



United States
Department of
Agriculture

Forest
Service

August 2007



Environmental Assessment

Grand and Cedar River National Grasslands

Travel Management Plan

Grand River National Grassland, Grand River Ranger District
Dakota Prairie Grasslands, Northern Region

Responsible Official:

David M. Pieper
Grasslands Supervisor
240 W. Century Ave.
Bismarck, ND 58503

701-250-4443

dpieper@fs.fed.us

Equal Employment Opportunity Act - The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDAs TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, or call (800) 795-3272 (voice) or (202)720-6382 (TDD). USDA is an equal opportunity provider and employer.

Data Accuracy - The Forest Service uses the most current and complete data available. GIS data and product accuracy may vary. They may be developed from sources of differing accuracy, accurate only at certain scales, based on modeling or interpretation, incomplete while being created or revised, etc. Using GIS products for purposes other than those for which they were created may yield inaccurate or misleading results. The Forest Service reserves the right to correct, update, modify, or replace GIS products without notification. For more information, contact: Dakota Prairie Grasslands, 240 W. Century Ave, Bismarck, ND 58503; (701) 250-4443.

TABLE OF CONTENTS

I PURPOSE OF AND NEED FOR ACTION	3
A. LOCATION AND SETTING	3
B. BACKGROUND AND LEGAL FRAMEWORK	3
C. PROPOSED ACTION	6
D. PURPOSE AND NEED	6
E. DECISIONS TO BE MADE	7
F. PUBLIC INVOLVEMENT	7
G. GRASSLAND PLAN AND RESOURCE MANAGEMENT PLAN DIRECTION	7
1. GRASSLAND PLAN DIRECTION	7
H. KEY ISSUES	9
1. REASONABLE ACCESS	9
2. PROTECT RESOURCE VALUES	9
I. ISSUES NOT SELECTED FOR DETAILED ANALYSIS	9
1. ENVIRONMENTAL JUSTICE	9
2. INVENTORIED ROADLESS AREA MANAGEMENT	9
II ALTERNATIVES INCLUDING THE PROPOSED ACTION	11
A. PROCESS USED TO DEVELOP ALTERNATIVES	11
B. ACTIONS COMMON TO ALL ALTERNATIVES	12
C. NO ACTION ALTERNATIVE	12
D. PROPOSED ACTION	13
E. ALTERNATIVES CONSIDERED BUT DROPPED FROM FURTHER ANALYSIS	13
1. GRAZING ASSOCIATION USE NEEDS	14
F. COMPARISON OF ALTERNATIVES	14
III AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES	16
A. BACKGROUND	16
B. AFFECTED ENVIRONMENT COMMON TO ALL ALTERNATIVES	16
C. SOILS	16
1. AFFECTED ENVIRONMENT	16
2. ENVIRONMENTAL CONSEQUENCES	17
D. SENSITIVE RESOURCE AREAS	18
1. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES	18
E. CULTURAL RESOURCES	19
1. AFFECTED ENVIRONMENT	19
2. ENVIRONMENTAL CONSEQUENCES	19
F. RECREATION	20
1. AFFECTED ENVIRONMENT	20
2. ENVIRONMENTAL CONSEQUENCES	20
G. TRANSPORTATION SYSTEM	21
1. AFFECTED ENVIRONMENT	21
2. ENVIRONMENTAL CONSEQUENCES	21

H. EFFECTS SUMMARY	22
1. IRRETRIEVABLE AND IRREVERSIBLE COMMITMENT OF RESOURCES	22
2. CUMULATIVE EFFECTS	22

IV LIST OF PREPARERS	25
-----------------------------	-----------

APPENDIX A – GRAND RIVER AND CEDAR RIVER NATIONAL GRASSLANDS ROADS ANALYSIS PROCESS (RAP) DATA SUMMARY	27
---	-----------

APPENDIX B – BACKGROUND INFORMATION WEBSITES	29
---	-----------

LIST OF FIGURES

FIGURE 1. KEY EXCERPTS FROM THE 2005 TRAVEL MANAGEMENT RULE	5
---	---

I Purpose of and Need for Action

This chapter summarizes the purpose and need for this action. This includes: 1) describing the proposed action and project area; 2) summarizing the Dakota Prairie Grasslands (DPG) Land and Resource Management Plan (Grasslands Plan) direction; and 3) identifying the decisions to be made. This chapter also includes a section on the public involvement process and the identification and development of key issues for the proposal.

A. Location and Setting

The USDA Forest Service manages the Grand River and Cedar River National Grasslands. The Grand River National Grassland (GRNG) is approximately 154,783 acres¹ and is located in northwestern South Dakota. The Cedar River National Grassland (CRNG) is approximately 6,717 acres and is located in south-central North Dakota. The topography of the area is characterized by fairly level stretches to rolling hills with isolated occurrences of badlands and rock outcrops.

B. Background and Legal Framework

The Grand River and Cedar River National Grasslands are comprised of lands acquired in the 1930s as part of a federal government resettlement program. At that time most of these lands were serviced by a road system, particularly to the scattered home sites.

Some of the roads on these grasslands are county, township or Forest Service roads and were constructed with a full road prism (i.e. ditches). They were graveled and maintained by the responsible entity and for the most part they still exist today. The remaining roads are “two-track” roads (Forest Service level 2) without a full road prism. Many of these two-track roads were created as fire guard and for accessing newly developed range facilities that were constructed to help implement new grazing systems that were being established on the acquired land. Some have been created by recreational users.

Although the creation of roads by recreational users was never sanctioned there were a few attempts to manage the road system. The 1986 Custer National Forest Land Management Plan was silent on travel management concluding the present road system was “adequate for present resource management”.

