the local economy. This assumption is based on the following five factors:

- Use of the Forest by hunters and other motorized visitors may shift, but overall use is not expected to change;
- Although motorized use may be restricted to designated routes, motorized opportunities on the Forest would still be plentiful (see the Transportation section);
- Dispersed and developed recreation should not be affected by implementing the alternatives; therefore, local tourism should not be affected; and
- Loss of game retrieval opportunities could result in an economic impact to local OHV merchants. However, this impact is expected to be small and should not affect the local economy as a whole.
- Although the type of use may change, i.e., motorized to nonmotorized opportunities, Forest visitation numbers are not expected to change. Consequently, local tourism should not be affected.

## CHAPTER V. AGENCIES AND PERSONS CONSULTED

### A. LIST OF PREPARERS

In accordance with 40 CFR 1501.2(a), the Forest Supervisor selected a team of resource specialists to utilize a systematic, interdisciplinary approach in planning and decision making which may have an impact on the human environment. The ID Team first met in December, 1997 for the purpose of identifying a preliminary list of issues, concerns and opportunities for managing travel management on the MBNF. The ID Team involved in analysis for the Forest-wide Travel Management Analysis consisted of the following members from the Laramie, Douglas, and Brush Creek/Hayden offices and the Steamboat office in Steamboat Springs, Colorado:

Melissa Martin - ID Team Leader  
Bill Westbrook - Recreation  
Sherry Dahl-Cox - Soil and Water  
Dave McKee - Heritage Resources  
Jerry Mastel - Wildlife  
Traute Parrie and Mary Morgan - Transportation  
Frank Beum - Public Affairs/Social Impacts  
Cindy Gradin and Curt Orde - Law Enforcement  
Don Carroll - Economics

### B. CONSULTATION AND COORDINATION

The ID Team consulted with various other federal, state, and local agencies, as well as private businesses, organizations, and individuals during the analysis process for this proposed action. The list below displays those specific agencies, organizations, individuals, Native American contacts, businesses, and media contacts that have expressed interest in this type of project.

#### Agencies / Government

Albany County Commissioners  
Albany County Sherriff's Office  
Baggs Game Warden  
Bureau of Land Mgmt, Casper  
Bureau of Land Mgmt, Rawlins  
Bureau of Land Mgmt, Lander  
Bureau of Land Mgmt, Newcastle  
Carbon County Commissioners  
City of Cheyenne  
Converse County Weed & Pest  
County Commissioner, Leah  
Talbot  
Custer County Commissioners  
Environmental Services,  
WYDOT

Field Rep, Ms. Jackie King  
Field Rep., Ms. Cherie Burd  
Field Rep., Ms. Karen McCreery  
Field Rep., Ms. Vivian Stokes  
Governor Jim Geringer  
Honorable Craig Thomas  
Jackson County Commissioners  
Mayor, Town of Saratoga  
National Park Service  
Office of Federal Land Policy  
Office of Water Quality  
Pennington Cty Planning Dept.  
Rocky Mtn Exp. Sta., Ft. Collins  
Rocky Mtn Exp. Sta., Laramie  
S. Dakota DOT  
S. Dakota Game, Fish, & Parks  
State Coordinator, Diane  
Rodekohr

State Director, Ms. Mantha  
Philips  
State Forester  
State Planning Coord., Rod  
Miller  
Fish & Wildlife Service,  
Cheyenne  
Fish & Wildlife Service, Pierre  
SD  
Weston County Commissioners  
WY Farm Bureau  
WY Game & Fish Dept, Lander  
WY Game & Fish Dept., Baggs  
WY Game & Fish Dept.,  
Cheyenne  
WY Game & Fish Dept.,  
Laramie

WY Game & Fish Dept.,  
Saratoga  
WY State Archives  
WY State Forestry Div.,  
Cheyenne  
WY State Forestry Div.,  
Douglas  
WY State Preservation Office

