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Appendix C Roadless Area Evaluation

A Roadless Area Evaluation to Study the Feasibility of Wilderness Recommendations to Congress

Purpose

This appendix describes 44 roadless areas associated with the Northern Great Plains Plans Revision. It further describes the analysis process used to evaluate individual roadless areas and offers findings from that process. Included in this report are: descriptions of each roadless area's affected environment, Wilderness capability and Availability Analyses, Evidence of Need for Wilderness and the consequences of management area acreage allocations for each of the five Forest Plan alternatives. At its most fundamental level, Wilderness designation is designed to provide an enduring resource of Wilderness for generations to come.

A Brief History of Roadless Area Reviews and Evaluations

In 1970, the Forest Service studied all administratively designated primitive areas and inventoried and reviewed all roadless areas greater than 5,000 acres in the National Forest System. This study was known as the Roadless Area Review and Evaluation (RARE). RARE was terminated in 1972 due to legal challenges.

In 1977, the Forest Service began another nationwide Roadless Area Review and Evaluation (RARE II) to identify roadless and undeveloped areas suitable for inclusion in the National Wilderness Preservation System within the National Forest System. As a result of RARE II, the following areas were recommended for Wilderness: the 9,000-acre Twin Buttes area on the Little Missouri National Grassland and the 6,388-acre Pine Ridge area on the Nebraska National Forest. RARE II also was challenged in court and the court determined that RARE II did not fully comply with National Environmental Policy Act (NEPA) requirements.

In 1986, the Nebraska Wilderness Act established the 7,794-acre Soldier Creek Wilderness on the Nebraska National Forest and the 6,599-acre Pine Ridge National Recreation Area, though not as a Wilderness area.

Current Conditions

On the Little Missouri National Grasslands, formerly the Custer National Forest, RARE II areas were reevaluated and are identified as the Forest Service's inventoried roadless areas (on the Little Missouri National Grasslands) for purposes of this report. The 1987 management plan made the following determinations for roadless areas now on the Dakota Prairie Grasslands:

- Twin Buttes, Bennett-Cottonwood, and Lone Butte (total of about 74,700 acres) - Allocated to a Low Development Management Area.
- The remaining inventoried roadless areas, Ash Coulee, Bell Lake, Bullion Butte, Kinley Plateau, Magpie, Strom-Hanson, and Wannagan (about 53,300 acres) were allocated to a mix of multiple-use emphases that ranged from a range / wildlife / minerals prescription to a wildlife prescription.

No roadless areas were identified on the Thunder Basin National Grassland (administered by the Medicine Bow-Routt National Forest) during RARE II or the 1980s planning effort.

Chief of the Forest Service authorized the Nebraska National Forest to defer the reevaluation because the Forest was in the final stages of completing the *1984 Forest Land and Resource Management Plan* (Nebraska National Forest LRMP II-35). In addition, no activities were planned for any RARE II areas that would preclude future consideration as Wilderness. There have been no activities within these areas that would affect consideration as Wilderness. Of the five RARE II areas, the three located in South Dakota are reevaluated in this analysis: Indian Creek (24,670 acres), Red Shirt (9,700 acres), and Cheyenne River (7,750 acres). The special designations of the two RARE II areas in Nebraska were accomplished through the Nebraska Wilderness Act of 1985.

Table C-1 displays the roadless area acres as determined through the RARE II process, as adjusted immediately after each of the three forest plans currently in force were signed and as calculated as inventory acreage in 1998. Reduction in acreages for the Little Missouri roadless acres result from implementation of the present land and resource management plan, primarily oil and gas development. Increases in acreages resulted from the inventory process used for this analysis (see inventory process section). The Red Shirt roadless area on the Buffalo Gap National Grassland shows an approximately 6,000-acre decrease in size, although the current area has the same boundaries as the existing RARE II maps. Apparently there was an acreage calculation error during the RARE II process.

Table C-1: Roadless Area Status

Planning Unit/ Roadless Area	Original RARE II Acres	Acres When Forest Plan Signed	1998 Inventory Acreage
DAKOTA PRAIRIE GRASSLAND UNITS			
Little Missouri National Grassland			
Ash Coulee	28,560	13,040	0
Bennett-Cottonwood	18,240	18,760	19,700
Bell Lake	10,860	12,460	11,270
Bullion Butte	17,760	17,760	19,880
Kinley Plateau	19,360	19,360	16,900
Lone Butte	12,920	7,140	11,470
Magpie	34,960	6,080	21,280
Strom-Hanson	15,320	16,670	18,810
Twin Buttes	9,000	9,000	13.390
Wannagan	5,880	5,040	6,020
TOTAL	172,860	125,310	138,720
Grand River, Cedar River, and Sheyenne National Grasslands	0	0	0
TOTAL	**0**	**0**	**0**
MEDICINE BOW-ROUTT NATIONAL FOREST UNIT			
Thunder Basin National Grassland	0	0	0
TOTAL	**0**	**0**	**0**
NEBRASKA NATIONAL FOREST UNITS			
Buffalo Gap National Grassland			
Indian Creek	24,670	24,670	25,100
Red Shirt	15,720	15,720	9,210
Cheyenne River	7,050	7,050	7,570
Pine Ridge District			
Soldier Creek Wilderness	8,090	8,090	7,800
Pine Ridge National Recreation Area	6,390	6,560	6,540
TOTAL	**61,920**	**62,090**	**56,220**

(Information for table taken from *Custer National Forest Plan, Record of Decision,* page iii and *Nebraska National Forest Plan,* page II-36).

The 1998-acre figures were taken from computer-generated maps and rounded to the nearest 10 acres.

Within the 250 million acres of the Northern Great Plains planning area, nine federally designated Wilderness areas (none of which are located on a proclaimed national grassland) exist for a total of 158,234 acres. The following table shows the existing Wilderness acreages by the administering agency.

Table C-2: Existing Wilderness

Existing Wilderness	Administering Agency	Acres	Bailey's Section[1]
Chase Lake, ND	US Fish and Wildlife Service	4,155	331E
Alteredwood, ND	US Fish and Wildlife Service	5,577	332A
Medicine Lake, MT	US Fish and Wildlife Service	11,366	331E
UL Bend, MT	US Fish and Wildlife Service	20,819	331D
Fort Niobrara, NE	US Fish and Wildlife Service	4,635	332C / 332D
Theodore Roosevelt, ND - (Two units, North and South)	National Park Service	29,920	331F
Sage Creek, SD	National Park Service	64,144	331F
Black Elk, SD	US Forest Service	9,824	334A
Soldier Creek, NE	US Forest Service	7,794	331F

[1] Ecological section as defined by Robert Bailey

331 series is Great Plains-Palouse Dry Steppe Province Ecoregion. 331D is the Northwestern Glaciated Plains Section, 331E is the Northern Glaciated Plains Section, and 331F is the Northwestern Great Plains Section.

332 series is Great Plains Steppe Province Ecoregion. 332A is the Northeastern Glaciated Plains Section, 332C is the Nebraska Sand Hills Section, and 332D is the Northcentral Great Plains Section.

334 series is Black Hills Coniferous Forest Province Ecoregion. 334A is the Black Hills Section.

Additional information for table from "The National Wilderness Preservation System Map 1964-1989."

Benchmark Analyses Summary

Inventory Process

An inventory of areas essentially roadless and undeveloped in character has been completed for every unit. All inventories began with an identification of all public highways and Forest Service roads maintained for the administration of each unit. Once such roads were identified, areas more than 5,000 acres in size that excluded such roads were identified (user-developed, unclassified roads may be present in the inventoried areas). The process then varied by unit based on the information contained in each unit's GIS. On the Dakota Prairie Grasslands, maps identifying potential roadless areas were sent to district employees for review of existing developments within the areas. Direction in FSH 1909.12,7 was followed to determine whether existing developments would disqualify the area from the roadless inventory. To assess undeveloped character, the amount of other developments, such as fences, water tanks and other human-made structures, was evaluated. Areas identified with essentially undeveloped character became a part of the roadless inventory for evaluation as potential Wilderness.

On the units of the Nebraska National Forest and the Thunder Basin National Grassland, once roadless areas were preliminarily identified, fence density and structure density (e.g.: water tanks, corrals and windmills) were applied to identify areas with less than one mile of interior fence per section and less than three structures per section. Areas of more than 5,000 acres remaining from this analysis comprise the roadless inventory.

Results of Inventory

Table C-3 lists the areas meeting the roadless area inventory criteria. The inventory process identified several roadless areas on the planning area units that were not identified in previous analyses. Thus, there will be new roadless areas listed in Table C-3 that don't appear in Table C-1. In the case of Bennett-Cottonwood, an adjoining roadless area, Collar, was identified. These two roadless areas were joined into one, Collar / Bennett-Cottonwood

* Please Note: The number of acres for roadless areas shown in the tables in this appendix may differ slightly from the number of acres shown elsewhere in these plan revision documents due to computer modeling and mapping techniques.

Table C-3: Inventoried Roadless Areas

Planning Unit/Inventoried Roadless Area	Acres*
DAKOTA PRAIRIE GRASSLANDS	
Little Missouri National Grassland McKenzie	
Collar / Bennett-Cottonwood	19,700
Lone Butte	11,470
Long X Divide	10,100
Johns Town / Horse Creek	24,450
Magpie	6,700
Scairt Woman	640
Little Missouri National Grassland - Medora	
Magpie	14,580
Bell Lake	11,270
Little Missouri National Grassland - Medora, cont.	
Bullion Butte	19,780
Easy Hill	7,350
Kinley Plateau	16,900
Strom-Hanson	18,810
Twin Buttes	13,380
Wannagan	6,030
Scairt Woman	5,460
Blacktail	8,620
Dawson's Waterhole	6,090
Tracy Mountain	9,730
Ponderosa Pine	7,470
Sheyenne National Grassland	
Durler	12,470
McLeod	9,120
Delamere	5,090
Venlo	5,320
Sheyenne	14,540
MEDICINE BOW-ROUTT NATIONAL FOREST UNIT	
Thunder Basin National Grassland	
H A Divide	5,060
Red Hills	6,840
Cow Creek	10,960

Planning Unit/Inventoried Roadless Area	Acres*
NEBRASKA NATIONAL FOREST UNITS	
Buffalo Gap National Grassland - Fall River	
Red Shirt RARE II	9,210
Red Shirt	7,130
Cheyenne River	7,570
Jim Wilson Canyon	6,020
First Black Canyon	4,960
Buffalo Gap National Grassland - Wall	
Indian Creek	25,100

*Acreages are computer-generated and rounded to the nearest 10 acres.

In addition, during the initial public comment period, the Sierra Club requested that the Forest Service evaluate several other areas for Wilderness potential. Although these areas contain more than the one mile of interior fence per section allowed within official Forest Service inventoried roadless areas, they have been evaluated for their potential as Wilderness. The table below lists those areas by administrative unit.

Table C-4: Public Proposed Wilderness

Planning Unit/Inventoried Roadless Area	Acres*
DAKOTA PRAIRIE GRASSLANDS	
Grand River National Grassland	
Grand River	6,060
South Fork	12,830
Twin Butte	6,540
MEDICINE BOW-ROUTT NATIONAL FOREST UNIT	
Thunder Basin National Grassland	
Cow Creek Buttes	6,540
Miller Hills	10,370
Duck Creek	12,330
Downs	6,510
NEBRASKA NATIONAL FOREST UNITS	
Buffalo Gap National Grassland: Fall River Ranger District	
Indian Creek	3,210+
Buffalo Gap National Grassland: Wall Ranger District	
Rake Creek Badlands	12,300
Indian Creek	3,770+
Fort Pierre National Grassland	
Cedar Creek	8,730
Pine Ridge Ranger District/Oglala National Grassland	
Sugarloaf	9,090
Toadstool	5,280
Soldier Creek	1,830

Planning Unit/Inventoried Roadless Area	Acres*
Samuel R. McKelvie National Forest	
Steer Creek East	60,790
Steer Creek West	26,210
Dismal River	12,980

* Acreages are computer generated and rounded to nearest 10 acres.

+ Acreage outside of the RARE II area.

Demand Assessment

Various proposals have been advanced for designating areas as additions to the National Wilderness Preservation System. In 1993, a coalition of organizations submitted *Badlands on the Brink - North Dakota Wilderness and Wild and Scenic River Proposal*. Areas included in this proposal were:

Bell Lake: 9,920 acres

Bennett-Cottonwood: 18,366 acres

Bullion Butte: 19,130 acres

Horse Creek: 25,320 acres

Kinley Plateau: 21,120 acres

Lone Butte: 10,400 acres

Long X Divide: 18,366 acres

Ponderosa Pine: 7,800 acres

Sheyenne Grasslands: 18,120 acres

Strom Hanson: 16,510 acres

Twin Buttes: 11,880 acres

Wannagan: 7,480 acres

In 1994, the Governor of North Dakota established a task force of the North Dakota Game and Fish Department and the North Dakota Parks and Recreation Department. This task force, called Vision 20/20, was charged with reviewing roadless areas within the state for potential Wilderness recommendations. To date, the task force is in the process of gathering information (personal communication with Doug Prchal).

In 1993, a South Dakota Wilderness Act was proposed by the Sierra Club to designate the following areas as Wilderness:

- Indian Creek Badlands: 37,900 acres,
- Red Shirt: 9,600 acres,
- Rake Creek: 14,180 acres, and
- Cheyenne River: 9,600 acres.

None of these proposals have appeared as legislation before Congress.

Several recreation studies have identified that many recreationists prefer a natural appearing setting with minimal disturbance (*Recreation Assessment for Northern Great Plains Plan*, Revision 2, 8, and 12). Comments received during the formal public scoping period range from wanting all roadless areas designated as Wilderness to having no more Wilderness designated and to reexamining all existing Wilderness areas.

Laws and Policies that Drive this Process

The U.S. Forest Service is required, by law, to inventory, evaluate, and consider all roadless areas for possible inclusion in the National Wilderness Preservation System during the planning process (36 CFR 219.17).

Two Wilderness laws pertain to the Northern Great Plains planning area. The Wilderness Act of 1964 applies to land west of the 100th Meridian and includes all the planning units, except the Sheyenne National Grassland. The Eastern Wilderness Act of 1975 applies to land east of the 100th Meridian, including the Sheyenne National Grassland.

Proponents of designating grassland Wilderness areas state that the Forest Service currently administers no grassland Wilderness areas anywhere in the 3.8-million-acre National Grassland System. They also point out that although Wilderness areas administered by other federal agencies do exist on mixed-grass prairies, few Wilderness areas under any federal administration exist on either short-grass or tallgrass prairies.

Opponents of designating grassland Wilderness areas conclude that enough Wilderness exists elsewhere, under Forest Service or other federal agency administration, to satisfy the general public's desire and need.

This report follows direction as found in the *Forest Service Handbook* (FSH). It documents "capability," "availability," and "Evidence of Need for Wilderness" data for the 30 inventoried roadless areas identified by personnel at Forest Service ranger districts and the 15 public proposed areas. Inventoried roadless areas meet agency criteria as defined in FSH 1909.12 Chapter 7.

Mineral Leasing and the Wilderness System

The Mineral Leasing Act of 1920 authorizes the Secretary of Interior to issue leases for disposal of certain minerals. This act currently applies to coal, phosphate, sodium, potassium, oil, oil shale, gilsonite, and gas. In addition, this act, along with the Federal Onshore Oil and Gas Leasing Reform Act of 1987, provides that oil and gas leases cannot be issued without the approval of the Forest Service on lands administered by the U.S. Forest Service.

Once a lease is issued (including within Wilderness areas or areas proposed for Wilderness designation), the lessee may enter upon that lease to conduct oil and gas operations unless limited by special stipulations. Thus, the lessee has the right to explore for minerals on that lease and may construct roads to do so, and the lessee also has the right to develop that lease, which can include well pads for on-site production facilities. The life span of an issued lease averages 10 years. If that lease produces mineral products, the expected average life span of the lease held by production averages between 15 to 25 years. However, lease stipulations can dictate that surface development is disallowed over 100 percent of the lease area (known as No Surface Occupancy [NSO]). If the lease language does not describe any NSO conditions, the lessee has the right to occupy some portion of the lease area for exploration and development.

Private subsurface mineral ownership under a federal surface ownership (including Wilderness areas or areas proposed for Wilderness designation) can occur on the public lands. The owner of these subsurface mineral rights must be allowed reasonable access to those areas by the agency responsible for managing the surface (typically, the Forest Service). If the agency denies a lessee the opportunity to develop a lease, regardless of the mineral ownership (federal or private), such denial would constitute a taking and the agency must compensate the lessee for potential altered revenue that may have resulted from that lease's development.