In 2001 the Northern Region of the Forest Service and the Montana Bureau of Land Management (BLM) developed the Off-Highway Vehicle (OHV) Environmental Impact Statement (EIS) and Record of Decision (ROD), hereinafter referred to as the OHV Decision, to “avoid future impacts from the increasing use of OHVs”. This decision brought consistency to travel management in the region and prohibits off road travel unless

¹ PLEASE NOTE: acreages and mileages throughout this assessment are approximate, whether noted as such or not. They may have been rounded to the nearest whole number, or minor mapping adjustments may have caused slight differences. Any minor differences do not affect the analysis.

specifically authorized. The decision also calls for site-specific plans to be developed to identify when and where individual roads will be open or closed to various uses.

A key aspect of this decision is what defines a travel route. Under this decision, motorized use was allowed on “existing” roads and trails. These routes were either clearly constructed and maintained roads and trails, or those where there is clearly evident two-track and single-track routes with regular use and continuous passage of motorized vehicles over a period of years for their continuous length (OHV EIS, page 12). This was intended to be the definition until site-specific planning to designate roads and trails was completed. Other exceptions for use were also allowed. These will be detailed more in *Chapter 2 – Process used to Develop Alternatives*.

The Northern Great Plains Planning effort and the DPG Land Management Plan (Grasslands Plan) were completed for most resources in July 2002 and for the remaining grazing related decisions in September 2006. These efforts provide direction for the management of the Grand River and Cedar River National Grasslands, including the road system. It adopted the Plan Amendment for travel as described in the OHV Decision. This planning effort also inventoried the following areas that met the roadless area characteristics: South Fork and Twin Buttes Creek. These were published Inventoried Roadless Areas (IRAs) in the 2001 Roadless Rule.

Activities in the Inventoried Roadless Areas (IRAs) are governed by the January 12, 2001 36 Part 294 Special Areas; Roadless Area Conservation; Final Rule, commonly referred to as the 2001 Roadless Rule. The Grasslands Plan and this project will follow this rule for management in Inventoried Roadless Areas.

On November 9, 2005, the Final Rule for Travel Management; Designated Routes and Areas for Motor Vehicle Use (Travel Management Rule) was published in the Federal Register. This affects 36 Code of Federal Regulations (CFR) Parts 212, 251, 261, and 295. Key portions of this rule are in Figure 1. After a decision has been made from this analysis, motorized use will be limited to designated routes (roads and/or trails depending on the area).

Further direction was provided by the June 30, 2006 letter and implementation schedule from the Northern Regional Forester to Forest and Grasslands Supervisors and Staff Directors. This serves as the delegation of authority for travel management decisions under 36 CFR Part 212. Decisions involving off route motorized use for dispersed camping and mixed use (allowing highway legal and non-highway legal vehicles on the same routes) is reserved to forest/grasslands supervisors. Decisions related to off route use for big game retrieval is reserved to the Regional Forester.

Figure 1. Key excerpts from the 2005 Travel Management Rule

§ 212.1 Definitions

Designated road, trail, or area. A National Forest System road, a National Forest System trail, or an area on National Forest System lands that is designated for motor vehicle use pursuant to § 212.51 on a motor vehicle use map.

Motor vehicle. Any vehicle which is self-propelled, other than: (1) A vehicle operated on rails; and (2) Any wheelchair or mobility device, including one that is battery powered, that is designed solely for use by a mobility-impaired person for locomotion, and that is suitable for use in an indoor pedestrian area.

§ 212.50 Purpose, scope, and definitions.

(a) *Purpose.* This subpart provides for a system of National Forest System roads, National Forest System trails, and areas on National Forest System lands that are designated for motor vehicle use. After these roads, trails, and areas are designated, motor vehicle use, including the class of vehicle and time of year, not in accordance with these designations is prohibited by 36 CFR 261.13. Motor vehicle use off designated roads and trails and outside designated areas is prohibited by 36 CFR 261.13.

(b) *Scope.* The responsible official may incorporate previous administrative decisions regarding travel management made under other authorities, including designations and prohibitions of motor vehicle use, in designating National Forest System roads, National Forest System trails, and areas on National Forest System lands for motor vehicle use under this subpart.

(c) For definitions of terms used in this subpart, refer to § 212.1 in subpart A of this part.

§ 212.51 Designation of roads, trails, and areas.

(a) *General.* Motor vehicle use on National Forest System roads, on National Forest System trails, and in areas on National Forest System lands shall be designated by vehicle class and, if appropriate, by time of year by the responsible official on administrative units or Ranger Districts of the National Forest System, provided that the following vehicles and uses are exempted from these designations:

- (1) Aircraft;
- (2) Watercraft;
- (3) Over-snow vehicles (see § 212.81);
- (4) Limited administrative use by the Forest Service;
- (5) Use of any fire, military, emergency, or law enforcement vehicle for emergency purposes;
- (6) Authorized use of any combat or combat support vehicle for national defense purposes;
- (7) Law enforcement response to violations of law, including pursuit; and
- (8) Motor vehicle use that is specifically authorized under a written authorization issued under Federal law or regulations.

(b) *Motor vehicle use for dispersed camping or big game retrieval.* In designating routes, the responsible official may include in the designation the limited use of motor vehicles within a specified distance of certain designated routes, and if appropriate within specified time periods, solely for the purposes of dispersed camping or retrieval of a downed big game animal by an individual who has legally taken that animal.