### **Organizations/Businesses**

A Bar A Ranches, Inc.  
A Cross Ranches, Inc.  
Albany Bar and Snowmobile  
Assoc.  
Alexander Cross, Inc.  
All Terrain Sports  
American Copper & Nickel Co.,  
Inc.  
American Wildlands  
Aspen Grove Outfitters  
Autumn Meadow Outfitters  
Ax Ranch, Inc.  
B&W Forest Products  
Black Hills Power and Light  
Bard Ranch  
Bell-Otte Ranch Inc.  
Berger Ranches  
Big Horn Logging, Inc.  
Bighorn Lumber Co.  
Biodiversity Associates, FOB  
Black Hills 4-Wheelers  
Black Hills Electric Cooperative  
Boykin Outfitters  
Bridger Peak Outfitters  
Bridle Bit Ranch Co.  
Brushy Creek Ranch  
Bryan Stroh, Inc.  
Burnett Ranches Partnership  
C.A. McKee Livestock  
C.C. Davis and Co.  
C.U. Ranch Inc.  
CA4WDCI Northern District,  
V.P.  
COHVCO  
Cannon Land and Livestock  
Carbon County Coalition  
Cedar Creek Ranch  
Chamberlain Brothers  
Cheyenne Board of Public  
Utilities  
Cobb Cattle Co.  
Colorado Environmental  
Coalition  
Colorado State University

Concerned Citizens of Casper,  
WY  
Continental Lumber Co.  
Coyote Cattle Co.  
Cross Country Connection  
Cross Y Ranch  
Deer Valley Ranch, Inc.  
Deerwood Ranch  
Dilts Ranch Co.  
Downs Ranch Limited  
Elite Motors  
Elk Mountain Outfitters  
Environmental Strategies  
Episcopal Diocese  
Ferguson Ranch, Inc.  
Fine Edge  
Floyd C. Reno & Sons  
Flying Horseshoe Ranch  
Focus Ranch  
Foundation of N. Am. Wild  
Sheep  
Friends of the Bow, Inc.  
Frontier Cycles  
Fund for Animals  
Grand Slam Outfitters  
Grand and Sierra Outfitters  
Great Rocky Mountain  
Outfitters  
Great Rocky Mtn. Outfitters  
Hack's Tackle and Outfitting  
High Country Horseback  
High Mountain Fencing  
Hunter Services  
Huston Family Partnership  
Iberlin Ranch  
Indian Creek Ranch  
Intermtn. Forest Products Assoc.  
Inyan Kara Grazing Assoc.  
Izaak Walton League  
Jake Johnson, Inc.  
J.F.W. Corporation  
J.P. Werner & Sons, Inc.  
JRJ Ranch, Inc.  
Jacobs Land & Livestock  
Johnson Timber Co.  
K-T Cattle Co.  
Kaisler Brothers Livestock  
Keeline Ranch Co.  
Kerr-McGee Coal Co.  
Kraft Ranches, Inc.  
L S & J Livestock Co.  
Lake Creek Landowner's Assoc.  
Lakota Owner's Assoc.  
Laramie Chamber of Commerce  
Laramie River Conservation  
Dist.

Lone Tree Ranch, Inc.  
Louisiana-Pacific Corp.  
Mart Madsen Sheep Co.  
Medicine Creek Ranch, Inc.  
Miles Land & Livestock Co.  
Mountain Valley Livestock  
Mowry Ranches, Inc.  
Nachtman Land & Livestock  
Nat'l Trust for Historic Pres.  
Nat'l Wildlife Federation,  
Gillette  
National Campers & Hikers  
Assoc.  
National Wildlife Federation  
Native Ecosystems Council  
Neiman Sawmill  
Newberg Lumber Co.  
Nicklas Scherer Livestock Co.  
Nordic Ski Association  
Northwest Forest Products  
Notch Peak Ranch  
Ogala Sioux Rural Water  
Systems  
Old Baldy Club Outfitters  
Outwest Safaris Unlimited, Inc.  
Palm Livestock Co.  
Parkerton Ranch, Inc.  
Pischer Logging  
Platt Ranches Trust  
Platts Guide and Outfitters  
Pope & Talbot, Inc.  
Powder R. Basin Res. Cncl,  
Douglas  
Powder R. Basin Res. Cncl,  
Sheridan  
Powder River Coal Co.  
Prager Ranches, Inc.  
Prairie Hills Audubon Society  
Predator Project  
Professional Guest Ranch  
Services  
Pronghorn Adventures  
R.E. Linde Sawmills, Inc.  
R.L. Hammer Lumber & Timber  
Reed Land & Livestock  
Renegade Wranglers  
Richards, Hood & Nies, P.C.  
Robinett Ranch Co.  
Rocky Mtn. Elk Found.,  
Laramie  
Rocky Mtn. Elk Found., S.  
Dakota  
Romios Outfitters  
Rough Country 4-Wheelers  
Rough Country Outfitters  
Rough Stock Racing