For the purposes of the following analysis, each roadless area was researched to see if (1) oil and gas leases exist within the area's boundary and (2) if they do they exist, to determine the distribution of those leases and evaluate whether Wilderness potential would be degraded.

For more information about mineral leasing on lands administered by the U.S. Forest Service, please refer to the following documents:

- *Northern Little Missouri National Grassland Oil and Gas Leasing Final Environmental Impact Statement* (1991) pages 1-12 to 1-13 and Appendix C.
- *Southern Little Missouri and Cedar River National Grasslands Final Oil and Gas Leasing Environmental Impact Statement* (1995) pages 1-4 to 1-5 and Appendices B and C.

Livestock Grazing and the Wilderness System

Section 4(d)(4)(2) of the Wilderness Act states: "The grazing of livestock, where established prior to the effective date of the Act, shall be permitted to continue subject to such reasonable regulations as are deemed necessary by the Secretary of Agriculture." Congressional interpretation of the Wilderness Act makes it clear that the legislative intent of the Wilderness Act is to allow livestock grazing and the facilities needed to support grazing in Wilderness areas when such grazing was established prior to classification.

Congress has developed specific guidelines and policy statements that reflect and clarify its interpretation of livestock grazing within Wilderness areas. The following points derive from Forest Service Manual 2323.22:

- There shall be no curtailments of grazing in Wilderness areas simply because an area is, or has been, designated as Wilderness, nor should Wilderness designations be used as an excuse by administrators to slowly "phase out" grazing. Any adjustments in the numbers of livestock permitted to graze in Wilderness areas should be made as a result of revisions in the normal grazing and land management planning and policy setting process, giving consideration to legal mandates, range condition, and the protection of the range resource from deterioration.
- The maintenance of supporting facilities, existing in the area prior to its classification as Wilderness (including fences, line cabins, water wells and lines, stock tanks, etc.), is permissible within a Wilderness area. Where practical alternatives do not exist, maintenance or other activities may be accomplished through the occasional use of motorized equipment. This may include, for example, the use of backhoes to maintain stock ponds, pickup trucks for major fence repairs or specialized equipment to repair stock watering facilities.

Interpretation of livestock grazing within Wilderness areas, cont.

- Such occasional use of motorized equipment should be expressly authorized in the grazing permits for the area involved. The use of motorized equipment should be based on a rule of practical necessity and reasonableness. For example, motorized equipment need not be allowed for the placement of small quantities of salt or other activities where such activities can reasonably and practically be accomplished on horseback or foot. On the other hand, it may be appropriate to permit the occasional use of motorized equipment to haul large quantities of salt to distribution points. Moreover, under the rule of reasonableness, occasional use of motorized equipment should be permitted where practical alternatives are not available and when such use would not have a significant adverse impact on the natural environment. Such motorized equipment uses would be normally permitted only in those portions of a Wilderness area where they had occurred prior to the area's designation as Wilderness or where established by prior agreement.
- Placing or reconstructing deteriorated facilities or improvements should not require "natural materials" unless the material and labor costs or using natural materials would not impose unreasonable additional costs on grazing permittees.
- The construction of new improvements or replacement of deteriorated facilities in a Wilderness is permissible if in accordance with those guidelines and management plans governing the area involved. However, the construction of new improvements should be primarily for the purpose of resource protection and the more effective management of resources rather than to accommodate increased numbers of livestock.
- The use of motorized equipment for emergency purposes, such as rescuing sick animals or the placement of feed in emergency situations, is also permissible. This privilege is to be exercised only in true emergencies and should not be abused by permittees.

The general rule of thumb should be that activities or facilities established prior to the date of an area's designation as Wilderness should be allowed to continue/remain in place, and facilities may be replaced when necessary for the permittee to properly administer the grazing program.

Organization of this Report

Roadless area information is presented by administrative unit, beginning with the Dakota Prairie Grasslands, followed by the Medicine Bow-Routt National Forest (Thunder Basin National Grassland), and ending with the Nebraska National Forest. Each area begins with a description of its affected environment, followed by a Capability Analysis, Availability Analysis, Evidence of Need for Wilderness analysis and a presentation of management area allocations by alternative.

In addition, in order to reduce redundancy and the number of pages in this report, a section is added at the end of each administrative unit's discussion of roadless areas. This section is titled "Criteria Common to All Roadless Areas on this Unit." For example, rather than repeat the exact wording under the "Challenge" criterion each time for all of the McKenzie Ranger District's roadless areas, "Challenge" is moved to the end of the narrative for the McKenzie Ranger District's discussion of its roadless areas.

Based on the capability, availability, and Evidence of Need for Wilderness analyses, each roadless area carries ratings as to its suitability for recommendations to Congress as Wilderness areas. The criteria used to rate the roadless areas (high, moderate, or low) are attached to the end of this document, as are specific ratings for each of the 45 roadless areas.

Before the narratives for each roadless area begin, a few definitions and a discussion of applicable laws that pertain to this roadless area review are provided.

An Affected Environment Overview for Each Area

The description of the affected environment for each of the 45 areas offers a context for the capability, availability and Evidence of Need for Wilderness analyses. As required by *Forest Service Handbook* (FSH) 1909.12,4.19, each overview includes information such as the following:

- Roadless area name and number of acres.
- Location, vicinity, and type of access.
- Geography and topography.
- Vegetation, including ecosystem types.
- Current uses of the area.
- Appearance of the area.
- Surroundings, such as the characteristics of contiguous areas.
- Key attractions, if any, such as sensitive wildlife present and scenic landmarks.

Capability Analyses

FSH 1909.12.7,21 defines and clarifies how capability of a roadless area for purposes of Wilderness designation is determined:

> The capability of a potential wilderness is the degree to which that area contains the basic characteristics that make it suitable for wilderness designation without regard to its availability for or need as wilderness. The combinations of basic natural characteristics are of infinite variety. No two areas possess these characteristics in the same measure. The combinations that may be appraised in one section of the country as being highly desirable for wilderness designation might be appraised as nominal or adverse in another. The principal wilderness characteristics that follow are generally, but not necessarily, listed in order of importance or desirability. Consider these characteristics in analyzing the quality of the wilderness resource of an inventoried roadless area. If these characteristics are determined to be important, describe and refer to them in trade-off analyses when pertinent.

The characteristics include: environment, challenge, recreation opportunities, special features, and manageability.

Availability for Wilderness

FSH 1909.12.7,22 defines and clarifies how availability is determined:

> All National Forest System lands determined to meet wilderness capability requirements are generally available for consideration as wilderness. However, the determination of availability is conditioned by the value of and need for the wilderness resource compared to the value of and need for other resources. To be available for wilderness, the values of the wilderness resource, both tangible and intangible, should offset the value of resources that formal wilderness designation would forego. The predominant value does not necessarily reflect the use or combination of uses that would yield the greatest dollar return or the greatest unit output. In evaluating availability, describe the other resource demands and uses that the area under evaluation would satisfy. Include all other resource potentials--pertinent quantitative and qualitative information including current use, outputs, trends, and potential future use, and outputs of the various resources involved.

Based on this direction, availability information was gathered to address resource values and potential and management obligations, constraints and encumbrances. The wildlife species listed in the Plant and Animal section of the availability section either have been sighted within the area or the area contains habitat suitable for the species. Table C-13 through Table C-15 contain additional information about wildlife and rare plant species found within the roadless areas.

Furthermore, "Evidence of Need for Wilderness" has been evaluated to better understand the implications of additional recommendations to the National Wilderness Preservation System.

Roadless Areas on the Dakota Prairie Grasslands

Grand River National Grassland (Grand River Ranger District)

Grand River Badlands (Public Proposed): An Overview of the Affected Environment

The 6,060-acre Grand River Badlands area is located about 15 miles south of Lemmon, South Dakota. More specifically, the Grand River Badlands area is located, either partly or fully, in Township 20 North, Range 18 East, Sections 6-8, Township 20 North, Range 15 East, Sections 1-4 and 9-12, and Township 21 North, Range 16 East, Sections 32-35. This area is a scenic combination of roughly cut breaks and rolling prairie. Access from Lemmon is south for 15 miles on State Highway 73.

The Grand River Badlands area is located within the Great Plains-Palouse Dry Steppe Province ecoregion of the Temperate Steppe Division. The topography of the area varies from gently rolling grasslands to rough-cut, isolated butte terrain with moderately incised drainages. The Grand River Badlands area has few trees, except near creek bottoms. Elevation varies from 2,000 to 3,000 feet above sea level.

The Grand River drains the Grand River Badlands area to the north and east. Shadehill Reservoir lies about two miles to the west of this area.

Few shrub or tree components are present. Some intermittent American plum, buffalo berry, and green ash may be found. The primary vegetation consists of western wheatgrass, blue grama, needle-and-thread grass, and thread-leaf sedge. Vegetative health in the area is good to excellent.

The area supports viable populations of mule and white-tailed deer, pronghorn, sharp-tailed grouse, and black-tailed prairie dogs and their associated species.

Rutting along two-track roads is an existing management concern.

Recreational opportunities include hiking, hunting, horseback riding, nature study, and primitive camping and picnicking. Livestock grazing is common.

Grand River Badlands: Capability Analysis

Environment

Opportunity for Solitude and Serenity: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Grand River Ranger District.

Natural Appearance and Integrity: Overall, this roadless area retains a natural appearance, representative of rolling grassland and isolated butte terrain. Most of the ecological processes, including flash flooding, remain intact, with the exception of frequent natural wildfire,. Closer examination reveals signs of mineral and livestock activities. Cattle may be frequently encountered during the warmer grazing season. About five miles of buried range-water pipeline exist in the area. Livestock developments (including developed springs, fences, water wells, primitive trails, stock tanks and dugouts) detract from the natural setting, although some range developments blend with the natural surroundings as much as possible.

Challenge: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Grand River Ranger District.

Recreation Opportunities: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Grand River Ranger District.

Special Features

Unique Characteristics and Scenic Features: Fossils found in Hell Creek Formation deposits represent the Cretaceous (130 to 65 million years ago) period.

Opportunities for Outdoor Education: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Grand River Ranger District.

Manageability

Size and Shape: The 6,060-acre Grand River Badlands area is roughly rectangular in shape. It is about five miles wide east to west and three miles long north to south. It contains four inholdings, totaling approximately 1,640 acres.

Potential to Manage Boundaries: Under a Wilderness designation and without adequate signing to identify the Wilderness area boundaries, managing the intermingled ownership in the area would pose significant challenges. In addition, the lack of consistent law enforcement within the area would impede enforcement of motorized restrictions in the area.

Grand River Badlands: Availability Analyses

Resource Values and Potentials

Oil and Gas: The minerals potential for oil and gas is considered low. No oil and gas developments currently exist in the area.

Coal: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Grand River Ranger District.

Livestock Grazing: Twelve permittees operate on one grazing allotment in the area. The area produces about 3,166 animal unit months of livestock grazing annually.

Locatable Minerals: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Grand River Ranger District.

Common Minerals: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Grand River Ranger District.

Timber: There is no merchantable timber within this area.

Recreation: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Grand River Ranger District.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral, or adverse effect on the federally listed species as shown below:

- Peregrine falcon; whooping crane: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.
- Bald eagle: Effects from Wilderness designation would have beneficial effect on wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.
- Mountain plover: A Wilderness designation would likely reduce prairie dog shooting, thereby increasing the expansion of prairie dog towns, which in turn, enhances mountain plover habitat. Designation would reduce motorized activities that can disturb mountain plovers and destroy their nests.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitat. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access within Wilderness areas.

Black-tailed prairie dogs and species closely associated with prairie dog towns and colonies: Prairie dogs and prairie dog-associated species would largely benefit from Wilderness designations, primarily because the poisoning of prairie dog towns, accomplished mainly with motorized support, would be greatly reduced. In addition, fewer prairie dog shooters would frequent prairie dog towns in Wilderness areas due to restrictions on motorized access.

However, prairie dogs and associated species may be adversely affected by a Wilderness designation due to the anticipated reduction in predator control resulting from motorized restrictions. Finally, the mountain plover, which favors areas affected by fire, may be adversely affected due to reduced motorized support in conducting prescribed fires.

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around aerial- and ground-nesting raptor sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially due to reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Grand River National Grassland include the black-tailed prairie dog and the plains sharp-tailed grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered falling under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the tables at the very end of this document.

Management Obligations, Constraints, or Encumbrances

Mineral Leases and Subsurface Rights: Approximately 1,391 acres of subsurface rights are owned by private entities in the Grand River Badlands area. No mineral leases currently are held on the Grand River National Grassland.

Existing Contracts and Agreements: The Grand River Cooperative Grazing Association holds a 10-year grazing agreement for the area. This agreement started in 1992 and is in effect until 2002. Special-use permits for buried telephone and power lines are in effect in the area.

Biotic Control Measures and Fire Protection: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Grand River Ranger District.

Effects on Adjacent Lands: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Grand River Ranger District.

Grand River Badlands: Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The nearest designated Wilderness is the 10,510-acre Theodore Roosevelt Wilderness, South Unit, in Theodore Roosevelt National Park, located about 125 miles northwest of this area. The Theodore Roosevelt Wilderness, South Unit, represents a mixed-grass prairie in a badlands setting. The Grand River Badlands Wilderness would also represent a mixed-grass prairie, but in a rolling grassland setting rather than a true badlands setting.

Representation of Landforms and Ecosystems: This area represents a mixed-grass prairie in a rolling grassland terrain. Upland breaks and upland grasslands ecosystem types are present.

Biota: No species are dependent upon a Wilderness designation to remain viable in this area. However, most key species would benefit from a designation.

Public Interests and Concerns: The area is found in a sparsely populated region of the country. Dickinson and Bismarck/Mandan, North Dakota, with an estimated population of less than 125,000, are the nearest cities of any size, and neither urban area is closer than 90 miles from the area.

A considerable number of people and organizations have requested that the Forest Service designate some grassland Wilderness somewhere within the 191-million-acre National Forest System. Currently, Congress has not designated Wilderness area on any of the 20 national grasslands in that System.

Grand River Badlands: Environmental Consequences

Management Prescription Allocations by Alternative

Alternative 2:	MA 3.64	90 acres
	MA 6.1	5,970 acres
Alternative 3:	MA 6.1	6,010 acres
Alternative 4:	MA 3.64	90 acres
	MA 6.1	5,970 acres
Alternative 5:	MA 3.64	50 acres
	MA 6.1	6,010 acres

Designation: Wilderness

Prescription: MA 1.2A Suitable Wilderness

Alternatives: Wilderness designation is not considered in any alternative because of the area's existing level of development.

Designation: Non-Wilderness

Prescription: MA 3.64 Special Plant and Wildlife Habitat

Alternatives: 2, 4, and 5

Environmental Consequences: Suitable habitat will be maintained or enhanced for the full spectrum of plant and wildlife species, guilds, and communities. Riparian areas (streams, seeps, springs, fens) will be managed to retain the hydrologic regimes. Broadleaf deciduous trees characterize woodlands and hardwood draws. Prairie landscapes will have a diversity of warm season and cool season grasses and forbs. Plant communities of high species diversity will act as a seed source for other areas within the landscape where diversity may be reduced.

Mitigation Measures: These areas are managed to maintain and enhance specific plant and wildlife species of concern and plant and wildlife communities. Habitat enhancement is encouraged. Motorized access would be limited to administrative use. Although grazing could occur to meet management objectives, the area would normally be considered unsuitable for grazing.

Economic and Social Effects: Motorized recreation opportunities would not be available. Opportunities for those desiring solitude and isolation would be about the same as present. Opportunities for discovery and interpretation of ecological, biological, cultural, historic and paleontological resources would be good. Livestock grazing would likely remain the primary economic benefit from the area but would be reduced from present levels. The primitive to semi-primitive character of the area would be substantially retained.

Designation: Non-Wilderness

Prescription: MA 6.1 Rangeland with Broad Resource Emphasis

Alternatives: 2, 4, and 5

Environmental Consequences: Motorized access would be allowed unless specific areas are designated as closed or restricted to designated roads and trails. A full spectrum of motorized recreation opportunities would be allowed. Construction of recreation facilities, roads, power lines, and other features would be allowed. Livestock grazing would continue. Valid existing rights and leases would be recognized.

Mitigation Measures: Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is a high probability, if the area is designated MA 6.1 it would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased while at the same time opportunities for nonmotorized activities reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would be reduced. All users would be permitted the same motorized access. The area would continue to provide the existing mix of economic benefits while roadless primitive and semi-primitive character could be lost permanently making future wilderness designation unlikely.