Former Forest Service Chief Dale Bosworth prioritized actions to keep America's forest and grasslands healthy by restoring and rehabilitating damaged areas. One of four main ways is to manage impacts of motorized recreation vehicles by restricting use to designated roads and trails. In conjunction with the release of the 2005 Travel Management Rule; Chief Bosworth committed to implementing this rule over the next four years (by the end of December, 2009). This project is part of that commitment.

The DPG conducted a Road Analysis in 2007. This assessment was conducted to identify which roads on the GRNG and CRNG had the potential for resource problems. In addition, it identified which roads were needed for management of these grasslands. Based on this legal framework and analysis, a proposed travel management plan was developed.

C. Proposed Action

The following is a summary of the Proposed Action. The detailed Proposed Action is in Chapter 2.

The Forest Service proposes to designate a system of roads on the Grand River and Cedar River National Grasslands. Specifically, the proposal would designate **410** miles of motorized travel routes. This includes **357** miles of current National Forest System Roads and would add **53** miles of undetermined routes to the system. This alternative would close about **59** miles of National Forest System roads to motorized use, and the other **192** miles of undetermined routes. A motorized vehicle use map would be created. Existing road management objectives for open roads would not change under this proposal, which means a majority of the roads would continue to be managed for high clearance vehicles.

As described by the 2001 OHV Decision, a maximum of 300 feet off-road travel for dispersed camping will be allowed on most designated roads. Motorized travel for game retrieval will not be allowed.

D. Purpose and Need

The primary purposes of this project are to identify and designate reasonable public access to the Grand River and Cedar River National Grasslands and eliminate the establishment of unauthorized roads and trails. Additionally, the proposal would lessen the amount of potential soil erosion by reducing the number of public roads as well as eliminate some public roads through other sensitive resource areas.

The project will also provide information for public education and the production of an open road map. The Grand River and Cedar River National Grasslands Travel Management Plan is needed to meet the intent of the Travel Management Rule, the OHV Decision and the Grasslands Plan. It is also needed to identify a travel system that can be adequately maintained.

E. Decisions to be Made

The Grasslands Supervisor will make a number of decisions to address the identified issues and to improve the overall health of the land. He may select any alternative, or a combination of the alternatives. The selected alternative will address:

- 1) Which roads will be included in the authorized transportation system,
- 2) Which limitations of motorized travel will apply to designated routes, and
- 3) Which types of use will be allowed on each route.

Although State and private lands are included in the analysis area, the decision to be made is only for National Forest System lands and Forest Service Roads. State and County roads are outside of the authority of this decision.

F. Public Involvement

On May 9, 2007, a project proposal scoping letter was sent to interested or potentially affected individuals, groups, organizations, county, state and other Federal agencies, describing the proposal and encouraging comments and participation in the planning process.

The Forest Service had a booth at the annual KBJM Farm and Home Show on March 16, 2007 in Lemmon. The main focus of the booth was Travel Management and information was provided to those who attended.

From these efforts, five comments were received. Comments concerned either roads across private land that should not be shown on the map, or a preference for fewer roads across the project area.

The project has been listed in the DPG Schedule of Proposed Actions (SOPA).

G. Grassland Plan and Resource Management Plan Direction

1. Grassland Plan Direction

National Forest System lands will be managed to comply with laws, regulations, Executive Orders, and direction in the Forest Service Manuals and Handbooks.

The Dakota Prairie Grasslands Land and Resource Management Plan (Grasslands Plan) was signed on July 31, 2002 and provides long-term management direction for all uses in the project area. Management direction is expressed in terms of Grassland-wide Direction, Geographic Area Direction and Management Area Direction. Grassland-wide Direction consists of goals, objectives, and management requirements, which are generally applicable to the entire DPG. Geographic Area Direction applies to one of the four geographic areas covered by the plan and is in addition to the Grassland-wide Direction. This project lies in

the Grand/Cedar Geographic Area. Management Area Direction is specific to individual areas and is also applied in addition to the Grassland-wide and Geographic Area Direction. There are five management areas in the Grand/Cedar Geographic Area.

Grassland Plan goals are statements describing a desired condition to be realized sometime in the future. Tiered under these goals are Grassland Plan Direction, and Standards and Guidelines. General Direction Statements specify the actions, measures, or treatments (management practices) to be done when implementing the activity or the condition expected to exist after the general direction is implemented. Standards and Guidelines outline the acceptable limits. Summarized below are key Grasslands Plan Goals and overall Management Area (MA) Direction.

Grassland Plan Goals

- Provide appropriate access to NFS lands and USDA Forest Service programs.
- Improve and protect watershed conditions to provide the water quality and soil productivity necessary to support ecological functions and intended beneficial uses.
- Increase the amount of forests and grasslands restored to or maintained in a healthy condition with reduced risk and damage from disturbance, both natural and man-made.
- Improve the capability of the Nation's forests and grasslands to provide diverse, high-quality outdoor recreation opportunities.
- Improve the safety and economy of the USDA Forest Service roads, trails, facilities, and operations and provide greater security for the public and employees.

MA 2.1 – Special Interest Areas

These areas are managed to protect sites with important physical, biological, and/or cultural characteristics for the purpose of public use and enjoyment.

MA 3.64 – Special Plant and Wildlife Habitat

These areas are managed to maintain and enhance specific plant and wildlife communities and species at risk. Motorized use is limited to only administrative and emergency uses.

MA 3.65 – Rangelands with Diverse Natural-Appearing Landscapes

This management area emphasizes maintaining or restoring a diversity of desired plants and animals and ecological processes and functions.

In addition to the Management Area goals and guidance, the Grand/Cedar River Geographical Area lists as a Standard “prohibit road construction within the South Fork and Twin Buttes Creek roadless areas.” These areas fall within this management area.