S. Dakota Assoc. of Prof. Arch.  
 Salisbury Livestock  
 Saratoga Safaris  
 Seebaum Land & Livestock  
 Sierra Club, Sheridan  
 Sierra Madre Guest Ranch Adv.  
 Silver Spur Ranchs, Inc.  
 Sioux Ranch, Inc.  
 Slash 2 Slash Ranch Co.  
 Slicks Sporting Goods  
 Sno-Shoe Ranch  
 Snowmobile Adventures  
 Snowy Mountain Lodge  
 Snowy Range Backcountry  
 Horsemen  
 Snowy Range Blizzard Tamers  
 Snowy Range Lodge  
 Snowy Range Ski Area  
 South Dakota Stock Growers  
 Assoc.  
 Southern Rockies Ecosystem  
 Project  
 Spring Creek Grazing Assoc.  
 Steinle Ranch Co.  
 Stratton Sheep Co.  
 Sundby Wilson Ranch  
 TA Outfitters  
 TZ Land and Cattle Co.  
 Teton West Lumber  
 The Nature Conservancy  
 Tillard ``55" Limited  
 Timberline Outfitters  
 Tracker-Packer & Guide  
 Outfitters  
 Trailridge Runners, Inc.  
 Trout Unlimited  
 Turtle Rock Ranch  
 Twin Pines Ranch, Inc.  
 University of Wyoming  
 VX Ranch  
 WAJ Inc.  
 WY Wildlife Federation,  
 Cheyenne  
 WY Wildlife Federation,  
 Laramie  
 Waliser Ranches, Inc.  
 Warren Livestock Co.  
 Western Forest Industry Council  
 Westgate Ski & Sports  
 Willadsen Bros. Ranch  
 Willox Ranch, Inc.  
 Wind River Multiple Use  
 Advocates  
 Wycolo Snowmobile Assoc.  
 Wycon Safari, Inc.  
 Wyoming Alpine Club

Wyoming Bicycle and  
 Pedestrian Coor.  
 Wyoming Division of Tourism  
 Wyoming Heritage Society  
 Wyoming Outdoor Council,  
 Casper  
 Wyoming Outdoor Council,  
 Cheyenne  
 Wyoming Outdoor Council,  
 Lander  
 Wyoming Stock Growers Assoc.  
 Wyoming Trails Coalition  
 Wyoming Water Resource  
 Council  
 X-H Land and Cattle Co.  
 X-H Ranch  
 Yakima Sport Racks  
 Yeoman Marine & RV

### Individuals

Adams, Clinton  
 Adams, Richard & Marjorie  
 Adsit, JoAnn  
 Aguayo, Mark  
 Alessandro, David & Francis  
 Alleman, Ronald  
 Allen, David  
 Allen, Myron  
 Allen, Robert & Dorothy  
 Altmen, Stephanie  
 Anderson, Marcus & Marsha  
 Anderson, Warren  
 Aronson, Andrew & Shirley  
 Asleson, Dave  
 Atherton, Robert  
 Atkinson, James  
 Baker, Catherine  
 Baker, Dr. Bill  
 Balfour, Robert & Caroline  
 Banks, Tim  
 Barr, Maruice  
 Bates, Charles  
 Bath Sisters  
 Baugh, Harold  
 Bayer, Mark  
 Beasley, Leona  
 Beath, Mary  
 Beck, Rick  
 Behrmann, Vaughn  
 Bell, Ray & Ceola  
 Bendrick, Robert & Laura  
 Bennet, David  
 Bennett, Norm  
 Binger, Ron

Bisco, Burton  
 Blackburn, Robert  
 Blankenship, Dan  
 Blizzard, Bindi  
 Body, Ardythe  
 Boelter, Ann  
 Bohlen, Charles & Sharon  
 Bohne, Joe  
 Bonham, Wayne & Frances  
 Bonser, Tyeland & Christopher  
 Boreing, Jim  
 Boresi, Arthur  
 Bower, E. A.  
 Bowman, Dean  
 Boykin, Randy  
 Brademeyer, Brian  
 Braig, Dan  
 Braisted, Kenneth & Bonnie  
 Brandt, M. M.  
 Brandt, Philip  
 Brandt, Pip  
 Braun, Louis  
 Brenneman, Bill  
 Brettell, Dr. Herbert R.  
 Briggs, Robert  
 Brommer, Charles & Madelyn  
 Brooks, Stan  
 Brophy, Peter & Kathryn  
 Brown, Don  
 Brown, Richard & Martha  
 Browning, John  
 Bruckner, Jeff  
 Buline, Pam  
 Burkhart, Brooke  
 Burney, Mary Lee  
 Buskirk, Dr. Steve  
 Butler, Lynne  
 Butler, Richard & Pam  
 Buxton, John  
 Callahan, Michael  
 Callahan, Michael  
 Calvert, Ann  
 Canino, Mr. and Mrs. Clyde  
 Carpenter, Thomas  
 Cary, Brad  
 Caseaneda, Mark  
 Casey, Robert & Patricia  
 Casey, Robert Jr.  
 Castor, Clifford & Virginia  
 Cavalli, James & Linda  
 Cavanagh, Peter  
 Chambers, Gerald  
 Chesbro, Wally  
 Chesebro, Dr. Ben  
 Christensen, Charles, Janet, &  
 Robert