South Fork (Public Proposed): An Overview of the Affected Environment

The 12,830-acre South Fork area is located about five miles north of Bison, South Dakota. More specifically, the South Fork area is located, either partly or fully, in Township 19 North, Range 13 East, Sections 1-15, and Township 20 North, Range 13 East, Sections 22-24, 26-29 and 31-35. This area is a scenic combination of rough cut breaks and rolling prairie. Access from Lemmon, South Dakota, is west on State Highway 12 for 10 miles, then south on County Highway 9 for 24 miles.

The South Fork area is located within the Great Plains-Palouse Dry Steppe Province ecoregion of the Temperate Steppe Division. The topography of the area varies from gently rolling grasslands to rough-cut, isolated butte terrain with moderately incised drainages. In the southern portion of this area, a rather unique “sand hills-like” landscape feature with exposed blowouts occurs. The South Fork area has few trees, except near creek bottoms. Elevation varies from 2,000 to 3,000 feet above sea level.

The Grand River drains the South Fork area to the north and east. Shadehill Reservoir is downstream from this area.

Few shrub or tree components are present. Some intermittent American plum, buffalo berry and green ash may be found. The primary vegetation consists of western wheatgrass, blue grama, needle-and-thread and thread-leaf sedge. This area is in good to excellent vegetative health.

The area supports viable populations of mule and white-tailed deer, pronghorn, sharp-tailed grouse and black-tailed prairie dogs and their associated species.

Rutting along two-track roads is an existing management concern.

Recreational opportunities include hiking, hunting, horseback riding, nature study and primitive camping and picnicking. Livestock grazing is common.

South Fork: Capability Analysis

Environment

Opportunity for Solitude and Serenity: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Grand River Ranger District.

Natural Appearance and Integrity: Overall, this roadless area retains a natural appearance, representative of rolling grassland and isolated butte terrain. Most of the ecological processes, including flash flooding, but with the exception of frequent natural wildfire, remain intact. Closer examination will reveal signs of mineral and livestock activities. Cattle may be frequently encountered during the warmer grazing season. Up to seven miles of buried range-water pipeline may be developed in the area in the near future. Livestock developments, including developed springs, fences, water wells, primitive trails, stock tanks and dugouts, detract from the natural setting, although some range developments blend with the natural surroundings as much as possible.

Challenge: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Grand River Ranger District.

Recreation Opportunities: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Grand River Ranger District.

Special Features

Unique Characteristics and Scenic Features: Fossils found in Hell Creek Formation deposits represent the Cretaceous (130 to 65 million years ago) period. This area also includes a "sand dune-like" landscape feature characterized by exposed blowouts.

Opportunities for Outdoor Education: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Grand River Ranger District.

Manageability

Size and Shape: The 12,830-acre South Fork area is basically square in shape. It is about five miles wide north to south, and six miles long east to west. It contains four private and state inholdings, totaling approximately 1,595 acres.

Potential to Manage Boundaries: The potential to manage the intermingled ownership within the area under a Wilderness designation would pose significant challenges without adequate signing to identify the Wilderness area. In addition, the lack of consistent law enforcement within the area would impede enforcement of motorized restrictions in the area.

South Fork: Availability Analyses

Resource Values and Potentials

Oil and Gas: The minerals potential for oil and gas is considered low. No oil and gas developments currently exist in the area.

Coal: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Grand River Ranger District.

Livestock Grazing: Eleven permittees operate on two allotments in the area. The area produces about 4,199 animal unit months of livestock grazing annually.

Locatable Minerals: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Grand River Ranger District.

Common Minerals: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Grand River Ranger District.

Timber: There is no merchantable timber within this area.

Recreation: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Grand River Ranger District.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Peregrine falcon; whooping crane: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.
- Bald eagle: Effects from Wilderness designation would have beneficial effect on wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.
- Mountain plover: A Wilderness designation would likely reduce prairie dog shooting, thereby increasing the expansion of prairie dog towns which, in turn, enhances mountain plover habitat. Designation would reduce motorized activities that can disturb mountain plovers and destroy their nests.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitats. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access within Wilderness areas.

Black-tailed prairie dogs and species closely associated with prairie dog towns and colonies: Prairie dogs and prairie dog-associated species would largely benefit from Wilderness designations, primarily because the poisoning of prairie dog towns, accomplished mainly with motorized support, would be greatly reduced. In addition, fewer prairie dog shooters would frequent prairie dog towns in Wilderness areas due to restrictions on motorized access. However, prairie dogs and associated species may be adversely affected by a Wilderness designation due to the reduction anticipated in predator control, which would result from motorized restrictions. Finally, the mountain plover, which favors areas affected by fire, may be adversely affected due to reduced motorized support in conducting prescribed fires.

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around both aerial- and ground-nesting raptor sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially due to reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Grand River National Grassland include: the black-tailed prairie dog and the plains sharp-tailed grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered falling under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the tables at the very end of this document.

Management Obligations, Constraints, or Encumbrances

Mineral Leases and Subsurface Rights: Approximately 3,763 acres of subsurface rights are owned by private entities in the South Fork area. No mineral leases currently are held on the Grand River National Grassland.

Existing Contracts and Agreements: The Grand River Grazing Association holds the 10-year grazing agreement for the area. This agreement started in 1992 and is in effect until 2002. Special-use permits for honey bee apiaries are in effect in the area.

Biotic Control Measures and Fire Protection: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Grand River Ranger District.

Effects on Adjacent Lands: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Grand River Ranger District.

South Fork: Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The nearest designated Wilderness is the 10,510-acre Theodore Roosevelt Wilderness, South Unit, in Theodore Roosevelt National Park, located about 130 miles northwest of this area. The Theodore Roosevelt Wilderness, South Unit, represents a mixed-grass prairie in a badlands setting. The South Fork Wilderness would also represent a mixed-grass prairie, but in a rolling grassland setting, not in a badlands setting.

Representation of Landforms and Ecosystems: This area represents a mixed-grass prairie in a rolling grassland terrain. The following ecosystem types are present: upland breaks and upland grasslands.

Biota: No species are dependent upon a Wilderness designation to remain viable in this area. Most key species would benefit, however, from a designation.

Public Interests and Concerns: The area is found in a sparsely populated region of the country. Dickinson and Bismarck / Mandan, North Dakota, with an estimated population of less than 125,000, are the nearest cities of any size, and neither urban area is closer than 90 miles from the area.

A considerable number of people and organizations have requested that the Forest Service designate some grassland Wilderness somewhere within the 191-million-acre National Forest System. Currently, Congress has not designated Wilderness area on any of the 20 national grasslands within that System.

South Fork: Environmental Consequences

Management Prescription Allocations by Alternative:

Alternative 2:	MA 2.1	50 acres
	MA 6.1	12,780 acres
Alternative 3:	MA 6.1	5,180 acres
	MA 6.1 No Road	7,650 acres
Alternative 4:	MA 2.1	50 acres
	MA 6.1	12,780 acres
Alternative 5:	MA 2.1	50 acres
	MA 6.1	12,780 acres

Designation: Wilderness

Prescription: MA 1.2A Suitable Wilderness

Alternatives: Wilderness designation is not considered in any alternative because of the area's existing level of development.

Designation: Non-Wilderness

Prescription: MA 2.1 Special Interest Area

Alternatives: 2, 4, and 5

Environmental Consequences: Recreation opportunities that maintain and enhance the characteristics for which the SIA was designated will be available. Livestock grazing would continue as present. Valid existing rights and leases would be recognized

Mitigation Measures: OHV trail construction will be prohibited. Oil and gas leasing would be no surface occupancy.

Economic and Social Effects: Recreational and interpretive opportunities would be emphasized. The area would continue to provide a mix of economic benefits.

Designation: Non-Wilderness

Prescription: MA 6.1 Rangeland with Broad Resource Emphasis

Alternatives: 2, 4, and 5

Environmental Consequences: Motorized access would be allowed unless specific areas are designated as closed or restricted to designated roads and trails. A full spectrum of motorized recreation opportunities would be allowed. Construction of recreation facilities, roads, power lines, and other features would be allowed. Livestock grazing would continue. Valid existing rights and leases would be recognized.

Mitigation Measures: Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is a high probability, if the area is designated MA 6.1 it would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased while opportunities for nonmotorized activities reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would be reduced. All users would be permitted the same motorized access. The area would continue to provide the existing mix of economic benefits while roadless primitive and semi-primitive character could be lost permanently making future wilderness designation unlikely.

Twin Butte Creek (Public Proposed): An Overview of the Affected Environment

The 6,540-acre Twin Butte Creek area is located about 25 miles south of Lemmon, South Dakota. More specifically, the Twin Butte Creek area is located, either partly or fully, in Township 18 North, Range 18 East, Sections 20-36 and Township 17 North, Range 18 East, Sections 3-4. This area is a scenic combination of rough cut breaks and rolling prairie. Access from Lemmon is 14 miles east on State Highway 73, then 4.5 miles south of County Road 4.

The Twin Butte Creek area is located within the Great Plains-Palouse Dry Steppe Province ecoregion of the Temperate Steppe Division. The topography of the area varies from gently rolling grasslands to rough-cut, isolated butte terrain with moderately incised drainages. The Twin Butte Creek area has few trees, except near creek bottoms. Elevation varies from 2,000 to 3,000 feet above sea level.

The Grand River drains the Twin Butte Creek area to the north and east.

Few shrub or tree components are present. Some intermittent American plum, buffalo berry and green ash may be found. The primary vegetation consists of western wheatgrass, blue grama, needle-and-thread and thread-leaf sedge. This area is in good to excellent vegetative health.

The area supports viable populations of mule and white-tailed deer, pronghorn, sharp-tailed grouse and black-tailed prairie dogs and their associated species.

Rutting along two-track roads is an existing management concern.

Recreational opportunities include hiking, hunting, horseback riding, nature study and primitive camping and picnicking. Livestock grazing is common. Traditional American Indian religious practices have historically occurred in the area.

Twin Butte Creek: Capability Analysis

Environment

Opportunity for Solitude and Serenity: Because of its rolling character, opportunities for solitude and serenity are available, though the area does not offer high opportunities for solitude and serenity. On open stretches of this area, the vast nature of the mixed-grass prairie and the relative lack of visible human developments allow the visitor to experience the grassland in a primitive or semi-primitive condition.

Natural Appearance and Integrity: Overall, this roadless area retains a natural appearance, representative of rolling grassland and isolated butte terrain. Most of the ecological processes, including flash flooding, but with the exception of frequent natural wildfire, remain intact. Closer examination will reveal signs of mineral and livestock activities. Cattle may be frequently encountered during the warmer grazing season. About one and one-half miles of buried range-water pipeline exists in the area. In addition, approximately three miles of a semi-improved road suitable for sedan traffic exists in the eastern portion of the area. Livestock developments, including developed springs, fences, water wells, primitive trails, stock tanks and dugouts, detract from the natural setting, although some range developments blend with the natural surroundings as much as possible. About three and one-half miles of buried range-water pipeline exist in the area.

Challenge: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Grand River Ranger District.

Recreation Opportunities: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Grand River Ranger District.

Special Features

Unique Characteristics and Scenic Features: Fossils found in Hell Creek Formation deposits represent the Cretaceous (130 to 65 million years ago) period. This area has been identified as a potential high-use area for traditional American Indian religious practices. Portions of this area are located in both the Cheyenne and Standing Rock Indian Reservations.

Opportunities for Outdoor Education: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Grand River Ranger District.

Manageability

Size and Shape: The 6,540 acre Twin Butte Creek area is rectangular in shape. It is about five miles wide east to west, and three miles long north to south. It contains one inholding of about two acres.

Potential to Manage Boundaries: The lack of consistent law enforcement within the area would impede enforcement of motorized restrictions in the area.

Twin Butte Creek: Availability Analyses

Resource Values and Potentials

Oil and Gas: The minerals potential for oil and gas is considered low. No oil and gas developments currently exist in the area.

Coal: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Grand River Ranger District.

Livestock Grazing: Three permittees operate on three allotments in the area. The area produces about 1,101 animal unit months of livestock grazing annually.

Locatable Minerals: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Grand River Ranger District.

Common Minerals: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Grand River Ranger District.

Timber: There is no merchantable timber within this area.

Recreation: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Grand River Ranger District.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Peregrine falcon; whooping crane: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.
- Bald eagle: Effects from Wilderness designation would have beneficial effect on wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.
- Mountain plover: A Wilderness designation would likely reduce prairie dog shooting, thereby increasing the expansion of prairie dog towns which, in turn, enhances mountain plover habitat. Designation would reduce motorized activities that can disturb mountain plovers and destroy their nests.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitats. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access within Wilderness areas.

Black-tailed prairie dogs and species closely associated with prairie dog towns and colonies: Prairie dogs and prairie dog-associated species would largely benefit from Wilderness designations, primarily because the poisoning of prairie dog towns, accomplished mainly with motorized support, would be greatly reduced. In addition, fewer prairie dog shooters would frequent prairie dog towns in Wilderness areas due to restrictions on motorized access. However, prairie dogs and associated species may be adversely affected by a Wilderness designation due to the reduction anticipated in predator control, which would result from motorized restrictions. Finally, the mountain plover, which favors areas affected by fire, may be adversely affected due to reduced motorized support in conducting prescribed fires.

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around both aerial- and ground-nesting raptor sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially due to reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Grand River National Grassland include: the black-tailed prairie dog and the plains sharp-tailed grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered falling under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the tables at the very end of this document.

Management Obligations, Constraints or Encumbrances

Mineral Leases and Subsurface Rights: Approximately 1,085 acres of subsurface rights are owned by the Standing Rock Sioux Tribe in the Twin Butte area. No mineral leases currently are held on the Grand River National Grassland.

Existing Contracts and Agreements: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Grand River Ranger District.

Biotic Control Measures and Fire Protection: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Grand River Ranger District.

Effects on Adjacent Lands: Under a Wilderness designation, restrictions on motorized access into the area could diminish opportunities for traditional American Indian religious practices. For additional effects on adjacent lands, please refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Grand River Ranger District.

Twin Butte Creek: Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The nearest designated Wilderness is the 10,510-acre Theodore Roosevelt Wilderness, South Unit, in Theodore Roosevelt National Park, located about 150 miles northwest of this area. The Theodore Roosevelt Wilderness, South Unit, represents a mixed-grass prairie in a badlands setting. The Twin Butte Creek Wilderness would also represent a mixed-grass prairie, but in a rolling grassland setting, not in a badlands setting.

Representation of Landforms and Ecosystems: This area represents a mixed-grass prairie in a rolling grassland terrain. The following ecosystem types are present: upland breaks and upland grasslands.

Biota: No species are dependent upon a Wilderness designation to remain viable in this area. Most key species would benefit, however, from a designation.

Public Interests and Concerns: The area is found in a sparsely populated region of the country. Dickinson and Bismarck / Mandan, North Dakota, with an estimated population of less than 125,000, are the nearest cities of any size, and neither urban area is closer than 90 miles from the area.

A considerable number of people and organizations have requested that the Forest Service designate some grassland Wilderness somewhere within the 191-million-acre National Forest System. Currently, Congress has not designated Wilderness area on any of the 20 national grasslands within that System.

Twin Butte Creek: Environmental Consequences

Management Prescription Allocations by Alternative

Alternative 2	MA 6.1	6,540 acres
Alternative 3	MA 3.65 No Road	6,540 acres
Alternative 4	MA 6.1	6,540 acres
Alternative 5	MA 6.1	6,540 acres

Designation: Wilderness

Prescription: MA 1.2A Suitable Wilderness

Alternatives: Wilderness designation is not considered in any alternative because of the area's existing level of development.

Designation: Non-wilderness

Prescription: MA 3.65 Rangelands with Diverse Natural-appearing Landscapes (No Road)

Alternatives: 3

Environmental Consequences: The existing road system would remain open to motorized access unless specifically designated as closed or restricted. The construction of new roads would be prohibited in the area. A full spectrum of motorized recreation opportunities would be allowed. Livestock grazing would continue. Valid existing rights and leases would be recognized.

Mitigation Measures: Mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines.

Economic and Social Effects: Opportunities for motorized activities would be present but would be lower than that in MA 3.65. Opportunities for solitude, lower human encounters, and nonmotorized settings may be increased over time. All users would be permitted the same motorized access. The area would continue to provide a mix of economic benefits.

Designation: Non-Wilderness

Prescription: MA 6.1 Rangeland with Broad Resource Emphasis

Alternatives: 2, 4, and 5

Environmental Consequences: Motorized access would be allowed unless specific areas are designated as closed or restricted to designated roads and trails. A full spectrum of motorized recreation opportunities would be allowed. Construction of recreation facilities, roads, power lines, and other features would be allowed. Livestock grazing would continue. Valid existing rights and leases would be recognized.