MA 4.22 – River and Travel Corridors

This area is managed to protect or preserve the scenic values and recreation uses.

MA 6.1 – Rangeland with Broad Resource Emphasis

This management area is managed to meet a variety of ecological conditions and human needs. Ecological conditions will be maintained while emphasizing selected biological structure and composition that considers the range of natural variability. These lands often display high levels of development, commodity uses, and activity. Motorized use is common on designated roads.

H. Key Issues

Issues are defined as concerns about the potential effects of the proposed action. Issues about the proposal were solicited from all interested parties as well as from the agency's interdisciplinary (ID) planning team of resource specialists. From the comments, key issues were identified.

1. Reasonable Access

Maintain reasonable access for public recreation as well as for administration of grazing practices, fire suppression, etc.

2. Protect Resource Values

Minimize the effects of the road system on soils, sensitive areas, heritage resources and other important resource values.

I. Issues Not Selected for Detailed Analysis

The following elements are not carried forward into the analysis for the reasons described below:

1. Environmental Justice

Executive Order 12898, "General Actions to Address Environmental Justice in Minority Populations and Low Income Populations, requires all Federal agencies to incorporate environmental justice into their mission. Neither the proposed action nor the alternatives would disproportionately affect minority or low-income populations. Therefore, an environmental justice analysis is not triggered and the concept is not discussed further in this document.

2. Inventoried Roadless Area Management

There are two inventoried roadless areas (IRA) within the Grand River National Grassland. This issue will not be carried forward because neither the proposal nor the alternative will

affect the roadless status of these areas. No road construction or reconstruction is being proposed.

II Alternatives Including the Proposed Action

The National Environmental and Policy Act (NEPA) Regulations (40 CFR 1502.14) require rigorous exploration and objective evaluation of reasonable alternatives. According to NEPA, Federal agencies are to include and discuss appropriate measures to mitigate 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. Alternatives were developed to address issues identified in Chapter 1 and to meet the current management prescriptions associated with the Grassland Plan.

This section describes two alternatives: No Action Alternative (A) and the Proposed Action (B). No issues were raised in scoping that required the development of additional alternatives (*also see Issues and Alternatives Considered but Dropped sections*).

A. Process Used to Develop Alternatives

A key difference between the no action and proposed action alternatives is in the definitions of what travel routes are allowed to be used by motorized vehicles. Under the 2005 Travel Management Rule existing routes are allowed to be used (*also see Chapter 1 – Background and Legal Framework*). Once a Travel Planning process is completed, only those routes designated for motorized use as shown on a Motorized Vehicle Use Map (MVUM) will be available to be used.

There are a few key differences between the No Action, which continues with the 2001 OHV Decision without change, and the Proposed Action, which incorporates the 2005 Travel Management Rule. Unless the Proposed Action *specifically* states it would keep a provision of the 2001 OHV Decision via the caveat in 2005 Travel Management Rule (36 CFR 212.50 (b)), the Proposed Action will be as directed by the rest of the Travel Management Rule.

The Proposed Action alternative is based on the results of a Roads Analysis Process (RAP). During this process all roads identified as presently existing were rated as high value or low value. High value roads were those roads that were needed for public access of the grasslands. About 412 miles of road were rated as high value, with 57 rated as low value.

In addition, all existing roads were evaluated for their existing and/or potential impacts to grasslands resources including soil and water, wildlife, sensitive plants, paleontological, and cultural. With regard to each of these resources every road was rated as being high risk (having the potential for some adverse impact on that specific resource) or low risk (not having an identifiable potential for a negative impact). About 440 miles of road are considered high risk, with 29 miles of low risk. It should be noted that in some of these roads the actual area of risk was a very small portion of the entire road length; however the entire road was noted as high risk for purposes of comparison.

From this geographic information system analysis, a matrix was developed of high/low risk versus high/low value. A total of 18 miles² of road were rated as high value/low risk, 394 miles were ranked high value/high risk, 11 miles were found to be low value/ low risk and 46 miles were rated as low value/high risk.

B. Actions Common to All Alternatives

The following types of motorized travel could occur on established (no action) or designated (proposed action) roads: passenger vehicle, high-clearance four-wheel drive vehicle, ATV, and motorcycle as State Law allows.

- There will be no change in road standard or road management objectives.
- Permits to drive off of designated routes would continue to be issued by the authorized officer on a case-by-case basis.
- Livestock producers are allowed to access their permitted area. When and how the areas are accessed is set in the permit or annual operating plans. Examples of these permit activities include salting, herding, and checking and maintaining improvements.
- Access would be provided to private inholders, consistent with Section 1323(a) of the Alaska National Interest Lands Conservation Act (P.L. 96-487; 16 U.S.C. 3210).
- Any Federal, state, local official, or member of a rescue organization or fire-fighting organization, in the performance of an official duty related to law enforcement, emergency search and rescue, and/or fire suppression, would be exempt from travel restrictions.
- All Federal and State laws applying to motorized vehicles are subject to enforcement. Title 36 CFR 261.13 is the primary Forest Service regulation for motorized vehicle use.
- Non-motorized cross-country travel will be allowed.
- Current snowmobile travel rules and regulations will not be affected under this plan.
- Motorized travel for game retrieval will not be allowed.

C. No Action Alternative

The No Action Alternative is used as a baseline to compare to the proposed action for environmental impacts. In this analysis, the No Action Alternative describes the current, on-the-ground situation. This includes user-created routes, if they fit the established route criteria, as well as constructed routes.

² Miles have been rounded up to the nearest whole mile from information in the Geographical Information System.