Christensen, Martha  
Clark, James  
Clark, John & Esther  
Clark, Larry  
Clifford, Jess  
Clinton, Jack  
Clow, Bradley  
Cochran, John  
Cockrell, Michael  
Colberg, Patricia & Norbert  
Cole, James  
Collamer, John  
Condict, Karen & Alden  
Condict, Winthrop Jr.  
Connely, Brian  
Cook, Arnold  
Corbett, Clarissa  
Cornelius, Dr. C. J.  
Corrigan, Megan  
Cosner, Dean and Iola  
Cosner, John  
Cosner, Ted & Dianna  
Costantino, Becky  
Cotton, Scott  
Couture, Fritz  
Crimmins, Mike  
Cross, William  
Cunningham, Charles  
Curtis, Lonny  
D'Elia, Lillian  
Daddow, Richard & Pamela  
Daiss, Shirley  
Daniels, Rex Jr.  
Davis, Scott  
Davis, Trey  
Dawson, Marvin  
Day, Donald  
DeGroot, Earl  
DeJong, Roger  
DeVries, Roy & Jeanne  
Deisch, Gordon  
Dennison Family  
Dennison, Butch & Linda  
Depietro, Joe  
Dowden, Roger  
Droscher, Mardy & Carolyn  
Druce, Don  
Druchniak, Robert  
DuBois, David  
Duncan, Mel  
Eads, Ross  
Eberhart, Richard  
Ebert, Bruce  
Edwards, Guy  
Edwards, Thomas & Leah  
Eisele, Mark

Ellis, John & Shelley  
Ellis, Martin & Sydney  
Emmons, Dwight & Elma  
Engelman, Jeff  
Ensign, Horance & Emogene  
Ernst, Amy  
Errington, Charles  
Espach, Ralph & Rebecca  
Esser, Barbara  
Etchepare, Paul Jr.  
Evans, Joyce & Michael  
Ewart, Howard  
Faber, Monty  
Falkenburg, George  
Farnham, Marilynn  
Farris, James & Edna  
Fertig, Monty  
Flannery, Michael  
Flingold, Alison  
Forrester, Mary  
Fortman, Mike  
Foster, Doris  
Foster, Jeff  
Frary, Ladd  
Frazier, Michael  
Funk, Wendell  
Gallegos, Eleanor  
Gardner, Richard  
Garland, Robert  
Geiger, Larry  
Gibbens, William  
Gillis, Arnold and Zerita  
Ginther, William  
Gladston, Marcia  
Glode, Joe  
Goranson, Frederick & Lavada  
Gordon, Billie & Thelma  
Gorges, Barb  
Graham, Margaret  
Groff, Jack & Josh  
Groose, Robin  
Guenzel, Virginia  
Gunnerson, Dennis  
Gunnerson, Mark  
Gustafson, Shawn  
Haefele, Roger  
Hall, Glen & Dorothy  
Hansen, Mr. and Mrs. Carl  
Hansen, Ronald  
Hansen, William & Nancy  
Hanson, Eleanor  
Hardekopf, Cynthia  
Hardingham, David  
Harnish, James & Marnie  
Harokopis, Michael & Catherine  
Harper, Johnny