Mitigation Measures: Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is a high probability, if the area is designated MA 6.1 it would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased while at the same time opportunities for nonmotorized activities reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would be reduced. All users would be permitted the same motorized access. The area would continue to provide the existing mix of economic benefits while roadless primitive and semi-primitive character could be lost permanently making future wilderness designation unlikely.

Criteria Common to All Roadless Areas on this Administrative Unit

Capability Analyses

Challenge: Challenge centers around survival in a dry and harsh environment. Summer temperatures can exceed 100° Fahrenheit with little or no drinkable water sources. Winter temperatures can drop to -35° Fahrenheit with wind-chill factors in excess of -80°. Broken terrain and open landscapes are deceptive and may disorient visitors' abilities to mark their directions. Hiking may be much more difficult than anticipated with steep slopes and difficult terrain. Prairie rattlesnakes may be encountered and can be dangerous.

Opportunities for Outdoor Education: A visitor should find features to stimulate curiosity: geology, grassland ecosystems, grassland flora and fauna, bared soil layers, shifting weather patterns and cloud types, incredibly clear night skies offering unimpeded views of the stars. Skills in maneuvering a rugged terrain, using a compass, taking precautions for snake and spider bites, heat stroke (and frostbite or freezing to death in the winter), setting up a primitive campsite, and outdoor cooking may all test and develop a visitor’s understanding of the outdoors.

Recreation Opportunities: Current recreation includes deer and pronghorn hunting, upland game hunting, hiking, dispersed camping, horseback riding, photography, nature study and other associated activities.

Availability Analyses

Coal: There are no known coal resources on the Grand River National Grassland. No current production occurs and previous historic development has been very minimal. Currently, there are no coal leases on the Grand River National Grassland.

Locatable Minerals: No records exist in geological literature that documents the occurrence or development of any hardrock minerals on or near the Grand River National Grassland, a region that is sedimentary in origin.

Common Minerals: Gravel, a common variety mineral, is found throughout the Grand River National Grassland. Gravel is the only local source of road-surfacing material. Adequate private sources for this aggregate exists. Therefore, a low potential exists for development of gravel resources on the Grand River National Grassland.

Recreation: Motorized recreation would be prohibited under a Wilderness designation. Current nonmotorized recreation, such as dispersed camping, hiking, horseback riding and nature study, would be allowed. Wilderness designation would preclude all off-highway motorized recreation, such as ATV and snowmobile use. Walk-in hunting opportunities would increase. Backcountry experiences would be enhanced with the exclusion of motorized activities. Opportunities for physically challenged and elderly access may be reduced or eliminated. Fishing opportunities within the Grand River Badlands and South Fork areas are available for warm-water species, such as perch and bass; however, fishing would be restricted to walk-in opportunities only under a Wilderness designation.

Biotic Control Measures and Fire Protection: Chemical, biological and mechanical control methods are used to stem the expansion of undesirable plant species, such as leafy spurge. Wildfire suppression would be addressed in Wilderness management plans that would be developed if any of the roadless areas are designated by Congress as Wilderness areas.

Effects on Adjacent Lands: Any increase in visitation, which may occur under a Wilderness designation, could increase the potential for accidental fire starts. Adjacent land values next to a designated Wilderness may rise or fall depending on local markets. As well, the potential for trespass from a designated Wilderness onto adjacent lands of other ownership might increase. These effects are estimated to be the same for all roadless areas on the Grand River National Grassland.

Little Missouri National Grassland

Medora Ranger District

Bell Lake: An Overview of the Affected Environment

The 11,270 acre Bell Lake area is located about 40 miles northwest of Dickinson, North Dakota, about 15 miles northwest of Medora, North Dakota, and about 11 miles northwest of the south unit of Theodore Roosevelt National Park. In addition, Bell Lake is just three miles west of the Elkhorn Ranch unit of Theodore Roosevelt National Park. Specifically, Bell Lake is located, either partly or fully, in: T. 143 N., R. 103 W., Sections 2-4, 7-15, 17-18, 20-21, 26-29 and 32-35. Bell Lake lies within the Little Missouri Badlands, a scenic combination of rugged terrain and open space. Access to the area is via Interstate 94 west from Medora for 14 miles, then north at the Camel Hump exit on Golden Valley County Road 14 for about 18 miles.

The Bell Lake area is located within the Little Missouri Badlands, a biogeographical sub-unit of the Great Plains Region. Robert G. Bailey further identifies the area as a part of the Great Plains-Palouse Dry Steppe Province ecoregion of the Temperate Steppe Division (71).

Topography varies from gentle rolling grasslands to rugged badlands terrain with deeply incised stream channels and numerous clay buttes. Extensive areas of upland grasslands are interspersed between upland breaks, particularly in the north and west side of the unit. Elevation varies from 2,300 feet to 2,700 feet above sea level. Two watersheds, Alkali and Bell Lake Creek, have helped sculpt the drainages and pinnacles in the area.

This area is a blend of vegetated landscapes and eroded badlands terrain. On some of the non-grass areas, predominate vegetation consists of big sagebrush, rubber rabbit brush, four-wing salt bush, and greasewood. Green ash and American elm occupy the wooded draws. Dominant grasses include western wheatgrass, green needle grass, and blue grama with little bluestem in the sandy areas and threadleaf sedge on the southern exposures. Understory shrub species in draws include buffaloberry, skunkbush sumac, chokecherry, snowberry, woods rose, and many others.

The alluvial floodplains along Bell Lake Creek support a riparian community consisting of cottonwoods and associated species. The terraces immediately above the floodplain tend to support silver sage and extensive western wheatgrass stands.

The Bell Lake area supports populations of mule deer, white-tailed deer, pronghorn antelope, sharp-tailed grouse and coyotes. Golden eagles frequently hunt in the area. Although the wildlife habitats and species represented within the Bell Lake area are not unique within the Little Missouri National Grassland, they are considered important to North Dakota.

Several two-track roads and about five miles of buried range-water pipeline exist in the area.

Recreational opportunities include hiking, hunting, horseback riding and camping. Other uses include livestock grazing and oil and gas production.

Bell Lake: Capability Analysis

Environment

Opportunity for Solitude and Serenity: Opportunities for solitude and serenity are available. The rugged terrain offers an opportunity for isolation among the broken landscape. In addition, on open stretches of this area, the vast nature of the mixed-grass prairie and the relative lack of visible human developments allow the visitor to experience the grassland in a primitive or semi-primitive condition.

Natural Appearance and Integrity: Overall, this roadless area retains a natural appearance, representative of rolling grasslands and rough badlands terrain. Most of the ecological processes, including flash flooding, but with the exception of frequent natural wildfire, remain intact. Cattle may be frequently encountered during the warmer grazing season. About five miles of buried range-water pipeline exists in the area. Livestock developments, including developed springs, fences, water wells, primitive trails, stock tanks and dugouts, detract from the natural setting, although some range developments blend with the natural surroundings as much as possible.

Challenge: Please, refer to “Criteria Common to All Roadless Areas on this Administrative Unit” at the end of the roadless report for the Medora Ranger District.

Recreation Opportunities: Current recreation in the area includes walk-in hunting, hiking, nature study, photography and other associated activities. The area is in a semi-primitive, low-development setting.

Special Features

Unique Characteristics and Scenic Features: Several archeological sites exist, representing prehistoric occupation and historic homestead occupation. A couple active prairie dog towns exist in the area. This area is scenic. It provides colorful badlands topography and open, native grassland landscapes. Fossils found in Fort Union (also known as Ludlow) Formation deposits represent the Paleocene (65 to 45 million years ago) period.

Opportunities for Outdoor Education: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Manageability

Size and Shape: The 11,270 acre Bell Lake area is roughly rectangular in shape. It is about two to five miles wide east to west, and six miles long north to south. It has no inholdings.

Potential to Manage Boundaries: Fencelines run for most of the boundary on the west, south and north sides. These existing fencelines could offer clear and visible signing should the area be designated as a Wilderness. Signing and posting along the eastern flank would be required. A major challenge may be enforcement of nonmotorized restrictions should the area be designated a Wilderness.

Bell Lake: Availability Analyses

Resource Values and Potentials

Oil and Gas: The minerals potential for oil and gas is considered high. At the time the DEIS was released for public review, the area was leased for oil and gas but no developments had yet occurred within the area. Since that time exploration has increased along the eastern border of the area. One well was drilled within the boundary but resulted in a dry hole. Oil and gas developments occur just outside the eastern flank of the area, with expectations for development to occur within the boundary.

Coal: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Livestock Grazing: Five permittees operate on five allotments in the area. The area produces, about 5,900 animal unit months of livestock grazing annually.

Locatable Minerals: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Common Minerals: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Timber: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Recreation: Motorized recreation would be prohibited under a Wilderness designation. Current nonmotorized recreation activities, such as dispersed camping, hiking, horseback riding, and nature study, would be allowed. Wilderness designation would preclude off-

highway motorized recreation, such as ATV and snowmobile use. Walk-in hunting opportunities would increase. Backcountry experiences would be enhanced with the exclusion of motorized activities. Opportunities for physically challenged and elderly access may be reduced or eliminated in the area.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Peregrine falcon; whooping crane: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.
- Bald eagle: Effects from Wilderness designation would have a beneficial effect on wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitats. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access within Wilderness areas.

Black-tailed prairie dogs and species closely associated with prairie dog towns and colonies: Prairie dogs and prairie dog-associated species would largely benefit from Wilderness designations, primarily because the poisoning of prairie dog towns, accomplished mainly with motorized support, would be greatly reduced. In addition, fewer prairie dog shooters would frequent prairie dog towns in Wilderness areas due to restrictions on motorized access. However, prairie dogs and associated species may be adversely affected by a Wilderness designation due to the reduction anticipated in predator control, which would result from motorized restrictions.

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around both aerial- and ground-nesting raptor sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Little Missouri National Grassland include: the black-tailed prairie dog, plains sharp-tailed grouse and the sage grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered that fall under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the table at the very end of this document.

Management Obligations, Constraints, or Encumbrances

Mineral Leases and Subsurface Rights: Land origination within Bell Lake is about 10,749 acres acquired and 480 acres from the public domain. About 320 acres of private subsurface minerals ownership beneath federally owned surface occurs in the area and is subject to minerals leasing. These acres are subject to lease, but as yet have not been developed. Currently, leases are generally for a 10-year period. Once production on a lease is established, the lease is valid throughout the life of production. The life of production for an oil well on the district is between five and twenty- five years.

Existing Contracts and Agreements: The Medora Grazing Association holds a 10-year livestock grazing agreement in the area.

Biotic Control Measures and Fire Protection: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Effects on Adjacent Lands: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Bell Lake: Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The nearest designated Wilderness is the 10,510-acre Theodore Roosevelt Wilderness, South Unit, in Theodore Roosevelt National Park, located about 11 miles southeast of this area. The Theodore Roosevelt Wilderness, South Unit, represents a mixed-grass prairie in a badlands setting. The Bell Lake Wilderness would also represent a mixed-grass prairie in a badlands setting.

Representation of Landforms and Ecosystems: This area represents a mixed-grass prairie with the following ecosystem types present: upland breaks, hardwood draws and upland grasslands. The landscape includes badlands and rolling prairies.

Biota: No species are dependent upon Wilderness designation to remain viable in this area. Most species probably would benefit, however, from a designation.

Public Interests and Concerns: The area is found in a sparsely populated region of the country. Dickinson, Williston and Bismarck / Mandan, North Dakota, with an estimated population of less than 125,000, and Glendive and Sydney, Montana, with a combined population of about 25,000, are the nearest cities of any size, and none of them are closer than 35 miles from the area.

A considerable number of people and organizations have requested that the Forest Service designate some grassland Wilderness somewhere within the 191-million-acre National Forest System. Currently, Congress has not designated Wilderness area on any of the 20 national grasslands within that System.

Two Wilderness areas have been designated in the Little Missouri Badlands: the 10,510-acre Theodore Roosevelt Wilderness, South Unit, and the 19,410-acre Theodore Roosevelt Wilderness, North Unit, both of which are located in the Theodore Roosevelt National Park. These two Wilderness areas offer nearby designated Wilderness which, in most ways, represent most of the key characteristics found in the Bell Lake area, including appearance and vegetative cover types. No other designated Wilderness areas, however, exist in the Little Missouri Badlands, a recognized biogeographical sub-unit of the Great Plains.

Bell Lake: Environmental Consequences

Management Prescription Allocations by Alternative

Alternative 2	MA 6.1	11,270 acres
Alternative 3	MA 6.1	11,270 acres
Alternative 4	MA 1.31	11,270 acres
Alternative 5	MA 1.31	11,270 acres

Designation: Wilderness

Prescription: MA 1. 2A Suitable for Wilderness

Alternatives: Wilderness designation is not considered in any alternative because of the area's existing level of mineral development.

Designation: Non-wilderness

Prescription: MA 1.31 Backcountry Recreation Nonmotorized

Alternatives: 4 and 5

Environmental Consequences: With rare exceptions, travel is nonmotorized. Recreation opportunities would be those associated with the primitive and nonmotorized end of the spectrum such as walking, hiking, horseback riding, and nonmotorized hunting. Overall wildlife would tend to benefit from reduced human activity. Opportunities for discovery of cultural, historical and paleontological resources would exist but interpretive opportunities would be limited or foregone. Livestock grazing would continue as present. Valid existing rights would be recognized. Because the area is leased for oil and gas and contains a small area of private minerals, additional oil and gas developments could occur. Where mineral development occurs, the semi-primitive, nonmotorized character of the area would be lost for the duration of the activity.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration, noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Construction of new range developments would not be allowed to detract from the semi-primitive character of the area. Oil and gas development on existing leases would require the area to be reclaimed to as near as possible its original condition at the close of the lease.

Economic and Social Effects: Opportunities for nonmotorized activities would be increased while at the same time reducing opportunities for motorized activities. Because oil and gas development of existing leases could occur; restricting other users could cause conflict. Those accustomed to accessing the area by vehicle might resent vehicle restrictions. Economic benefits from oil and gas developments would continue as long as production occurs in the area.

Designation: Non-wilderness

Prescription: MA 6.1 Rangeland with Broad Resource Emphasis

Alternatives: 2 and 3

Environmental Consequences: Motorized access would be allowed unless specific areas are designated as closed or restricted to designated roads and trails. A full spectrum of motorized recreation opportunities would be allowed. Construction of recreation facilities, roads, power lines, and other features would be allowed. Livestock grazing would continue. Existing oil and gas leasing would continue and new leasing would be permitted. Oil and gas developments such as roads, pipelines, and drilling pads would likely occur.

Mitigation Measures: Although mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is a high probability, if the area is designated MA 6.1 it would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased while at the same time opportunities for nonmotorized activities would be reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would be reduced. All users, including oil and gas, would be permitted the same motorized access. The area would continue to provide the existing mix of economic benefits while roadless primitive to semi-primitive character could be lost permanently making future wilderness designation unlikely.

Blacktail: An Overview of the Affected Environment

The 8,620-acre Blacktail area is located about 19 miles north of Medora, North Dakota, and about 12 miles north of the south unit of the Theodore Roosevelt National Park. Specifically, the Blacktail area is located, either partly or fully, in: T. 144 N., R. 101 W., Section 34, and T. 144 N., R. 100 W., Sections 31-33, and T. 143 N., R. 100 W., Sections 4, 6-7, 18 and 30, and T. 143 N., R. 101 W., Sections 1-3, 10-12, 13-14 and 23-25. Access to the area from Medora is via Interstate 94 east about 16 miles, then north on U.S. Highway 85 for about 15 miles, then seven miles west on Forest Highway 2, then six miles north and west on Forest Highway 717A.

The Blacktail area is located within the Little Missouri Badlands, a biogeographical sub-unit of the Great Plains Region. Robert G. Bailey further identifies the area as a part of the Great Plains-Palouse Dry Steppe Province ecoregion of the Temperate Steppe Division (71). The topography of the Blacktail area consists of ridgelines, plateaus and deeply incised drainages and cutbanks. Elevation ranges from about 2,500 to 2,767 feet above sea level.

Vegetation includes Rocky Mountain juniper, mixed grasses and sedges, and hardwoods in the draws and canyons. Wildlife include mule and white-tailed deer, upland and neotropical grassland birds, reptiles, such as the horned toad, and raptors. Scattered infestations of leafy spurge, a noxious weed, occur in the area.