The No Action alternative would authorize approximately **661** miles of motorized travel routes. This includes both National Forest System Roads (**416** miles) and all known two-track or undetermined routes (**245** miles), which includes administrative roads. The current level of management intensity would not change. All existing uses would continue under this alternative.

It would continue to be illegal to operate motorized transportation off established routes.

Per the OHV Decision, direct motor vehicle travel to a suitable camping site within 300 feet of all roads would be allowed if travel does not damage the land or streams.

D. Proposed Action

The Proposed Action would designate **410** miles of motorized travel routes. This includes **357** miles of current National Forest System Roads and would add **53** miles of undetermined routes to the system. This alternative would close about **59** miles of National Forest System Roads to motorized use, and the other **192** miles of undetermined routes. However, these roads/routes may be used in accord with Travel Management rule exceptions.

The current level of management intensity would not change on the designated roads. Operators will be restricted to these designated routes unless authorized. It would be illegal to operate motorized transportation off designated routes.

- A Motorized Vehicle Use Map (MVUM) will be produced and will be available for the public in hard copy and on the web (as soon as technically possible) (36 CFR 212.56).
- Driving 300 feet off-road for purposes of dispersed camping would continue to be allowed except for 12 miles of road. These roads are 5607, 5656A, 5656A1, 5747, 57705, 5U156 and portions of 5618 and 5626 as noted on the map in the Map Appendix.
- Increase public education on travel management and natural resources, including education about the need to avoid driving on roads during wet conditions.
- All roads and trails not identified as open will be closed and allowed to naturally rehabilitate. For those roads/routes not needed for administrative purposes, if natural rehabilitation does not occur, actions such as gates or barricades, scarification and reseeding may be considered under a future analysis.

E. Alternatives Considered but Dropped from Further Analysis

The Travel Management Plan and subsequent analysis will allow management solutions designed to conserve soil, wildlife, water quality, native vegetation, heritage resources, and other resources, while providing for a mix of recreational travel opportunities.

1. Grazing Association use needs

This alternative would add all routes needed for livestock facility and other permit administration needs to the system. This was not carried forward as an alternative because the grazing association is under permit for use of these routes or other needed off-road use under their permit.

F. Comparison of Alternatives

	No Action	Proposed Action
Designate reasonable public access	This alternative would designate a system of roads. Alternative routes to the same geographic destinations would be kept.	This alternative would designate a system of roads. Routes of low value more likely to cause resource concerns will be closed.
Reduce soil erosion	Under the No Action Alternative, new erosion would occur, and would have the highest impact between the alternatives, because it has more system roads and could add additional user created roads to the overall transportation network.	Soil erosion will result from motorized use. However, it will be reduced from existing levels. User created routes may be less likely in this alternative to increase soil erosion and runoff.
Protect sensitive resource areas.	Under the No Action Alternative, additional acres of the district will be impacted by inviting public use on current user created routes. This may create impacts on resources that have not been located yet.	This action will add some undetermined or user created routes to the system, however, it will limit the impacts on resources that have not yet been located.

	No Action	Proposed Action
Protect heritage resource sites	The direct effects are loss of archaeological materials and deposits, and the information they contain.	Implementation of this alternative would preserve and protect cultural resources by limiting the access of recreational vehicles to site locations, thereby reducing ground disturbance, and loss or destruction of archaeological soils.
Provide public education and a Motorized Vehicle Use Map (MVUM).	Existing maps and systems would be maintained.	The MVUM will show the public which routes are open for use.
Meet the intent of the Travel Management rule, the OHV Decision and the Grasslands Plan	Meets the intent of parts of the OHV Decision and Grasslands Plan. Does not meet the rest of the OHV Decision, the Grasslands Plan and the Travel Management Rule.	Will meet the intent of the OHV Decision, the Grasslands Plan and the Travel Management Rule.

III Affected Environment and Environmental Consequences

This section describes the resources of the area, and the potential effects the proposed action and its alternative may have on these resources. Direct and indirect effects tend to focus on the impacts of implementing proposed activities (or in the case of the No Action alternative, the impacts of not implementing the proposed actions). Cumulative effects discussions focus on the incremental impacts of the proposed activities when added to other past, present, and foreseeable future actions, regardless of Federal, non-Federal or individual undertakes such other actions. In this document, all resources cumulative effects are discussed together at the end of the chapter.

A. Background

Recreational use in this area is expected to increase as people become more aware of the area. Some routes are causing degradation to the soil, vegetation, and water resources.

Overall, the current system roads need more frequent and intense maintenance. This includes improving drainage structures and signing of the system routes. The high number of user created routes and lack of signing can make it difficult for the user to determine the system routes and make it difficult to enforce the “established trail” rules. In addition, wet conditions or poor road layout design have led to braided roads as visitors drive around wet spots or rutted areas.

B. Affected Environment Common to All Alternatives

The project area has a semi-arid continental climate with warm summers and very cold winters. Precipitation is heaviest in late spring and early summer. The climate is continental with an average of 14-17 inches of precipitation annually. Elevation ranges from approximately 2,150 to 2,860 feet above sea level. Significant drainages in the area include the North Fork Grand River, South Fork Grand River, Grand River, Cedar River and Black Horse Butte Creek along with numerous ephemeral and intermittent creeks, wetlands, and springs.

C. Soils

1. Affected Environment

Soils in the area vary in texture from silty loam to sand. The sandy soils can be characterized by high infiltration rate and a high susceptibility to wind and water erosion. These soils are low in nutrients, water holding capacity, and organic-matter content. The erosion potential is especially great when the landscape slope is more than 15 percent.