Harrington, Clarence  
Harrison, Paul & Sherri-Lyn  
Harshbarger, Bob & Jean  
Hartman, John  
Havner, Paul & Madonna  
Hays, Owen  
Hayse, Dr. Bruce  
Hayward, Dr. Greg  
Heeren, Lynn  
Heggie, Ervin Jr.  
Herlihy, John & Patricia  
Herold, Brad & Janet  
Hewitt, Henry  
Hicks, Larry  
Hilding, Nancy  
Hileman, Hazen  
Hill, Gerald & Evabelle  
Hill, John  
Hiller, Dr. Joe  
Hitchcock, Clinton  
Hitchcock, Robert  
Hittle, Earline  
Hodgkiss, Dan  
Hohnson, Gale  
Holliday, Robert & Virginia  
Hooker, Floyd  
Hornig, Edward & Nora  
Hoskins, David  
Hubbs, Dennis  
Hubert, Dr. Wayne  
Hull, Lynne  
Hulme, Randal  
Hulme, Robert & June  
Humenick, Michael & Sharron  
Huntley, Martin  
Hutton, Mike  
Irene, Neil  
Iriberry, Anita  
Irvine, Bill  
Iverson, Alexandra & Ron  
Jacobs et. al.  
Janzen, Robert  
Jenkins, Amy  
Jewell, Hank  
Johnson, Bob  
Johnson, Carl  
Johnson, Catherine  
Johnson, Dallas & Arla  
Johnson, James & Deanna  
Johnson, Ralph & Marie  
Johnson, Richard  
Johnson, Ron  
Johnson, Vern  
Jones, Joe & Connie  
Jones, Tricia  
Joslyn, Janis

Kashager, Andy  
Kates, John  
Katherman, Mary  
Keadle, William & Danette  
Kern, Roy  
Kern, Thomas  
Khorsand, Julia  
Kilmer, Russell  
King, Amy  
King, Stephen & Mary Fances  
Kinsey, Norman  
Kissel, Harold  
Kjar, Craig  
Kjome, Peny  
Klein, Dr. Dan  
Klima, Edward & Diane  
Kline, Arthur  
Klipstein, Bart  
Knight, Dr. Dennis  
Knight, Marsha  
Knudtson, Marie  
Kougl, Maureen  
Kowardy, Robert & Diane  
LaPlante, Jon  
Lang, Dr. Dorothy  
Larsen, Chuck  
Larsen, Rick  
Larson, Jim  
Larson, Josephine & Robert  
Larson, Rodney & Marilyn  
Lauman, Bob  
Le Beaumont, Ron  
Leach, Daniel  
Leal, Leslie  
Leavitt, Richard  
Legerski, Katie  
Leslie, Jim & Gail  
Lindner, Vickie  
Lindzey, James  
Little, Paul  
Litton, Patricia  
Loeffler, Edwin & Mary  
Loinham, Hugh & Isabella  
Long, Gale & Sharon  
Loveland, Donald & Margie  
Lowham, Charles & Patricia  
Lynch, Earl, Patt, & Karen  
Lynch, Patrick  
MacNeel, Neal & Beverly  
Madison, Eugene  
Mangun, Lori  
Manning, Robert  
Martinsen, Randi  
Marvin, Carl & Arlene  
Matheny, James  
Maucker, Jim

Maxwell, Janet  
May, Morton  
Mayer, S. and Family  
McCabe, Fred & Elizabeth  
McCauley, Elaine  
McChesney, Charles & Mary  
Lou  
McKee, Casey & Cody  
McKeel, Colleen  
McKenney, Harold  
McLaughlin, James & Judith  
Mead, Dr. R. C.  
Meadows, Bob & Carol  
Mehalow, Gabriel  
Mehlaff, Larry  
Melcher, Thelma  
Merklin, Kenneth  
Merrell, Art  
Michaud, Mr. & Mrs. W. R.  
Milek, James  
Miles, John  
Miller, Baillie  
Miller, Chris  
Miller, Diane & John  
Miller, Peter & Natalie  
Minton, Frances  
Mooney, Merle & Dorothy  
Morgan, Dan  
Morgan, Newlin  
Morgan, Sam  
Moriarty, Kathy  
Mullens, Glenn & Elinor  
Mundt, Dale  
Munroe, Montie  
Myron, Dan  
Nelson, Ella  
Nelson, Kennard  
Neumiller, Wayne & JoAnne  
Nicholas, David & Karen  
Noecker, Suzy  
Null, Suzie  
O'Neill, James  
O'Toole, Pat & Sharon  
Olmsted, Hazel  
Olson, Ray & Deborah  
Olson, Wana  
Ortega, Jesse & Helen  
Osborn, Dwight  
Pafford, Richard & Lisa  
Page, Martha  
Pansing, Thomas  
Parker, Daisy Peele  
Parks, Mr. & Mrs. B. D.  
Parrie, Randall  
Parsons, Barbara  
Peck, Mariana