About three miles of buried oil pipeline and one and a half miles of utility line exist in the area, along with range developments.

Blacktail: Capability Analyses

Environment

Opportunity for Solitude and Serenity: Medium opportunities for solitude and serenity are available. Lower opportunities exist on the ridgetops, with higher opportunities in the canyons. The rugged terrain offers an opportunity for isolation among the canyons. In addition, on open stretches of this area, the vast nature of the mixed-grass prairie and the relative lack of visible human developments allow the visitor to experience the grassland in a primitive or semi-primitive condition.

Natural Appearance and Integrity: Overall, this roadless area retains a natural appearance, representative of rolling grasslands and rough badlands terrain. Most of the ecological processes, including flash flooding, but with the exception of frequent natural wildfire, remain intact. Closer examination will reveal signs of livestock activities. Cattle may be frequently encountered during the warmer grazing season. Livestock developments, including developed springs, fences, water wells, primitive trails, stock tanks and dugouts, detract from the natural setting, although most range developments have been constructed to blend with the natural surroundings as much as possible. In addition, there are about two miles of buried range-water pipeline in the area.

Challenge: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Recreation Opportunities: Current recreation in the area includes a significant amount of big game, upland bird and turkey hunting, hiking, photography, nature study and other associated activities.

Special Features

Unique Characteristics and Scenic Features: Several archeological sites exist, representing prehistoric occupation and historic homestead occupation. Golden eagles are sighted in the area. The Blacktail area is scenic. It provides colorful badlands topography and open, native grassland landscapes. Fossils found in Fort Union (also known as Ludlow) Formation deposits represent the Paleocene (65 to 45 million years ago) period.

Opportunities for Outdoor Education: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Manageability

Size and Shape: The 8,620-acre Blacktail area is shaped something like wedge. It is about six miles long north to south and one to four miles wide east to west. It contains no inholdings.

Potential to Manage Boundaries: Posting and signing the boundaries to this area would be difficult due to the broken nature of the area's terrain. A major challenge may be enforcement of nonmotorized restrictions should the area be designated a Wilderness.

Blacktail: Availability Analyses

Resource Values and Potentials

Oil and Gas: The minerals potential for oil and gas is considered high. A couple of oil wells exist just outside the eastern boundary. The potential for oil and gas developments to expand into the area is moderate. The area is currently under lease by private oil and gas producers but not yet developed.

Coal: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Livestock Grazing: Ten permittees operate on seven allotments in the area. The area produces about 3,843 animal unit months of livestock grazing annually.

Locatable Minerals: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Common Minerals: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Timber: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Recreation: Motorized recreation would be prohibited under a Wilderness designation. Current nonmotorized recreation activities, such as dispersed camping, hiking, horseback riding, and nature study, would be allowed. Wilderness designation would preclude off-highway motorized recreation, such as ATV and snowmobile use. Walk-in hunting opportunities would increase. Backcountry experiences would be enhanced with the exclusion of motorized activities. Opportunities for physically challenged and elderly access may be reduced or eliminated in the area.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Peregrine falcon; whooping crane: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.
- Bald eagle: Effects from Wilderness designation would have a beneficial effect on wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitats. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access within Wilderness areas.

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around both aerial- and ground-nesting raptor sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Little Missouri National Grassland include: the black-tailed prairie dog, plains sharp-tailed grouse and the sage grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered that fall under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the table at the very end of this document.

Management Obligations, Constraints, or Encumbrances

Mineral Leases and Subsurface Rights: Land origination within the Blacktail area is about 7,350 acres acquired and 1,270 acres from the public domain. About 320 acres of private subsurface minerals ownership beneath federally owned surface occurs in the area and is subject to minerals leasing. These acres are subject to lease, but as yet have not been developed. Currently, leases are generally for a 10-year period. Once production on a lease is established, the lease is valid throughout the life of production. The life of production for an oil well on the district is between five and twenty-five years.

Existing Contracts and Agreements: The Medora Grazing Association holds a 10-year livestock grazing agreement for the area.

Biotic Control Measures and Fire Protection: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Effects on Adjacent Lands: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Blacktail: Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The nearest Wilderness area is the 10,510-acre Theodore Roosevelt Wilderness, South Unit, in the Theodore Roosevelt National Park. The Theodore Roosevelt Wilderness, South Unit, is about 14 miles to the southwest. The 19,410-acre Theodore Roosevelt Wilderness, North Unit, lies about 21 miles to the north. Both of these Wilderness areas represent mixed-grass prairies in a badlands setting. The Blacktail Wilderness would also represent a mixed-grass prairie in a badlands setting.

Representation of Landforms and Ecosystems: This area represents a mixed-grass prairie with the following ecosystem types present: hardwood draws, upland grasslands, upland breaks and rolling grasslands. The landscape includes badlands and rolling prairies.

Biota: No species are dependent upon a Wilderness designation to remain viable in the area. Most key species would benefit, however, from a designation.

Public Interests and Concerns: The area is found in a sparsely populated region of the country. Dickinson, Williston and Bismarck / Mandan, North Dakota, with an estimated population of less than 125,000, and Glendive and Sydney, Montana, with a combined population of about 25,000, are the nearest cities of any size, and none of them are closer than 40 miles from the area.

A considerable number of people and organizations have requested that the Forest Service designate some grassland Wilderness somewhere within the 191-million-acre National Forest System. Currently, Congress has not designated Wilderness area on any of the 20 national grasslands within that System.

Two Wilderness areas have been designated in the Little Missouri Badlands: the 10,510-acre Theodore Roosevelt Wilderness, South Unit, and the 19,410-acre Theodore Roosevelt Wilderness, North Unit, both of which are located in the Theodore Roosevelt National Park. These two Wilderness areas offer nearby designated Wilderness which, in most ways, represent most of the key characteristics found in the Blacktail area, including appearance and vegetative cover types. No other designated Wilderness areas, however, exist in the Little Missouri Badlands, a recognized biogeographical sub-unit of the Great Plains.

Blacktail: Environmental Consequences

Management Prescription Allocations by Alternative:

Alternative 2	MA 6.1	8,620 acres
Alternative 3	MA 3.65	8,620 acres
Alternative 4	MA 1.31	8,620 acres
Alternative 5	MA 6.1	8,620 acres

Designation: Wilderness

Prescription: MA 1.2A Suitable Wilderness

Alternatives: Wilderness designation is not considered in any alternative because of the area's existing level of mineral development.

Designation: Non-wilderness

Prescription: MA 1.31 Backcountry Recreation Nonmotorized

Alternatives: 4

Environmental Consequences: With rare exceptions, travel is nonmotorized. Recreation opportunities would be those associated with the primitive and nonmotorized end of the spectrum such as walking, hiking, horseback riding, and nonmotorized hunting. Overall wildlife would tend to benefit from reduced human activity. Opportunities for discovery of cultural, historical and paleontological resources would exist but interpretive opportunities would be limited or forgone. Livestock grazing would continue as present. Valid existing rights would be recognized. Because the area is leased for oil and gas and contains a small area of private minerals, oil and gas developments could occur. Where mineral development occurs, the semi-primitive, nonmotorized character of the area would be lost for the duration of the activity.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration, noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Construction of new range developments would not be allowed to detract from the semi-primitive character of the area. Oil and gas development on existing leases would require the area to be reclaimed to as near as possible its original condition at the close of the lease.

Economic and Social Effects: Opportunities for nonmotorized activities would be increased while at the same time reducing opportunities for motorized activities. Because oil and gas development of existing leases could occur; restricting other users could cause conflict. Those accustomed to accessing the area by vehicle might resent vehicle restrictions. Economic benefits from oil and gas developments would continue as long as production occurs in the area.

Designation: Non-wilderness

Prescription: MA 3.65 Rangelands with Diverse Natural-appearing Landscapes

Alternatives: 3

Environmental Consequences: Motorized access would be allowed unless specific areas are designated as closed or restricted to designated roads and trails. A full spectrum of motorized recreation opportunities would be allowed. Construction of recreation facilities, roads, power lines, and other features would be allowed. Livestock grazing would continue. Existing oil and gas leasing would continue and new leasing would be permitted. Oil and gas developments such as roads, pipelines, and drilling pads would likely occur.

Mitigation Measures: Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is a high probability, if the area is designated MA 3.65 it would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased while at the same time opportunities for nonmotorized activities would be reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would be reduced. All users, including oil and gas, would be permitted the same motorized access. The area would continue to provide the existing mix of economic benefits while roadless primitive and semi-primitive character would be lost permanently making future wilderness designation unlikely.

Designation: Non-wilderness

Prescription: MA 6.1 Rangeland with Broad Resource Emphasis

Alternatives: 2, 3, and 5

Environmental Consequences: Motorized access would be allowed unless specific areas are designated as closed or restricted to designated roads and trails. A full spectrum of motorized recreation opportunities would be allowed. Construction of recreation facilities, roads, power lines, and other features would be allowed. Livestock grazing would continue. Existing oil and gas leasing would continue and new leasing would be permitted. Oil and gas developments such as roads, pipelines, and drilling pads would likely occur.

Mitigation Measures: Although mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is a high probability, if the area is designated MA 6.1 it would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased while at the same time opportunities for nonmotorized activities would be reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would be reduced. All users, including oil and gas, would be permitted the same motorized access. The area would continue to provide the existing mix of economic benefits while roadless primitive and semi-primitive character could be lost permanently making future wilderness designation unlikely.

Bullion Butte: An Overview of the Affected Environment

The 19,780-acre Bullion Butte area is located about 45 miles southwest of Dickinson, North Dakota, and about 16 miles south of the south unit of Theodore Roosevelt National Park. More specifically, Bullion Butte is located, either partly or fully, in: T. 136 N., R. 102 W., Sections 3-4, 6, 8-9, and T. 137 N., R. 103 W., Sections 13, 23, 25-27 and T. 137 N., R. 102 W., Sections 1-5, 8-15, 17-30, 32-35, and T. 137 N., R. 101 W., Section 19. It lies within the Little Missouri Badlands, a scenic combination of rugged terrain and open space. Access to the area is via Interstate 94 west from Medora, North Dakota, about three miles, then south on Forest Development Road 745 for about 20 miles, which takes the visitor to just beyond the northern perimeter of the area.

The Bullion Butte area is located within the Little Missouri Badlands, a biogeographical sub-unit of the Great Plains Region. Robert G. Bailey further identifies the area as a part of the Great Plains-Palouse Dry Steppe Province ecoregion of the Temperate Steppe Division (71).

The topography of the Bullion Butte area varies widely and is different from much of the rest of the Little Missouri National Grassland. Bullion Butte is the highest point (2,749 feet above sea level) on the national grassland, is an easily identifiable landmark, and provides impressive vistas. This butte is capped with sandstone, a remnant of a much earlier land surface. Adjacent to Bullion Butte is a large flat area named Big Plateau, which has been dissected by feeder tributaries to the Little Missouri River. The Little Missouri River runs through the northeastern portion of the area, and offers canoeing and fishing opportunities. Total vertical relief of the area is about 369 feet, from a low of 2,380 feet at the Little Missouri River to a high of 2,749 feet atop Bullion Butte.

The dominant ecosystems are upland and river breaks, toe slopes, river bottoms and upland grasslands. Vegetation ranges from native prairie grassland on much of the area to hardwood trees (mainly cottonwood, green ash and American elm) and brush in the drainages. Rocky Mountain juniper pockets are extensive throughout the area as are arid shrub types on steep south-facing slopes. Typical native grasses include western wheatgrass, green needlegrass, blue grama, little bluestem and threadleaf sedge, often found interspersed with silver sagebrush. The area also contains a ponderosa pine stand, unique to this part of North Dakota. A light infestation of leafy spurge, a noxious weed, occurs in the area.

The Bullion Butte area provides prime habitat for a variety of big game including mule deer, white-tailed deer, pronghorn antelope, and bighorn sheep, as well as non-game species. Game birds such as sharp-tailed grouse, wild turkey, and pheasant are found, as well as non-game birds and raptors such as golden eagles, hawks, and falcons. The Kinley Plateau area is immediately adjacent to Bullion Butte.

Recreational opportunities include hiking, hunting, canoeing, fishing, horseback riding, and camping. Other uses of the area include livestock grazing and oil and gas production.

Bullion Butte: Capability Analyses

Environment

Opportunity for Solitude and Serenity: The remote and massive Bullion Butte and its immediate area provide a high potential for solitude and serenity. This scenic area is rather inaccessible. The rugged crags and rocky escarpments surrounding Bullion Butte offer isolation from the sights and sounds of people. On the flat plateau of the butte, grand vistas can be had far above and away from people, although evidence of developments will be clearly evident in the surrounding countryside.

Natural Appearance and Integrity: Overall, this roadless area retains a highly natural appearance, representative of rolling grasslands and rough badlands terrain. Grand, sweeping vistas of the scenic badlands are provided from the top of Bullion Butte. Most of the ecological processes, including flash flooding, but with the exception of frequent natural wildfire, remain intact. Closer examination will reveal signs of livestock activities. Cattle may be frequently encountered during the warmer grazing season. Livestock developments, including developed springs, fences, water wells, primitive trails, stock tanks and dugouts, detract from the natural setting, although most range developments have been constructed to blend with the natural surroundings as much as possible. About one-half mile of buried range-water pipeline exists in the area. The general vegetative integrity of the area is fairly high.

Challenge: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Recreation Opportunities: Current recreation includes excellent walk-in recreational opportunities, such as hiking and hunting, horseback riding, some off-highway motorized recreation, limited rock climbing, photography, and nature study. Canoeing is available on the Little Missouri River. The massive Bullion Butte offers very good scenic vista opportunities, rising more than 350 feet above the surrounding area.

Special Features

Unique Characteristics and Scenic Features: The view from the top of Bullion Butte is very scenic and quite spectacular. The mountain-like scree slopes are very unusual for North Dakota, and so the geologic interest in this area is high. Bullion Butte is one of the largest buttes in the Little Missouri badlands. Fossils found in Fort Union (also known as Ludlow) Formation deposits represent the Paleocene (64 to 45 million years ago) period.

Opportunities for Outdoor Education: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Manageability

Size and Shape: The 19,780 acre Bullion Butte area is more or less rectangular. It is about six miles wide east to west and eight miles long north to south. The area includes five inholdings, two of which are owned by the State of North Dakota for about 960 acres and three of which are privately owned for about 560 acres.

Potential to Manage Boundaries: Due to the number of access points around this large area, the potential to enforce nonmotorized restrictions under a Wilderness designation is low. Signing the boundaries may be highly challenging due to the broken terrain. Defining the boundary should not prove too difficult due to the existing fence lines.

Bullion Butte: Availability Analyses

Resource Values and Potentials

Oil and Gas: The potential for oil and gas development is high. The area is available for lease under no surface occupancy (NSO) stipulations. There are no current leases in the area at this time. If the leases expire without development, the area may then be designated administratively unavailable for leasing.

Coal: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Livestock Grazing: Four permittees operate on four allotments in the area. The area produces about 6,701 animal unit months of livestock grazing annually.

Locatable Minerals: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Common Minerals: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Timber: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Recreation: Motorized recreation would be prohibited under a Wilderness designation. Current nonmotorized recreation activities, such as dispersed camping, hiking, horseback riding, and nature study, would be allowed. Wilderness designation would preclude off-highway motorized recreation, such as ATV and snowmobile use. Walk-in hunting opportunities would increase. Backcountry experiences would be enhanced with the exclusion of motorized activities. Opportunities for physically challenged and elderly access into the area may be reduced.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Peregrine falcon; whooping crane: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.

- Bald eagle: Effects from Wilderness designation would have a beneficial effect on wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.

Bighorn Sheep: Wilderness designation would have beneficial effects on bighorn sheep due to the lack of human disturbances and reductions in motorized activities a designation would bring, especially during the birthing season.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitats. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access within Wilderness areas.

Black-tailed prairie dogs and species closely associated with prairie dog towns and colonies: Prairie dogs and prairie dog-associated species would largely benefit from Wilderness designations, primarily because the poisoning of prairie dog towns, accomplished mainly with motorized support, would be greatly reduced. In addition, fewer prairie dog shooters would frequent prairie dog towns in Wilderness areas due to restrictions on motorized access. However, prairie dogs and associated species may be adversely affected by a Wilderness designation due to the reduction anticipated in predator control, which would result from motorized restrictions

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around both aerial- and ground-nesting raptor sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Little Missouri National Grassland include: the black-tailed prairie dog, plains sharp-tailed grouse and the sage grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered that fall under this category. For a complete list of key species associated with each administrative unit covered by this revision process, please see the table at the very end of this document.