Motorized travel on fine-textured soils when they are wet can cause soil compaction. Excessive soil compaction creates long-term negative impacts to soils and watersheds. All traffic, motorized and non-motorized alike, applies pressure to the soil surface. This ground

pressure compacts soil particles and reduces pore space in the soil. Effects of compaction worsen with increased traffic. Soil compaction is detrimental to plant growth by reducing infiltration, reducing water-holding capacity, and impeding root growth. Soil compaction is most acute when soil is wet (soil-moisture content is at or near field capacity). Additionally, motorized travel can cause rutting and root shearing. Both of these conditions can be difficult to repair.

Sandy soils, especially those on slopes greater than 15 percent were deemed to be highly susceptible to erosion.

2. Environmental Consequences

a) No Action Alternative

Direct and Indirect Effects

This alternative may allow for increases in user created routes and will invite public use on all 245 miles of undetermined routes. This will increase potential for soil erosion and runoff.

Increased soil erosion, compaction, and displacement would be anticipated as user created roads and road braiding continue to occur. The loss of vegetative cover and productivity due to uncontrolled use would increase. Implementation of this alternative would have a direct negative effect on soil resources.

Indirect effects include the proliferation of noxious weeds and undesirable invasive plants in degraded soils. Treatment of noxious weeds constitutes a drain on financial and human resources. Invasive plants threaten the forage production and stocking rate of rangeland and the existence of some native plants.

b) Proposed Action

Direct and Indirect Effects

Soil erosion will result from motorized use. However, it will be reduced from existing levels.

User created routes may be less likely in this alternative to increase soil erosion and runoff.

D. Sensitive Resource Areas

1. Affected Environment and Environmental Consequences

This includes wildlife, sensitive plant and paleontological resources.

a) No Action Alternative

Affected Environment and Direct and Indirect Effects

Wildlife

A number of wildlife related resources, such as leks and raptor nests are located on or near existing roads and routes. Because some of the roads have been there for many years, and the layout of the habitat needs for the various wildlife species, it is difficult to determine the effects of the current road system from one without roads. Some nesting pairs of raptors may have habituated to the existing level of traffic on these roads.

While current use on a number of the undetermined routes that would be added appears to not be impacting nests or lek activity, increased general public use that may come from adopting all routes into the system and inviting public use could potentially shift their use of the current habitat.

Sensitive Plants

Dakota buckwheat has large stable populations on the District where habitat is found. It is recognized that individual plants will be impacted in areas where current roads go through potential habitat. Smooth goosefoot also exists on the District, but no roads currently go through any of its occupied or potential habitat.

This alternative may allow for increases in user created routes that could potentially affect habitat for the Dakota buckwheat and smooth goosefoot.

b) Proposed Action

Direct and Indirect Effects

Wildlife

Since this alternative would close more miles of roads and routes (both NFSR and undetermined), potential impacts to wildlife would be minimized along these route, although permitted and administrative use may still continue.

Sensitive Plants

Implementation of this project may impact individuals or habitat, but will not likely contribute to a trend towards Federal listing or cause a loss of viability to the population or species for Dakota buckwheat. This project will have no effect on any threatened or endangered species, and no impact on smooth goosefoot.

User created routes may be less likely in this alternative and would result in less potential for new roads in habitat.

E. Cultural Resources

1. Affected Environment

A review of existing cultural resource data for the Grand River and Cedar River National Grasslands indicated 38 known archaeological sites that were potentially within 30 meters of existing FS system or county roads. Of these, 18 sites had been previously determined ineligible for the National Register of Historic Places. Eight of the remaining undetermined sites are historic homesteads. The remaining 12 undetermined archaeological sites are prehistoric or a combination of historic and prehistoric.

As stated previously, this proposal will cause no ground disturbing activity. Indeed implementation of the Grand River Transportation Plan would require motorized vehicles to stay on existing roads and two-tracks, thereby giving additional protection to cultural resources by limiting off road vehicular access. Therefore the grasslands archaeologist's professional opinion and recommendation is that the proposed Transportation Plan for the Grand River/Cedar River National Grasslands will have NO ADVERSE EFFECT on historic properties.

2. Environmental Consequences

a) No Action Alternative

Direct and Indirect Effects

If the No Action Alternative were implemented, it would have direct harmful effects on cultural resources. These impacts include damage, breakage, and movement of surface artifacts, especially in areas which have not been surveyed. In addition, dry soils are worn away by vehicle tires and wet soils are rutted and displaced. The direct effects are loss of archaeological materials and deposits, and the information they contain.

The indirect effect of implementation of the No Action Alternative is the continued loss of archaeological deposits and their materials. Vehicle actions increase the vulnerability of soils on or near archaeological sites to erosion.

b) Proposed Action Alternative

Direct and Indirect Effects

If this alternative is implemented, other heritage sites will be protected from damage by user created trails and roads. This will result in a direct positive effect to archaeological sites. Further, the implementation of this alternative would preserve and protect cultural resources by limiting the access of recreational vehicles to site locations, thereby reducing ground disturbance, and loss or destruction of archaeological soils.

The indirect effect of project implementation would be the reduction in erosion and soil loss on and around archaeological sites. The curtailment of current water and wind erosion would be a positive indirect effect.

F. Recreation

1. Affected Environment

The Grand River and Cedar River National Grasslands have no developed campgrounds. The Blacktail Trail and Trailhead were recently constructed providing a developed picnic area and a non-motorized trail for hiking, biking, and horseback riding. Most motorized recreation in the project area is day use recreation and is either sightseeing or accessing the area for other forms of recreation such as birdwatching, berry picking, fishing, or hunting. Deer, antelope, and prairie dog hunting are common in the area. Dispersed camping occurs most often on areas by Shadehill Reservoir on weekends during the summer and throughout the grasslands during the fall hunting seasons. The public has a limited understanding of the existing rules and regulations for motorized travel in the area.