Pelayic, Shawn  
Pellatz, Donald & Betty  
Pendarvis, Robert  
Perry, Rebecca  
Perryman, Dr. Barry L.  
Peters, Ginger  
Pexton, John  
Pickerill, Thomas & Pansy  
Pitman, Mrs. Robert  
Plunkett, Sheila  
Pollock, El Juana  
Powers, Phala  
Prager, Sibyl  
Proctor, Geri  
Purdy, Virginia  
Randall, Mr. & Mrs. Charles  
Randolph, Lyla  
Ranz, Tom  
Rauch, Janine  
Rauterkus, Mark  
Raymer, Randy  
Reed, Donald  
Reed, Earl  
Reher, Dr. Charles  
Reher, James  
Reichenbach, Roy  
Reid, Matt  
Reimholz, Cheryl  
Renshaw, Alice  
Reynolds, Butch  
Richards, Gary  
Richardson, Ann & Ken  
Richardson, Margery  
Richtermeyer, Mark  
Riehle, George  
Riehle, Wayne & Georgia  
Riggle, Don  
Riley, Donald  
Rinehart, James  
Rissler, William & Hanneldre  
Rittmueller, Him  
Robacker, Charles & Nancy  
Robinson, Ralph  
Robinson, Will  
Rodabaugh, Ron  
Rodgers, Daniel  
Rogers, Neil  
Rollison, Pat  
Rom, Lance  
Ross, Allen & Pamela  
Rottman, Clarence  
Sahler, Paul  
Schilt, Lou  
Schinkel, Eddie  
Schissler, Tom  
Schnitker, Jack & Alice

Schock, Doug  
Scully, Dennis  
Sears, Darlene  
Seibert, Lloyd  
Seslar, Virgil  
Severson, Brian  
Shaffer, Steve  
Shaw, James  
Sheehan, Mike  
Sheen, Claris & Beverly  
Sheen, Donna  
Shellhart, Charles & Eloise  
Shepard, Ruth  
Short, Jean  
Shuss, Howard  
Siegel, Thomas  
Simmons, Joseph & Michele  
Sims, Bill & Kelly  
Sindt, Vincent  
Sisco, Mr. & Mrs. Burton  
Sitzman, Gerald  
Slonaker, Jonas  
Smith, Dean & Darin  
Smith, Dr. M. A.  
Smith, Henry & Iola  
Smith, Judith  
Smith, Mr. and Mrs.  
Smith, Paige  
Smith, Pati  
Snyder, Ward & Susanne  
Sommers, Edward & Betty  
Sommers, Gertrude & Oliver  
Sommers, Robert & Deanna  
Souers, Aimee  
Souviron, Richard  
Spackman, Boyd & Joyce  
Spatz, Robert & Doris  
Spatz, Robert & Dorothy  
Spotted Horse, David  
Spracklen, Elmer  
Sprenger, Willard  
Steckley, Velma & Donald  
Steere, Scott  
Stein, George  
Steinhour, Jerry & Carol  
Steinle, Larry  
Stewart, John  
Stewart, Stan & May  
Stobart, Bob  
Stoddard, Robert & Gail  
Stogsdill, Dwight  
Stone, Charles  
Stuart, Irene & Jim  
Stuart, Paul & Ruby  
Sturgeon, William  
Swenson, Swen

Szekula, Charles  
Taylor, Kenneth & Dorothy  
Teeter, Joe  
Tennant, Jim  
Thomas, David  
Tracy, Daniel  
Trainer, Al  
True, Jean  
Tucker, Robert  
Turner, Michael & Jenny  
Tyser, Norm  
Ullrich, G. W.  
Underwood, Harry & Harriet  
Vali, Gabor  
Van Horne, Brian  
VanPelt, Douglas  
Vanalyne, Robert  
Vigil, Norman  
Vincent, Larry  
Vivion, Vern  
Vogler, Joe  
Vondra, Jim  
Waechter, Jack  
Wagner, Eric  
Wahl, Opal & Walt  
Waldron, Pat & Patty  
Wallen, David & Charleen  
Walton, Michael  
Warriner, Anne  
Watts, Reuben  
Wensky, Anna, Robbie, &  
Robert  
Werner, Jeffrey  
West, Wesley & Jerre  
Westring, Jan  
White, Edwin  
Wilkinson, Jerry & Rhonda  
Willbert, Connie  
Williams, Donald & Danna  
Williams, Donn & Ricky  
Williams, John  
Williamson, Mr. & Mrs. G.F.  
Willms, James  
Wilson, Bruce  
Wilson, Lilia  
Withrow, Kristy  
Wood, Floyd or David  
Woodall, Lloyd & Virginia  
Woodward, Bob  
Woodward, Dave  
Woodworth, Judith  
Woodworth, Paul  
Woolsey, George & Alice  
Wright, Don  
Wu, Annette & Samuel  
Yeoman, Steve

Yonkoff, John  
York, James  
Zancanella, Barb & John  
Zeiger, Art  
Zeiger, C. W.