Management Obligations, Constraints, or Encumbrances

Mineral Leases and Subsurface Rights: Land origination for the Bullion Butte area is about 19,636 acres acquired and 240 acres from the public domain. About 7,534 acres of private, subsurface minerals ownership exists beneath federal land in the area. Private ownership is entitled access to and development of these subsurface resources. The Forest Service can develop stipulations, to protect the surface resources, but the agency cannot deny these private parties access to the development of their resources. Bullion Butte will only be leased under no-surface occupancy stipulations. No private mineral developments exist in the area at this time.

Existing Contracts and Agreements: The existing livestock grazing agreement is with the Medora Grazing Association.

Biotic Control Measures and Fire Protection: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Effects on Adjacent Lands: Impacts on adjacent lands due to a Wilderness designation are considered quite low. Bullion Butte itself is an ample landmark that should help visitors determine their location, and clear and visible signing of the boundary should alert visitors to the adjacent landownership. Any increase in visitation to the area, which may occur under a Wilderness designation, could increase the potential for accidental human fire starts. Adjacent land values next to a designated Wilderness may rise or fall depending on local markets. As well, the potential for trespass from a designated Wilderness onto adjacent lands of other ownership might increase.

Bullion Butte: Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The nearest designated Wilderness is the 10,510-acre Theodore Roosevelt Wilderness, South Unit, in Theodore Roosevelt National Park located about 20 miles north of this area. This Wilderness represents a mixed-grass prairie in a badlands setting. It would share many of the same characteristics of a Bullion Butte Wilderness area.

Representation of Landforms and Ecosystems: Bullion Butte represents a mixed-grass prairie on a massive stand-alone butte. The following ecosystem types are present: hardwood draws, upland grasslands, rolling grasslands, terraces, upland breaks, toe slopes and river breaks.

Biota: No species are dependent upon a Wilderness designation to remain viable in the area. Most key species probably would benefit, however, from a designation.

Public Interests and Concerns: The area is found in a sparsely populated region of the country. Dickinson, Williston, and Bismarck/Mandan, North Dakota, with an estimated population of less than 125,000, and Glendive and Sydney, Montana, with a combined population of about 25,000, are the nearest cities of any size, and none of them are closer than 30 miles from the area.

A considerable number of people and organizations have requested that the Forest Service designate some grassland Wilderness somewhere within the 191-million-acre National Forest System. Currently, Congress has not designated Wilderness area on any of the 20 national grasslands within that System.

Two Wilderness areas have been designated in the Little Missouri Badlands: the 10,510-acre Theodore Roosevelt Wilderness, South Unit, and the 19,410-acre Theodore Roosevelt Wilderness, North Unit, both of which are located in the Theodore Roosevelt National Park. These two Wilderness areas offer nearby designated Wilderness which, in most ways, represent most of the key characteristics found in the Bullion Butte area, including appearance and vegetative cover types. No other designated Wilderness areas, however, exist in the Little Missouri Badlands, a recognized biogeographical sub-unit of the Great Plains.

Bullion Butte: Environmental Consequences

Management Prescription Allocations by Alternative

Alternative 2:	MA 3.51	8,630 acres
	MA 6.1	11,150 acres
Alternative 3:	MA 1.2A	8,880 acres
	MA 1.31	3,430 acres
	MA 2.2	1,250 acres
	MA 3.65	4,390 acres
	MA 4.22	1,830 acres
Alternative 4:	MA 1.2	8,400 acres
	MA 1.31	8,530 acres
	MA 2.2	200 acres
	MA 3.4	2,640 acres
Alternative 5:	MA 1.31	16,980 acres
	MA 3.4	2,800 acres

Designation: Wilderness

Prescription: MA 1.2 or 1.2A Recommended or Suitable Wilderness

Alternatives: 3 and 4

Environmental Consequences: Travel would be by nonmotorized, nonmechanical. Recreation opportunities would be those associated with the primitive and nonmotorized end of the spectrum such as walking, hiking, horseback riding, and nonmotorized hunting. Opportunities for discovery of cultural, historical, and paleontological resources would exist but interpretive opportunities may be limited or foregone. Wildlife would tend to benefit from reduced human activity, but some opportunities for fish and wildlife enhancement, and ecosystem restoration would be foregone. Grazing of livestock would continue where grazing was established at the time the wilderness is designated. Valid existing rights would be recognized. Oil and gas developments could occur on the areas of private mineral ownership.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration, noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Maintenance of existing range developments would be permitted. Construction of new range developments would not be allowed to detract from the wilderness character of the area. Stipulations, such as no surface occupancy, and reclamation efforts designed at protecting the wilderness values to the extent possible, may be authorized by Congress on existing rights and leases. The area may be Congressionally designated as administratively unavailable.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings will be increased while at the same time reducing opportunities for motorized recreation. If the area is withdrawn from leasing, oil and gas development opportunities would be foregone.

Designation: Non-wilderness

Prescription: MA 1.31 Backcountry Recreation Nonmotorized

Alternatives: 3, 4, and 5

Environmental Consequences: With rare exceptions, travel is nonmotorized. Recreation opportunities would be those associated with the primitive and nonmotorized end of the spectrum such as walking, hiking, horseback riding, and nonmotorized hunting. Overall wildlife would tend to benefit from reduced human activity. Opportunities for discovery of cultural, historical and paleontological resources would exist but interpretive opportunities would be limited or foregone. Livestock grazing would continue as present. Valid existing rights would be recognized. Because the area is leased for oil and gas and contains an area of private minerals, oil and gas development could occur. Where mineral development occurs, the semi-primitive, nonmotorized character of the area would be lost for the duration of the activity.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Construction of new range developments would not be allowed to detract from the semi-primitive character of the area. Oil and gas development on existing leases would require the area to being reclaimed to as near as possible its original condition at the close of the lease.

Economic and Social Effects: Opportunities for nonmotorized activities would be increased while at the same time reducing opportunities for motorized activities. Because oil and gas development of existing leases could occur; restricting other users could cause conflict. Those accustomed to accessing the area by vehicle might resent vehicle restrictions. Economic benefits from oil and gas developments would continue as long as production occurs in the area.

Designation: Non-wilderness

Prescription: MA 2.2 Research Natural Areas

Alternatives: 3 and 4

Environmental Consequences: With rare exceptions, travel is nonmotorized. Recreation opportunities would be those associated with the primitive and semi-primitive end of the spectrum such as walking and hiking. Uses that maintain or improve the ecological characteristics for which the RNA was designated would be allowed. Livestock grazing would continue as present. The area would be made unavailable for leasing until establishment of the RNA, at which time it would be withdrawn from mineral entry.

Mitigation Measures: Motorized travel is limited to administrative, law enforcement, emergency, and scientific purposes. Existing roads would be closed or obliterated unless necessary for administrative, scientific, or valid private access. Recreational use would be restricted if is hinders achievement of the desired condition for the RNA. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Construction of new range developments would not be allowed to detract from the semi-primitive character of the area.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings will be increased while at the same time reducing opportunities for motorized recreation. Those accustomed to accessing the area by motorized means might resent vehicle restrictions. If the area is withdrawn from leasing, oil and gas development opportunities would be foregone.

Mitigation Measures: Motorized travel routes may be designated with restrictions. Livestock grazing would be managed to maintain the values for which the river is designated. For segments recommended for wild designation, oil and gas leases would require no surface occupancy. "Scenic" or "recreational" segments would be stipulated to maintain the scenic values of the area.

Economic and Social Effects: Opportunities for nonmotorized activities would be increased while at the same time reducing opportunities for motorized activities. Those accustomed to accessing the area by vehicle might resent vehicle restrictions. Economic benefits from oil and gas revenues may be reduced if development opportunities are foregone.

Designation: Non-wilderness

Prescription: MA 3.51 Bighorn Sheep

Alternatives: 2

Environmental Consequences: Recreational activities and motorized travel would be discouraged during breeding and lambing periods. Livestock grazing would continue. Valid existing rights and leases would be recognized.

Mitigation Measures: Construction of new travel routes would be prohibited except to honor valid and existing rights and leases. Snowmobile use would be prohibited. Existing and adjoining allotments in this area would not permit conversion to domestic sheep. Oil and gas leasing would be no surface occupancy.

Economic and Social Effects: Opportunities for nonmotorized activities would be increased while at the same time reducing opportunities for motorized activities. Those accustomed to accessing the area by vehicle might resent vehicle restrictions. Economic benefits from oil and gas revenues may be reduced if development opportunities are foregone.

Designation: Non-wilderness

Prescription: MA 3.65 Rangelands with Diverse Natural-appearing Landscapes

Alternatives: 3

Environmental Consequences: Motorized access would be allowed unless specific areas are designated as closed or restricted to designated roads and trails. A full spectrum of motorized recreation opportunities would be allowed. Construction of recreation facilities, roads, power

lines, and other features would be allowed. Livestock grazing would continue. Existing oil and gas leasing would continue and new leasing would be permitted. Oil and gas developments such as roads, pipelines, and drilling pads would likely occur.

Mitigation Measures: Although mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is a high probability, if the area is designated MA 3.65 it would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased while at the same time opportunities for nonmotorized activities reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would be reduced. All users, including oil and gas, would be permitted the same motorized access. The area would continue to provide the existing mix of economic benefits while roadless primitive and semi-primitive character would be lost permanently making future wilderness designation unlikely.

Designation: Non-wilderness

Prescription: MA 4.22 River and Travel Corridors

Alternatives: 3

Environmental Consequences: Motorized access would be allowed unless specific areas are designated as closed or restricted to designated roads and trails. A variety of recreation opportunities would be allowed. Livestock grazing would continue. Existing oil and gas leasing would continue and new leasing would be permitted.

Mitigation Measures: Constructed public launch sites will be visually subordinate to the river and river corridor. OHV trail construction would be prohibited. Timing, seasonal, or location stipulations may be appropriate related to oil and gas development to maintain the scenic values of the area. Leasing within the corridor would be NSO.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings would be moderate. Economic benefits from oil and gas revenues may be reduced if development opportunities are foregone due to restrictions and stipulations.

Designation: Non-wilderness

Prescription: MA 6.1 Rangelands with Broad Resource Emphasis

Alternatives: 2

Environmental Consequences: Motorized access would be allowed unless specific areas are designated as closed or restricted to designated roads and trails. A full spectrum of motorized recreation opportunities would be allowed. Construction of recreation facilities, roads, power lines, and other features would be allowed. Livestock grazing would continue. Existing oil and gas leasing would continue and new leasing would be permitted. Oil and gas developments such as roads, pipelines, and drilling pads would likely occur.

Mitigation Measures: Although mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is a high probability, if the area is designated MA 6.1 it would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased while at the same time opportunities for nonmotorized activities reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would be reduced. All users, including oil and gas, would be permitted the same motorized access. The area would continue to provide the existing mix of economic benefits while roadless primitive and semi-primitive character could be lost permanently making future wilderness designation unlikely.

Dawson's Waterhole: An Overview of the Affected Environment

The 6,090-acre Dawson's Waterhole area is located about 32 miles northwest of Dickinson, North Dakota, and about three miles north of Theodore Roosevelt National Park. More specifically, Dawson's Waterhole is located, either partly or fully, in: T. 142 N., R. 101 W., Sections 19-22, 27-30 and 32-34. It lies within the Little Missouri Badlands, a scenic combination of rugged terrain and open space. Access from Belfield, North Dakota, is north on U.S. Highway 85 for 12 miles, then west on Forest Development Road 732 for 14 miles.

The Dawson's Waterhole area is located within the Little Missouri Badlands, a biogeographical sub-unit of the Great Plains Region. Robert G. Bailey further identifies the area as a part of the Great Plains-Palouse Dry Steppe Province ecoregion of the Temperate Steppe Division (71). Topography of the area consists of highly dissected and eroded badlands terrain. Exposed soils and clays are quite evident. This area drains to the west toward the Little Missouri River. Elevation ranges from 2,284 feet to about 2,650 feet above sea level.

Dominant vegetation includes western wheatgrass, green needlegrass, blue grama, little bluestem and threadleaf sedge, often found interspersed with silver sagebrush. Deciduous woody species include green ash, boxelder, cottonwood near drainage bottoms, chokecherry, American plum, juneberry and hawthorne. Coniferous species include Rocky Mountain juniper. A light to moderate infestation of leafy spurge, a noxious weed, occurs in the area.

Representative wildlife include mule and white-tailed deer, pronghorn antelope, elk, wild turkey, upland birds, neotropical grassland birds, numerous raptors and numerous reptiles.

Recreation, livestock grazing, and oil and gas production occur in the area.

Dawson's Waterhole: Capability Analyses

Environment

Opportunity for Solitude and Serenity: A high potential for solitude and serenity is available in the lower-elevation bottoms of the area. Overall, the area provides moderate to high opportunities for solitude and serenity. The area is generally inaccessible, though some two-tracks are found in the area. Generally, the sights and/or sounds of people are minimal.

Natural Appearance and Integrity: Overall, this roadless area retains a natural appearance, representative of rolling grasslands and rough badlands terrain. Most of the ecological processes, including flash flooding, but with the exception of frequent natural wildfire, remain intact. Closer examination reveals signs of livestock activities. Cattle may be frequently encountered during the warmer grazing season. Livestock developments, including developed springs, fences, water wells, primitive trails, stock tanks and dugouts, detract from the natural setting, although most range developments have been constructed to blend with the natural surroundings as much as possible. In addition, about 15 miles of buried range-water pipeline and one mile of utility line exist in the area.

Challenge: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Recreation Opportunities: Current recreation includes hiking, horseback riding, prairie dog viewing and shooting, dispersed camping, and big game and upland game hunting.

Special Features

Unique Characteristics and Scenic Features: Fossils found in Fort Union (also known as Ludlow) Formation deposits represent the Paleocene (65 to 45 million years ago) period.

Opportunities for Outdoor Education: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Manageability

Size and Shape: The 6,090-acre Dawson's Waterhole is roughly rectangular in shape. It is about four miles wide east to west and three miles long north to south. It contains no inholdings.

Potential to Manage Boundaries: Most of this area is defined by roads or fencelines, so visible and clear signing and posting of the area should be relatively easy. Enforcing nonmotorized use under a Wilderness designation would pose a major challenge due to the lack of law enforcement on the district.

Dawson's Waterhole: Availability Analyses

Resource Values and Potentials

Oil and Gas: The potential for oil and gas is high. The area is currently under lease but as yet has not been developed.

Coal: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Livestock Grazing: Two permittees operate on two allotments in the area. The area produces about 2,100 animal unit months of livestock grazing annually.

Locatable Minerals: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Common Minerals: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Timber: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Recreation: Motorized recreation would be prohibited under a Wilderness designation. Current nonmotorized recreation activities, such as dispersed camping, hiking, horseback riding, and nature study, would be allowed. Wilderness designation would preclude off-highway motorized recreation, such as ATV and snowmobile use. Walk-in hunting opportunities would increase. Backcountry experiences would be enhanced with the exclusion of motorized activities. Opportunities for physically challenged and elderly access may be reduced or eliminated in the area.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Peregrine falcon; whooping crane: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.
- Bald eagle: Effects from Wilderness designation would have a beneficial effect on wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitats. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access within Wilderness areas.

Black-tailed prairie dogs and species closely associated with prairie dog towns and colonies: Prairie dogs and prairie dog-associated species would largely benefit from Wilderness designations, primarily because the poisoning of prairie dog towns, accomplished mainly with motorized support, would be greatly reduced. In addition, fewer prairie dog shooters would frequent prairie dog towns in Wilderness areas due to restrictions on motorized access. However, prairie dogs and associated species may be adversely affected by a Wilderness designation due to the reduction anticipated in predator control, which would result from motorized restrictions.

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around both aerial- and ground-nesting raptor site sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Little Missouri National Grassland include: the black-tailed prairie dog, plains sharp-tailed grouse and the sage grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered that fall under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the table at the very end of this document.

Management Obligations, Constraints, or Encumbrances

Mineral Leases and Subsurface Rights: Land origination within the Dawson's Waterhole area is about 5,770 acres acquired and 320 acres from the public domain. About 1,000 acres of private, subsurface minerals ownership beneath federal lands exist in the area and is subject to minerals leasing. Leases may be exercised at any point in the life of the lease. Currently, leases are generally for a 10-year period. Once production on a lease is established, the lease is valid throughout the life of production. The life of production from an oil well on the district is between five and twenty-five years.

Existing Contracts and Agreements: The Medora Grazing Association holds a 10-year livestock grazing agreement for the area.