2. Environmental Consequences

a) No Action Alternative

Direct and Indirect Effects

The current number of routes and limited management will provide maximum recreation use and access to all parts of the area. Inventoried Roadless Areas will continue to have unauthorized roads and unauthorized use until action is taken.

Lack of management may lead to confusion and increase conflicts between users. Off road and trail travel and unauthorized routes may increase.

b) Proposed Action Alternative

Direct and Indirect Effects

The proposed number of routes and management in the project area would provide reasonable access, and more balanced levels of use for most users.

The proposed level of management will reduce confusion and conflicts between users. Unauthorized off-road and trail travel will decrease, and unauthorized routes may be rehabilitated. The Grand River and Cedar River National Grasslands will move toward meeting Forest Service standards, laws, and regulations.

G. Transportation System

1. Affected Environment

Current funding allows for minimal maintenance of the roads to planned service levels, with most of the road maintenance directed to priority safety and environmental needs. Under this funding, the roads are degrading to levels lower than what was intended.

Only a few of all Forest Service system roads are maintained for passenger cars. Other roads are administrative and public use roads maintained for pickup trucks and other high-clearance vehicles. Surface conditions on these roads are not favorable for passenger cars.

Many temporary access routes were created by users for a one-time experience. Increased public use has widened some roads and created additional roads. Most of these roads are poorly located and/or not maintained and were not intended for long-term vehicle use.

Many of these system roads have not been properly maintained for a variety of reasons. Early settlers crudely pioneered some roads. Others were planned for temporary access but never closed. Still others evolved from tracks made by off-road vehicles. Due to their haphazard nature, user-created roads have far more negative impacts on the environment than do permanent, properly planned forest roads that are well engineered and maintained.

2. Environmental Consequences

a) Effects Common to All Alternatives

The effects on the landscape of constructing new roads, deferring maintenance, and decommissioning old roads are well documented. Poorly designed or maintained roads promote erosion and degrade habitat. Roads that are not properly maintained can channel water down rutted surfaces, which erodes the road surface and causes soil loss. This can also cause users to create new routes around these areas. Proper maintenance, rerouting roads, and seasonal closures can help limit these concerns.

b) No Action Alternative

Direct and Indirect Effects

The highest number of roads and associated maintenance costs would be greatest in this alternative. Adopted user created routes in poor locations would need additional levels of maintenance and mitigation.

This alternative adopts the existing roads and trails, however additional user-created routes would still be a problem, because of the lack of public education. Difficulties in law enforcement, in part caused by the ease at which wheel tracks are created in sandy soils and wet claypan soils, would continue. This would lead to increased user conflicts, resource damage, and increased cost associated with a continually growing, uncontrolled network of roads and trails.

Increased uncontrolled access can allow people to travel into previously not accessed areas, resulting in indirect impacts such as ground and habitat disturbance, increased pressure on wildlife species, increased litter, sanitation needs, vandalism, and potential increased frequency of human-caused fires.

c) Proposed Action Alternative

Direct and Indirect Effects

The public would benefit by having a better system of roads and trails that provides reasonable access for all types of activities. User conflicts are likely to decrease, because of better maintenance and increased education. It is anticipated that fewer law enforcement problems will occur in the long term, because MVUM will be the enforcement tool and not the determination on whether or not an “established” road exists. Fewer user-created routes will occur.

A road-maintenance plan would be developed and implemented as budget permits. The long-term maintenance costs would be reduced once the system is brought up to standard. The elimination of certain roads would allow maintenance dollars to go further.

H. Effects Summary

1. Irretrievable and Irreversible Commitment of Resources

There are no known new irretrievable and/or irreversible commitments of resources for this project.

2. Cumulative Effects

Cumulative effects are a combination of direct and indirect effects of an alternative combined with the effects of past, present, and foreseeable future activities undertaken by either the Forest Service or other parties. Unless a different time period is defined, reasonably foreseeable future actions are considered as those proposed for action in the Schedule of Proposed Actions for the DPG, or those where permits or other legal actions have been taken.

The following table lists the past, present, and reasonably foreseeable actions considered in the cumulative effects analysis. All actions do not apply to each resource. Only those actions with relevant impacts to a specific resource were analyzed and discussed in the

section below.

Table 1. Past, present, and reasonably foreseeable future actions considered in the cumulative effects analysis for the Grand and Cedar River National Grasslands Travel Management Plan area.

Project/Activity	Location	Effects
Past and Concurrent Actions		
Farming	In suitable areas across the National Grasslands before acquisition, surrounding suitable areas on private historically and currently.	Landscape modification. Introduction of non-native species when farmed areas were reclaimed.
Livestock grazing	Throughout the analysis area.	Fences, water developments, and other range faculties were constructed and two-track road were also created. Some cross country travel occurs, especially to herd and gather livestock.
Prairie Dog management	Southern portion of Grand River National Grasslands.	As some prairie dog towns are eliminated and others are expanded, people seeking shooting opportunities may look for different roads to use for other locations, where other roads may not be used as often.
Trailhead Construction (Picnic Area)	Blacktail Trailhead in Pasture 9	Provided first developed recreation facility on the Grand River National Grassland. May increase recreation use of the area surrounding the campground, especially in conjunction with the non-motorized trail system attached to it (see below).
Non-motorized trail construction.	Blacktail Trail in Pasture 9.	The recent construction of the Blacktail Trail may increase non-motorized use.
Dispersed recreation	Throughout the analysis area	Dispersed recreational use in the analysis has occurred for decades. Some user-created routes have developed through these kinds of uses, especially hunting and game retrieval.
Road improvements and decommissioning	Recent decisions include improving NFSR 5626 in Pasture 9.	These roads will be incorporated as part of the decision for this project.
Prescribed fires	District-wide	Some cross-country travel is involved in this project.
Noxious weed treatments	District-wide	Some cross-country travel is involved in this project.
Reasonably Foreseeable Actions		
Campground construction	Near Shadehill reservoir in	Roads may need to be built and/or

Project/Activity	Location	Effects
	Pasture 8.	improved for the construction and use of the new campground. These impacts will be further analyzed in that analysis.