#### **Native American Contacts**

Blackfoot Community College  
Comanche Tribal Bus.  
Committee  
Crow Traditional Elder  
Culture Committee  
E. Shoshone Traditional Leader  
E. Shoshone Traditional Leader  
Flathead Cultural Commission  
Fort Hall Indian Reservation  
Fort Peck Reservation  
Kootenai Cultural Commission  
Lakota-Teton Sioux Tribal Rep.  
Medicine Wheel Alliance  
N. Arapaho Traditional Elder  
N. Cheyenne Cultural  
Commission  
N. Cheyenne Traditional Elder  
Northern Cheyenne Spokesman  
Oglala Sioux Tribe  
Rocky Boy Cree Cult. Rep.  
S. Arapaho Traditional Elder  
S. Cheyenn Councilman  
S. Ute Tribal Council  
Shoshone Tribal Pres. Office  
Shoshone-Bannock Tribe  
Sioux Tribes of S. Dakota  
Ute Mtn. Ute Tribal Council  
Ute Tribal Business Committee

#### **Media Contacts**

Associated Press  
Branding Iron  
Casper Star Tribune  
Ft. Collins Coloradoan  
KFBC, Cheyenne  
KIM, Laramie  
KOWB, Laramie  
KRAE, Cheyenne  
KRQU, Laramie  
KUWR, Laramie  
Laramie Daily Boomerang  
Rawlins Daily Times  
Rocky Mtn. Collegian  
Saratoga Sun  
Steamboat Pilot  
Warren Sentinel  
Wyoming Eagle



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## GLOSSARY

**Access:** This term generally refers to a road or trail route over which a public agency claims a right-of-way for public use.

**Designated Routes:** Designated routes include all Forest Service and user-created roads marked with a numbered route marker. Designated routes also include all Forest Service and user-created trails marked with symbols authorizing motorized use. User-created routes were not designed for safe public travel or resource protection; thus, travel on these routes is at the risk of the Forest user, provided resource damage does not occur.

**Forest Development Road:** A forest road under the jurisdiction of the Forest Service (23 U.S.C. 101) which has been determined through an interdisciplinary process to be necessary for the protection, administration, and/or utilization of National Forest System lands.

**Forest Transportation System:** A term, sometimes shortened to "system", generally used to denote the database containing information about all travel ways classified as Forest Development Roads.

**Highway Safety Act (Roads Subject to the):** Forest development roads that are open to unrestricted use by the general public for standard passenger cars. These roads include those that are closed on a seasonal basis, closed during extreme weather conditions or fire emergencies but are otherwise open for public use (FSM 1535.11; FSH 7709.58, sec. 12.3 para. 3).

**Improved Road:** A Forest Development Road included in the Forest Development Transportation Plan designed for passenger vehicles. The surface of this category of road is well-compacted and maintained hardened, gravel, or native material that provides a stable surface during the normal season of use. These roads are generally double lane or single lane with turnouts.

**Jurisdiction:** The legal right to control or regulate use of a transportation facility. Jurisdiction requires authority, but not necessarily ownership. The authority to construct or maintain a road may be derived from fee title, an easement, an agreement, or some other similar method.

**Maintenance Level 3 Roads:** This is a level assigned to roads open and maintained for travel by a prudent driver in a standard passenger car. User comfort and convenience are not considered priorities. Roads in this maintenance level are typically low speed, single lane with turnouts and spot surfacing. Some roads may be fully surfaced with either native or processed material. Appropriate traffic management strategies are either "encourage" or "accept." "Discourage" or "prohibit" strategies may be employed for certain classes of vehicles or users.

**Non-System:** See definition for user-created.

**Obliteration:** The act of eliminating the functional characteristics of a travelway and the reestablishment of natural resource production capability. The intent is to make the corridor unusable as a road or a trail and stabilize it against soil loss. Generally, a road will not be considered obliterated unless natural drainage patterns have been restored through recontouring.

**Obliterated:** For the purpose of this analysis, the term obliterated refers to any intentional activity which is designed to prevent the use of motorized vehicles on an existing travelway. These activities range from decommissioning the road by blocking the entrance, scattering boughs on the roadbed, or revegetating and adding water bars to removing fill and culverts, reestablishing original drainage patterns, and/or recontouring the road template (full obliteration). Regardless of the method, the result is to terminate the function of the travelway as a road and mitigate adverse impacts to some degree.