Biotic Control Measures and Fire Protection: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Effects on Adjacent Lands: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Dawson's Waterhole: Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The nearest Wilderness area is the 10,510-acre Theodore Roosevelt Wilderness, South Unit, in the Theodore Roosevelt National Park. The Theodore Roosevelt Wilderness, South Unit is about three miles to the south. The 19,410-acre Theodore Roosevelt Wilderness, North Unit, lies about 30 miles to the north. Both of these Wilderness areas represent mixed-grass prairies in a badlands setting. The Dawson's Waterhole Wilderness would also represent a mixed-grass prairie in a badlands setting.

Representation of Landforms and Ecosystems: This area represents a mixed-grass prairie with the following ecosystem types present: hardwoods draws, upland grasslands, rolling grasslands and hilly scoria. The landscape includes badlands and rolling prairies.

Biota: No species are dependent upon a Wilderness designation to remain viable in the area. Most key species would benefit, however, from a designation.

Public Interests and Concerns: The area is found in a sparsely populated region of the country. Dickinson, Williston and Bismarck / Mandan, North Dakota, with an estimated population of less than 125,000, and Glendive and Sydney, Montana, with a combined population of about 25,000, are the nearest cities of any size, and none of them are closer than 30 miles from the area.

A considerable number of people and organizations have requested that the Forest Service designate some grassland Wilderness somewhere within the 191-million-acre National Forest System. Currently, Congress has not designated Wilderness area on any of the 20 national grasslands within that System.

Two Wilderness areas have been designated in the Little Missouri Badlands: the 10,510-acre Theodore Roosevelt Wilderness, South Unit, and the 19,410-acre Theodore Roosevelt Wilderness, North Unit, both of which are located in the Theodore Roosevelt National Park. These two Wilderness areas offer nearby designated Wilderness which, in most ways, represent most of the key characteristics found in the Dawson's Waterhole area, including appearance and vegetative cover types. No other designated Wilderness areas, however, exist in the Little Missouri Badlands, a recognized biogeographical sub-unit of the Great Plains.

Dawson's Waterhole: Environmental Consequences

Management Prescription Allocations by Alternative

Alternative 2:	MA 3.51	110 acres
	MA 6.1	5,980 acres
Alternative 3:	MA 3.65	6,090 acres
Alternative 4:	MA 1.31	6,090 acres
Alternative 5:	MA 3.51	110 acres
	MA 6.1	5,980 acres

Designation: Wilderness

Prescription: MA 1.2A

Alternatives: Wilderness designation is not considered in any alternative because of the area's existing level of mineral development.

Designation: Non-wilderness

Prescription: MA 1.31 Backcountry Recreation Nonmotorized

Alternatives: 4

Environmental Consequences: With rare exceptions, travel is nonmotorized. Recreation opportunities would be those associated with the primitive and nonmotorized end of the spectrum such as walking, hiking, horseback riding, and nonmotorized hunting. Overall wildlife would tend to benefit from reduced human activity. Opportunities for discovery of cultural, historical and paleontological resources would exist but interpretive opportunities would be limited or forgone. Livestock grazing would continue as present. Valid existing rights would be recognized. Because the area is leased for oil and gas and contains a small area of private minerals, oil and gas developments could occur. Where mineral development occurs, the semi-primitive, nonmotorized character of the area would be lost for the duration of the activity.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration, noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Construction of new range developments would not be allowed to detract from the semi-primitive character of the area. Oil and gas developments on existing leases would require the area to be reclaimed to as near as possible its original condition at the close of the lease.

Economic and Social Effects: Opportunities for nonmotorized activities would be increased while at the same time reducing opportunities for motorized activities. Because oil and gas development of existing leases could occur; restricting other users could cause conflict. Those accustomed to accessing the area by vehicle might resent vehicle restrictions. Economic benefits from oil and gas developments would continue as long as production occurs in the area.

Designation: Non-wilderness

Prescription: MA 3.51 Bighorn Sheep

Alternatives: 2 and 5

Environmental Consequences: Recreational activities and motorized travel would be discouraged during breeding and lambing periods. Livestock grazing would continue. Valid existing rights and leases would be recognized.

Mitigation Measures: Construction of new travel routes would be prohibited except to honor valid and existing rights and leases. Snowmobile use would be prohibited. Existing and adjoining allotments in this area would not permit conversion to domestic sheep. Oil and gas leasing would be no surface occupancy.

Economic and Social Effects: Opportunities for nonmotorized activities would be increased while at the same time reducing opportunities for motorized activities. Those accustomed to accessing the area by vehicle might resent vehicle restrictions. Economic benefits from oil and gas revenues may be reduced if development opportunities are foregone.

Designation: Non-wilderness

Prescription: MA 3.65 Rangelands with Diverse Natural-appearing Landscapes

Alternatives: 3

Environmental Consequences: Motorized access would be allowed unless specific areas are designated as closed or restricted to designated roads and trails. A full spectrum of motorized recreation opportunities would be allowed. Construction of recreation facilities, roads, power lines, and other features would be allowed. Livestock grazing would continue. Existing oil and gas leasing would continue and new leasing would be permitted. Oil and gas developments such as roads, pipelines, and drilling pads would likely occur.

Mitigation Measures: Although mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is a high probability, if the area is designated MA 3.65 it would lose its roadless character due to increased oil and gas development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased while at the same time opportunities for nonmotorized activities reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would be reduced. All users, including oil and gas, would be permitted the same motorized access. The area would continue to provide the existing mix of economic benefits while roadless primitive and semi-primitive character would likely be lost permanently making future wilderness designation unlikely.

Designation: Non-wilderness

Prescription: MA 6.1

Alternatives: 2,5

Environmental Consequences: Motorized access would be allowed unless specific areas are designated as closed or restricted to designated roads and trails. A full spectrum of motorized recreation opportunities would be allowed. Construction of recreation facilities, roads, power

lines, and other features would be allowed. Livestock grazing would continue. Existing oil and gas leasing would continue and new leasing would be permitted. Oil and gas developments such as roads, pipelines, and drilling pads would likely occur.

Mitigation Measures: Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is a high probability, if the area is designated MA 6.1 it would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased while at the same time opportunities for nonmotorized activities reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would be reduced. All users, including oil and gas, would be permitted the same motorized access. The area would continue to provide the existing mix of economic benefits while roadless primitive and semi-primitive character could be lost permanently making future wilderness designation unlikely.

Easy Hill: An Overview of the Affected Environment

The 7,350-acre Easy Hill area is located about 25 miles southwest of Dickinson, North Dakota, and about eight miles south of Theodore Roosevelt National Park. More specifically, Easy Hill is located, either partly or fully, in: T. 138 N., R. 101 W., Sections 23-26 and 35, and T. 138 N, R. 100 W., Sections 19 and 30-32. It lies within the Little Missouri Badlands, a scenic combination of rugged terrain and open space. Access from Belfield, North Dakota, is south via U.S. Highway 85 for 12 miles, then west on Forest Development Road 767 for about 10 miles, then north on Forest Development Road 765 for about two miles.

The Easy Hill area is located within the Little Missouri Badlands, a biogeographical sub-unit of the Great Plains Region. Robert G. Bailey further identifies the area as a part of the Great Plains-Palouse Dry Steppe Province ecoregion of the Temperate Steppe Division (71). Topography varies from rolling grasslands to moderately rugged badlands terrain. The area displays incised drainages and numerous clay buttes. Elevation ranges from about 2,650 feet to 2,840 feet above sea level. This area includes a portion of the headwaters to Sully Creek. Drainage of the area is to the west, eventually emptying into the Little Missouri River.

On some of the non-grassy areas, predominate vegetation consists of big sagebrush, rabbit brush and four-wing salt brush. Many of the steep drainages on north-facing slopes are occupied by a dense growth of Rocky Mountain juniper. Green ash and American elm occupy the wooded draws. Dominant grasses include western wheatgrass, green needlegrass, and blue grama, with some little bluestem in the sandy areas and threadleaf sedge on the southern exposures. Understory shrub species in draws include buffaloberry, skunkbush sumac, chokecherry, snowberry, woods rose, and many others. A scattered infestation of leafy spurge, a noxious weed, occurs in the area.

The area's wildlife includes ferruginous hawks and other raptors, mule deer, pronghorn antelope, coyotes, bobcats, badgers, rattlesnakes and other reptiles and numerous other species. Golden eagles have been known to nest in the area.

There are a number of two-track roads in the area, as well as two and one-half miles of buried range-water pipeline.

Easy Hill: Capability Analyses

Environment

Opportunity for Solitude and Serenity: A high potential for solitude and serenity is available in the breaks and drainages; however, on the flatter areas at higher elevations, only a moderate potential for solitude and serenity is available, if only because adjacent developments outside the boundary, including oil wells, roads and ranches, are visible. Traffic through the area during the fall hunting season is rather high.

Natural Appearance and Integrity: Overall, this roadless area retains a natural appearance, representative of rolling grasslands and moderately rugged badlands terrain. Most of the ecological processes, including flash flooding, but with the exception of frequent natural wildfire, remain intact. Closer examination reveals signs of mineral and livestock activities. Cattle may be frequently encountered during the warmer grazing season. Livestock developments, including developed springs, fences, water wells, primitive trails, stock tanks and dugouts, detract from the natural setting, although most range developments have been constructed to blend with the natural surroundings as much as possible.

Challenge: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Recreation Opportunities: Current recreation includes hiking, horseback riding, dispersed camping, nature study and big game and upland game hunting.

Special Features

Unique Characteristics and Scenic Features: Fossils found in Fort Union (also known as Ludlow) Formation deposits represent the Paleocene (65 to 45 million years ago) period.

Opportunities for Outdoor Education: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Manageability

Size and Shape: The 7,350-acre Easy Hill is roughly square in shape. It is about four miles wide east to west and four and one-half miles long north to south. It contains no inholdings.

Potential to Manage Boundaries: Significant posting and boundary signing would be needed for this area. A high potential for illegal motorized trespass under a Wilderness designation could be expected, especially since many two-track roads enter the area and because this area is sought after by hunters in the fall. Few, if any, natural barriers exist that might restrict illegal entry. In addition, enforcing nonmotorized use under a Wilderness designation would pose a major challenge due to the lack of law enforcement on the district.

Easy Hill: Availability Analyses

Resource Values and Potentials

Oil and Gas: The potential for oil and gas is high. At the time the DEIS was released for public review, the area was leased for oil and gas but no developments occurred within the area. Since that time the area has been developed for oil and gas with approximately 1 mile of road and 1 well site.

Coal: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Livestock Grazing: Three permittees operate on three allotments in the area. The area produces about 2,020 animal unit months of livestock grazing annually.

Locatable Minerals: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Common Minerals: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Timber: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Recreation: Motorized recreation would be prohibited under a Wilderness designation. Current nonmotorized recreation activities, such as dispersed camping, hiking, horseback riding, and nature study, would be allowed. Wilderness designation would preclude off-highway motorized recreation, such as ATV and snowmobile use. Walk-in hunting opportunities would increase. Backcountry experiences would be enhanced with the exclusion of motorized activities. Opportunities for physically challenged and elderly access may be reduced or eliminated in the area.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Peregrine falcon; whooping crane: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.
- Bald eagle: Effects from Wilderness designation would have a beneficial effect on wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitats. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access within Wilderness areas.

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around both aerial- and ground-nesting raptor sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Little Missouri National Grassland include: the black-tailed prairie dog, plains sharp-tailed grouse and the sage grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered that fall under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the table at the very end of this document.

Management Obligations, Constraints or Encumbrances

Mineral Leases and Subsurface Rights: Land origination within the Easy Hill area is about 7,184 acres acquired and about 160 acres from the public domain. About 322 acres of private, subsurface minerals ownership exist in the area. Some on-the-ground staking of possible oil well locations has recently occurred.

Existing Contracts and Agreements: The Medora Grazing Association holds a 10-year livestock grazing agreement for the area.

Biotic Control Measures and Fire Protection: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Effects on Adjacent Lands: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Easy Hill: Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The nearest Wilderness area is the 10,510-acre Theodore Roosevelt Wilderness, South Unit, in the Theodore Roosevelt National Park. The Theodore Roosevelt Wilderness, South Unit is about 13 miles to the northwest. The 19,410-acre Theodore Roosevelt Wilderness, North Unit, lies about 60 miles to the north. Both of these Wilderness areas represent mixed-grass prairies in a badlands setting. The Easy Hill Wilderness would also represent a mixed-grass prairie in a badlands setting.

Representation of Landforms and Ecosystems: This area represents a mixed-grass prairie with the following ecosystem types present: hardwoods draws, upland grasslands, rolling grasslands and upland breaks. The landscape includes badlands and rolling prairies.

Biota: No species are dependent upon a Wilderness designation to remain viable in the area. Most key species would benefit, however, from a designation.

Public Interests and Concerns: The area is found in a sparsely populated region of the country. Dickinson, Williston and Bismarck / Mandan, North Dakota, with an estimated population of less than 125,000, and Glendive and Sydney, Montana, with a combined population of about 25,000, are the nearest cities of any size, and none of them are closer than 25 miles from the area.

A considerable number of people and organizations have requested that the Forest Service designate some grassland Wilderness somewhere within the 191-million-acre National Forest System. Currently, Congress has not designated Wilderness area on any of the 20 national grasslands within that System.

Two Wilderness areas have been designated in the Little Missouri Badlands: the 10,510-acre Theodore Roosevelt Wilderness, South Unit, and the 19,410-acre Theodore Roosevelt Wilderness, North Unit, both of which are located in the Theodore Roosevelt National Park.

These two Wilderness areas offer nearby designated Wilderness which, in most ways, represent most of the key characteristics found in the Easy Hill area, including appearance and vegetative cover types. No other designated Wilderness areas, however, exist in the Little Missouri Badlands, a recognized biogeographical sub-unit of the Great Plains.

Easy Hill: Environmental Consequences

Management Prescription Allocations by Alternative

Alternative 2:	MA 3.51	70 acres
	MA 6.1	7,280 acres
Alternative 3:	MA 3.65	7,220 acres
	MA 6.1	130 acres
	MA 1.31	7,340 acres
Alternative 4:	MA 3.51	70 acres
Alternative 5:	MA 6.1	7,280 acres

Designation: Wilderness

Prescription: MA 1.2A Suitable Wilderness

Alternatives: Wilderness designation is not considered in any alternative because of the area's existing level of mineral development.

Designation: Non-wilderness

Prescription: MA 1.31 Backcountry Recreation Nonmotorized

Alternatives: 4

Environmental Consequences: With rare exceptions, travel is nonmotorized. Recreation opportunities would be those associated with the primitive and nonmotorized end of the spectrum such as walking, hiking, horseback riding, and nonmotorized hunting. Overall wildlife would tend to benefit from reduced human activity. Opportunities for discovery of cultural, historical and paleontological resources would exist but interpretive opportunities would be limited or forgone. Livestock grazing would continue as present. Valid existing rights would be recognized. Because the area is leased for oil and gas and contains a small area of private minerals, additional oil and gas developments could occur. Where mineral development occurs, the semi-primitive, nonmotorized character of the area would be lost for the duration of the activity.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration, noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Construction of new range developments would not be allowed to detract from the semi-primitive character of the area. Oil and gas development on existing leases would require the area to be reclaimed to as near as possible its original condition at the close of the lease.

Economic and Social Effects: Opportunities for nonmotorized activities would be increased while at the same time reducing opportunities for motorized activities. Because oil and gas development of existing leases could occur; restricting other users could cause conflict. Those accustomed to accessing the area by vehicle might resent vehicle restrictions. Economic benefits from oil and gas developments would continue as long as production occurs in the area.

Designation: Non-wilderness

Prescription: MA 3.51

Alternatives: 2 and 5

Environmental Consequences: Recreational activities and motorized travel would be discouraged during breeding and lambing periods. Livestock grazing would continue. Valid existing rights and leases would be recognized.

Mitigation Measures: Construction of new travel routes would be prohibited except to honor valid and existing rights and leases. Snowmobile use would be prohibited. Existing and adjoining allotments in this area would not permit conversion to domestic sheep. Oil and gas leasing would be no surface occupancy.

Economic and Social Effects: Opportunities for nonmotorized activities would be increased while at the same time reducing opportunities for motorized activities. Those accustomed to accessing the area by vehicle might resent vehicle restrictions. Economic benefits from oil and gas revenues may be reduced if development opportunities are foregone.

Designation: Non-wilderness

Prescription: MA 3.65

Alternatives: 3

Environmental Consequences: Motorized access would be allowed unless specific areas are designated as closed or restricted to designated roads and trails. A full spectrum of motorized recreation opportunities would be allowed. Construction of recreation facilities, roads, power lines, and other features would be allowed. Livestock grazing would continue. Existing oil and gas leasing would continue and new leasing would be permitted. Oil and gas developments such as roads, pipelines, and drilling pads would likely occur.