Cumulative effects only occur if there are direct and/or indirect effects of the project to a resource.

No Action Cumulative Effects

This alternative would reinforce activities that have occurred in the past. If the current trend holds true, users will not stay on established roads and new ones will be added annually. This will increase overall expansion of noxious weed infestations, erosion, impacts to sensitive areas, and degradation of additional unknown archaeological sites.

When combined with other management activities, there could be more routes, confusion, and conflicts. Combined over time, this will move the Grand River and Cedar River National Grasslands farther away from meeting Grassland Standards, travel management policies, laws, and regulations.

With the established route rule, the public may reasonably become confused by tracks left from permitted cross-country use.

Proposed Action Cumulative Effects

In the future, recreation on National Forest System Lands will likely continue to increase. However, in the project area, most recreation opportunities will be confined to areas that have already been affected by past recreation activities.

There would be positive effects realized through avoidance of some heritage sites.

Implementing this alternative may displace users that prefer to ride off designated routes to other areas. This may impact public and private lands immediately adjacent to the project area. Conflicts would be lessened between motorized and non-motorized users, such as hiking, mountain biking, and horseback riding.

IV List of Preparers

NAME	TITLE
Joby Timm	District Ranger
Kurt Hansen	District Supervisory Rangeland Management Specialist
Dan Svingen	Grasslands Wildlife Biologist
Tom Turck	Grasslands Recreation/Heritage Program Manager
Mark Gonzalez	Grasslands Hydrologist
Brenda Quale	Grasslands NEPA/FOIA/Appeals Mgr.
K.C. Homiston	Grasslands Roads Civil Engineer
Phil Sjursen	Grasslands GIS Specialist
Brian Moe	Grasslands Civil Engineering Tech
Mary Haase	District Resource Assistant
Drew Anderson	District Rangeland Management Specialist
Chancey Odell	District Range Technician
Curt Glasoe	Grasslands Engineer
Travis Crickenberger	Forest Service Law Enforcement Officer

This page blank

Appendix A – Grand River and Cedar River National Grasslands Roads Analysis Process (RAP) Data Summary

This analysis tiers from the Dakota Prairie Grasslands unit-wide RAP, which mostly looked at the more highly developed roads. In this analysis, roads considered had to be existing roads under Forest Service jurisdiction. Current system roads and undetermined routes were all reviewed.

Criteria for High Risk analysis included the following:

- 1) Steep slopes (15 percent or greater)
- 2) Known heritage/cultural resource sites (within 30 meters of a road)
- 3) Known areas of concentrated paleontological resources (within 30 meters of a road)
- 4) Known sensitive species locations and known suitable habitat conditions (within 15 meters of a road)
- 5) Riparian areas/streams based on NWI (within 30 meters of a road)
- 6) Known grouse leks (within ¼ mile of a road)
- 7) Known golden eagle and raptor nest locations (within 1/2 mile of a road)
- 8) Known burrowing owl locations (within ¼ mile of a road)
- 9) Known prairie dog towns (adjacent to road)
- 10) Known noxious weed locations (adjacent to road)

Criteria for High Value roads included the following:

- 1) Roads that are through roads
- 2) Roads that are needed to access private lands
- 3) Roads that are needed to provide adequate access to public land
- 4) Roads that are reliably passable and safe

Summary Table for RAP

		<i>Notes</i>
Low Value	57 miles*	
High Value	412 miles	
Total	469 miles	
Burrowing owl	1.9 miles	These include segments of roads and will not add up to the total below
Grouse leks	37.5 miles	
Raptor/eagle nest	20.4 miles	
Prairie dog town	3.4 miles	
Heritage/cultural sites	3.0 miles	
Riparian/stream	10.6 miles	
Paleontological	0 miles	
Slope	14.2 miles	
Sensitive plants	0.05 miles	
Noxious weeds	1.5 miles	
Overall Risk		
<i>High</i>	440 miles	If a road had a portion that was high risk, then the entire road was flagged for having some type of risk on it.
<i>Low</i>	29 miles	
Total	469 miles	

* in miles of road from the GIS system

Matrix

	High Value*	Low Value*
High Risk	394	46
Low Risk	18	11

* in miles of road from the GIS system

Appendix B – Background information websites

Custer National Forest Land Management Plan

<http://www.fs.fed.us/r1/custer/projects/index.shtml>

Northern Region of the Forest Service and the Montana Bureau of Land Management (BLM)
Off-Highway Vehicle (OHV) EIS and ROD

<http://www.mt.blm.gov/ea/ohv/>

Northern Great Plains FEIS and the DPG Land Management Plan (Grasslands Plan)

<http://www.fs.fed.us/ngp/plan/feis.htm>

Forest Service Roadless information

<http://www.roadless.fs.fed.us/>

Final Rule for Travel Management; Designated Routes and Areas for Motor Vehicle Use

<http://www.fs.fed.us/recreation/programs/ohv/>