**Off-Highway Vehicle:** Any motorized vehicle designed for or capable of cross-country travel on or immediately over land, water, snow, ice, marsh, swampland, or other natural terrain. It includes, but is not limited to, four-wheel drive or low-pressure-tire vehicles, motorcycles and related two-wheel vehicles, amphibious machines, ground-effect or air-cushion vehicles, and any other means of transportation deriving power from any source other than muscle or wind.

**Off-Road Vehicle:** See definition under Off-Highway Vehicle.

**Public Road:** Any road under the jurisdiction of, and maintained by, a public authority that is "open to public travel" (23 U.S.C. 101a).

**Recreation Opportunity Spectrum:** Land delineations that identify a variety of recreation experience opportunities categorized into six classes along a continuum from primitive to urban. Each class is defined in terms of the degree to which it satisfied certain recreation experience needs based on the extent to which the natural environment has been modified, the type of facilities provided, the degree of outdoor skills needed to enjoy the area, and the relative density of recreation use (USDA, FS ROS Users Guide). The six classes are:

**Primitive:** Area is characterized by essentially unmodified natural environment of fairly large size. Interaction between users is very low and evidence of other uses is minimal. The area is managed to be essentially free from evidence of human-induced restrictions and controls. Motorized use within the area is not permitted. The following subclass of the Primitive ROS class is used in some wilderness prescriptions.

**Pristine:** Area is characterized by essentially pristine bio-physical conditions and a high degree of remoteness for both wildlife and humans with no perceptible evidence of past human use. Interaction between users is very low. All resource management activities are integrated so that natural biological processes are not adversely or artificially changed over time by human use.

**Semi-Primitive Non-Motorized:** An area that is characterized by a predominately natural or natural-appearing environment of moderate-to-large size. Interaction between users is low, but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restrictions may be present but are subtle. Motorized recreation use is not permitted, but local roads used for other resource management activities may be present on a limited basis. Use of such roads is restricted to minimize impacts on recreation experience opportunities.

**Semi-Primitive Motorized:** An area that is characterized by a predominately natural or natural appearing environment of moderate-to-large size. Concentration of users is low, but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restrictions may be present, but are subtle. Motorized recreation use is permitted utilizing local primitive or collector roads with predominately natural surfaces and trails suitable for motor bike use.

**Roaded-Natural:** Area is characterized by predominately natural appearing environments with moderate evidences of the sights and sounds of man. Such evidences usually harmonize with the natural environment. Interaction between users may be moderate to high, with evidence of other users prevalent. Resource modification and utilization practices are evident, but harmonize with the natural environment. Conventional motorized use is provided for in construction standards and design of facilities.

**Rural:** Area is characterized by a natural environment which has been substantially modified by development of structures, vegetative manipulation and/or pastoral agricultural development. Resource modification and utilization practices may be used to enhance specific recreation activities and to maintain vegetative cover and soil. Sight and sounds of humans are readily evident, and the interaction between users is often moderate to high. A considerable number of facilities are designed for use by a large number of people. Moderate densities are provided for away from developed sites. Facilities for intensified motorized use and parking are available.

**Urban:** Area is characterized by a substantially urbanized environment, although the background may have natural appearing elements. Renewable resource modification and utilization practices are often used to enhance specific recreation activities. Vegetative cover is often exotic and manicured. Sights and sounds of humans, on-site, are predominant. Large numbers of users can be expected both on-site and in nearby areas. Facilities for highly intensified motor use and parking are available with forms of mass transit often available to carry people throughout the site.

**Road:** A general term denoting a transportation facility for purposes of travel by vehicles.

**Temporary Roads:** Roads associated with timber sale contracts, fire activities, or other short-term access needs, not necessary for future resource management and not intended to be part of the forest development transportation plan.

**Trail:** A commonly used term denoting a pathway for purposes of travel by foot, stock, or trail vehicles.

**Unimproved Road:** A Forest Development Road included in the Forest Development Transportation Plan designed for high clearance and 4-wheel vehicles. The surface of this category of road is maintained only to provide drainage and to protect the surrounding environment. The surface is usually rough and irregular. The road width is generally 10 to 14 feet, and backing to allow vehicles to pass should be expected.

**User-Created:** Any travelway that has been created through repeated use, primarily for recreation or access purposes, and was not planned, located, designed, or constructed in accordance with Forest Service Road Specifications.