Mitigation Measures: Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is a high probability, if the area is designated MA 3.65 it would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased while at the same time opportunities for nonmotorized activities reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would be reduced. All users, including oil and gas, would be permitted the same motorized access. The area would continue to provide the existing mix of economic benefits while roadless primitive and semi-primitive character would be lost permanently making future wilderness designation unlikely.

Designation: Non-wilderness

Prescription: MA 6.1

Alternatives: 2, 3, and 5

Environmental Consequences: Motorized access would be allowed unless specific areas are designated as closed or restricted to designated roads and trails. A full spectrum of motorized recreation opportunities would be allowed. Construction of recreation facilities, roads, power lines, and other features would be allowed. Livestock grazing would continue. Existing oil and gas leasing would continue and new leasing would be permitted. Oil and gas developments such as roads, pipelines, and drilling pads would likely occur.

Mitigation Measures: Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is a high probability, if the area is designated MA 6.1 it would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased while at the same time opportunities for nonmotorized activities reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would be reduced. All users, including oil and gas, would be permitted the same motorized access. The area would continue to provide the existing mix of economic benefits while roadless primitive and semi-primitive character could be lost permanently making future wilderness designation unlikely.

Kinley Plateau: An Overview of the Affected Environment

The 16,900-acre Kinley Plateau area is located about 35 miles southwest of Dickinson, North Dakota, and about 10 miles south of the south unit of Theodore Roosevelt National Park. More specifically, Kinley Plateau is located, either partly or fully, in: T. 138 N., R. 101 W., Sections 19-22 and 27-33, and T. 137 N., R. 101 W., Sections 4-8, 14-15, 17-19, 21-23, 26-28 and 34, and T. 138 N., R. 102 W., Sections 22-25 and 35, and T. 137 N., R. 102 W., Sections 1-2 and 12-13. It lies within the Little Missouri Badlands, a scenic combination of rugged terrain and open space. Access to the area is via Forest Highway 3 south from Medora, North Dakota, for about 11 miles, then east on Forest Development Road 762 for about five miles, which takes the visitor to the northeastern perimeter of the area.

The Kinley Plateau area is located within the Little Missouri Badlands, a biogeographical sub-unit of the Great Plains Region. Robert G. Bailey further identifies the area as a part of the Great Plains-Palouse Dry Steppe Province ecoregion of the Temperate Steppe Division (71). Topography of the area varies from gentle rolling grasslands, flat ridges and plateaus, to extremely rugged badlands terrain with deeply incised stream channels. Elevation varies from 2,500 feet to 2,900 feet above sea level. The geology of Kinley Plateau makes it quite scenic, with color-banded clay buttes with exposed scoria layers.

The rough, broken terrain within the area has a variety of plant growth. On some of the non-grassy areas, predominate vegetation consists of big sagebrush, rabbit brush and four-wing salt brush. Many of the steep drainages on north-facing slopes are occupied by a dense growth of Rocky Mountain juniper. Green ash and American elm occupy the wooded draws. Dominant grasses include western wheatgrass, green needlegrass, and blue grama, with some little bluestem in the sandy areas and threadleaf sedge on the southern exposures. Understory shrub species in draws include buffaloberry, skunkbush sumac, chokecherry, snowberry, woods rose,

and many others. A light infestation of leafy spurge, and a scattered infestation of spotted knapweed, both noxious weeds, occurs in the area.

The alluvial floodplains support a riparian community consisting of cottonwoods and associated species. The terraces immediately above the floodplain tend to support silver sage and extensive western wheatgrass stands.

Over the years, many of the area's two-track roads have become impassable due to erosion along ridges and within ravines. Other two-tracks occur in the area, as do allotment and pasture fences.

The Kinley Plateau area provides prime habitat for a variety of big game including mule deer, white-tailed deer, pronghorn antelope, and bighorn sheep, as well as non-game species. Kinley Plateau provides home range for the state's largest herd of bighorn sheep. Game birds such as sharp-tailed grouse, wild turkey, and pheasant are found, as well as non-game birds and raptors.

The Kinley Plateau area borders the Bullion Butte area on the southwest.

Recreational opportunities include hiking, hunting, horseback riding, and camping. Livestock grazing also occurs in the area.

Kinley Plateau: Capability Analyses

Environment

Opportunity for Solitude and Serenity: Due to the rugged terrain of this area, the opportunity for solitude and serenity is high. Visitors should be able to isolate themselves in the buttes, removing themselves from the sights and sounds of others.

Natural Appearance and Integrity: Overall, this roadless area retains a relatively high natural appearance, representative of rolling grasslands and rough badlands terrain. Most of the ecological processes, including flash flooding, but with the exception of frequent natural wildfire, remain intact. Closer examination reveals signs of livestock activities. Cattle may be frequently encountered during the warmer grazing season. Generally, the vegetative integrity of this area is high. Livestock developments, including developed springs, fences, water wells, primitive trails, stock tanks and dugouts, detract from the natural setting, although most range developments have been constructed to blend with the natural surroundings as much as possible. About four and a half miles of buried range-water pipeline is located in the area and light infestations of leafy spurge and scattered infestations of spotted knapweed have been recorded.

Challenge: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Recreation Opportunities: Current recreation includes hiking into primitive and semi-primitive tranquil settings, hunting, dispersed camping, canoeing on the Little Missouri River, mountain biking, horseback riding, wildlife viewing, wildflower viewing, scenic driving, nature study and associated activities. This area is a good day-use area because of its close proximity to both Medora and Dickinson, North Dakota.

Special Features

Unique Characteristics and Scenic Features: This area is highly scenic, characterized by two or three high plateaus. Bighorn sheep frequent the area. Fossils found in Fort Union (also known as Ludlow) Formation deposits represent the Paleocene (65 to 45 million years ago) period.

Opportunities for Outdoor Education: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Manageability

Size and Shape: The 16,900-acre Kinley Plateau area is rather irregular in shape, with two roughly rectangular segments, the smaller to the southeast of the larger. The larger segment is about six miles long north to south and five miles wide east to west. The smaller segment is about three miles long north to south and two miles wide east to west. One inholding, owned by the State of North Dakota, of about 640 acres, is located in the area.

Potential to Manage Boundaries: Most of this area is defined by roads or fencelines, so visible and clear signing and posting of the area should be relatively easy. Enforcing nonmotorized use under a Wilderness designation would pose a major challenge due to the lack of law enforcement on the district.

Kinley Plateau: Availability Analyses

Resource Values and Potentials

Oil and Gas: The potential for oil and gas developments is high. The area is available for lease under no surface occupancy (NSO) stipulations. There are no current leases in the area at this time. If the leases expire without development the area may then be designated administratively unavailable for leasing.

Coal: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Livestock Grazing: The area produces about 8,354 animal unit months of livestock grazing annually. Nine permittees operate on eight allotments in the area.

Locatable Minerals: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Common Minerals: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Timber: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Recreation: Motorized recreation would be prohibited under a Wilderness designation. Current nonmotorized recreation activities, such as dispersed camping, hiking, horseback riding, and nature study, would be allowed. Wilderness designation would preclude off-highway motorized recreation, such as ATV and snowmobile use. Walk-in hunting opportunities would increase. Backcountry experiences would be enhanced with the exclusion of motorized activities. Opportunities for physically challenged and elderly access into the area may be reduced.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Peregrine falcon; whooping crane: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.
- Bald eagle: Effects from Wilderness designation would have a beneficial effect on wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.

Bighorn Sheep: Wilderness designation would have beneficial effects on bighorn sheep due to the lack of human disturbances and reductions in motorized activities a designation would bring, especially during the birthing season.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitats. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access within Wilderness areas.

Black-tailed prairie dogs and species closely associated with prairie dog towns and colonies: Prairie dogs and prairie dog-associated species would largely benefit from Wilderness designations, primarily because the poisoning of prairie dog towns, accomplished mainly with motorized support, would be greatly reduced. In addition, fewer prairie dog shooters would frequent prairie dog towns in Wilderness areas due to restrictions on motorized access. However, prairie dogs and associated species may be adversely affected by a Wilderness designation due to the reduction anticipated in predator control, which would result from motorized restrictions.

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around both aerial- and ground-nesting raptor sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Little Missouri National Grassland include: the black-tailed prairie dog, plains sharp-tailed grouse and the sage grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered that fall under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the table at the very end of this document.

Management Obligations, Constraints, or Encumbrances

Mineral Leases and Subsurface Rights: Land origination within the Kinley Plateau area is about 16,240 acres acquired and 1,136 acres from the public domain. About 5,904 acres of private, subsurface ownership beneath federal lands were recently acquired from Burlington Resources Oil and Gas Company. About 380 acres are available for leasing, but only under no-surface occupancy stipulations. Seismic exploration is allowed.

Existing Contracts and Agreements: The Medora Grazing Association holds the grazing agreement in the area.

Biotic Control Measures and Fire Protection: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Effects on Adjacent Lands: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Kinley Plateau: Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The nearest Wilderness area is the 10,510-acre Theodore Roosevelt Wilderness, South Unit, in the Theodore Roosevelt National Park. The Theodore Roosevelt Wilderness, South Unit is about 17 miles to the north. The Theodore Roosevelt Wilderness, South Unit, represents a mixed-grass prairie in a badlands setting. The Kinley Plateau Wilderness would also represent a mixed-grass prairie in a badlands setting.

Representation of Landforms and Ecosystems: This area represents a mixed-grass prairie with the following ecosystem types present: hardwood draws, upland grasslands, rolling grasslands, upland breaks, and hilly scoria. The landscape includes rugged, relatively pristine badlands.

Biota: No species are dependent upon a Wilderness designation to remain viable in the area. Most key species probably would benefit, however, from a designation.

Public Interests and Concerns: The area is found in a sparsely populated region of the country. Dickinson, Williston, and Bismarck / Mandan, North Dakota, with an estimated population of less than 125,000, and Glendive and Sydney, Montana, with a combined population of about 25,000, are the nearest cities of any size, and none of them are closer than 30 miles from the area.

A considerable number of people and organizations have requested that the Forest Service designate some grassland Wilderness somewhere within the 191-million-acre National Forest System. Currently, Congress has not designated Wilderness area on any of the 20 national grasslands within that System.

Two Wilderness areas have been designated in the Little Missouri Badlands: the 10,510-acre Theodore Roosevelt Wilderness, South Unit, and the 19,410-acre Theodore Roosevelt Wilderness, North Unit, both of which are located in the Theodore Roosevelt National Park. These two Wilderness areas offer nearby designated Wilderness which, in most ways, represent most of the key characteristics found in the Kinley Plateau area, including appearance and vegetative cover types. No other designated Wilderness areas, however, exist in the Little Missouri Badlands, a recognized biogeographical sub-unit of the Great Plains.

Kinley Plateau: Environmental Consequences

Management Prescription Allocations by Alternative

Alternative 2:	MA 3.51	11,790 acres
	MA 6.1	5,110 acres
Alternative 3:	MA 1.2A	12,770 acres
	MA 1.31	4,130 acres
Alternative 4:	MA 1.2	16,900 acres
Alternative 5:	MA 1.31	16,780 acres
	MA 6.1	120 acres

Designation: Wilderness

Prescription: MA 1.2 or 1.2A Recommended or Suitable Wilderness

Alternatives: 3 and 4

Environmental Consequences: Travel would be by nonmotorized, nonmechanical. Recreation opportunities would be those associated with the primitive and nonmotorized end of the spectrum such as walking, hiking, horseback riding, and nonmotorized hunting. Opportunities for discovery of cultural, historical, and paleontological resources would exist but interpretive opportunities may be limited or foregone. Wildlife would tend to benefit from reduced human activity, but some opportunities for fish and wildlife enhancement, and ecosystem restoration would be foregone. Grazing of livestock would continue where grazing was established at the time the wilderness is designated. Valid existing rights and leases would be recognized.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Maintenance of existing range developments would be permitted. Construction of new range developments would not be allowed to detract from the wilderness character of the area. Stipulations, such as no surface occupancy, and reclamation efforts designed at protecting the wilderness values to the extent possible may be authorized by Congress on existing rights and leases. The area may be Congressionally designated as administratively unavailable.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings will be increased while at the same time reducing opportunities for motorized recreation. If the area is withdrawn from leasing, oil and gas development opportunities would be foregone.

Designation: Non-wilderness

Prescription: MA 1.31 Backcountry Recreation Nonmotorized

Alternatives: 3 and 5

Environmental Consequences: With rare exceptions, travel is nonmotorized. Recreation opportunities would be those associated with the primitive and nonmotorized end of the spectrum such as walking, hiking, horseback riding, and nonmotorized hunting. Overall wildlife would tend to benefit from reduced human activity. Opportunities for discovery of cultural, historical, and paleontological resources would exist but interpretive opportunities would be limited or forgone. Livestock grazing would continue as present. Valid existing rights would be recognized. Because the area is leased for oil and gas and contains a small area of private minerals, oil and gas developments could occur. Where mineral development occurs, the semi-primitive, nonmotorized character of the area would be lost for the duration of the activity.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Construction of new range developments would not be allowed to detract from the semi-primitive character of the area. Oil and gas development on existing leases would require the area to be reclaimed to as near as possible its original condition at the close of the lease.

Economic and Social Effects: Opportunities for nonmotorized activities would be increased while at the same time reducing opportunities for motorized activities. Because oil and gas development of existing leases could occur; restricting other users could cause conflict. Those accustomed to accessing the area by vehicle might resent vehicle restrictions. Economic benefits from oil and gas developments would continue as long as production occurs in the area.

Designation: Non-wilderness

Prescription: MA 6.1 Rangeland with Broad Resource Emphasis

Alternatives: 2 and 5

Environmental Consequences: Motorized access would be allowed unless specific areas are designated as closed or restricted to designated roads and trails. A full spectrum of motorized recreation opportunities would be allowed. Construction of recreation facilities, roads, power lines, and other features would be allowed. Livestock grazing would continue. Existing oil and gas leasing would continue and new leasing would be permitted. Oil and gas developments such as roads, pipelines, and drilling pads would likely occur.

Mitigation Measures: Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is a high probability, if the area is designated MA 6.1 it would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased while at the same time opportunities for nonmotorized activities reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would be reduced. All users, including oil and gas, would be permitted the same motorized access. The area would continue to provide the existing mix of economic benefits while roadless primitive and semi-primitive character could be lost permanently making future wilderness designation unlikely.

Magpie: An Overview of the Affected Environment

The 21,280-acre Magpie area (14,580-acres on the Medora Ranger District and 6,700 acres of the McKenzie Ranger District) is located about 36 miles south and west of Watford City, North Dakota, and about 12 miles south of the north unit of Theodore Roosevelt National Park. More specifically, the Magpie area is located, either partly or fully, in: T. 145 N., R. 100 W., Section 14-15, 19, 21-23 and 26-35, and T. 144 N., R. 101 W., Sections 1-5, 10-14 and 23-25, and T. 144 N., R. 100 W., Sections 6, 18-20, 22-23, 26-30 and 32-34, and T. 143 N., R. 100 W., Section 4. Access to the area from Watford City is via U.S. Highway 85 south for 28 miles, then west on McKenzie County Road 50 for six miles, then south on Forest Development Road 809 for about two and a half miles. The area lies to the southwest.

The Magpie area is located within the Little Missouri Badlands, a biogeographical sub-unit of the Great Plains Region. Robert G. Bailey further identifies the area as a part of the Great Plains-Palouse Dry Steppe Province ecoregion of the Temperate Steppe Division (71). Topography of the area varies from gentle rolling grasslands to extremely rugged badlands terrain with deeply incised stream channels and numerous clay buttes. Extensive areas of upland grasslands are interspersed between upland breaks. Elevation varies from 2,100 feet to 2,600 feet above sea level.

The rough, broken terrain within the area has a variety of plant growth. Many of the steep drainages on north-facing slopes are occupied by a dense growth of Rocky Mountain juniper. Green ash and American elm occupy the wooded draws. Dominant grasses include western wheatgrass, green needlegrass, and blue grama with some little bluestem in the sandy areas and threadleaf sedge on the southern exposures. Understory shrub species in draws include buffaloberry, skunkbush sumac, chokecherry, snowberry, woods rose and many others. A scattered infestation of leafy spurge, a noxious weed, occurs in the area.

The Magpie area supports populations of mule deer, white-tailed deer, pronghorn antelope, turkeys, and sharp-tailed grouse. Although the wildlife habitats and species represented are not unique within the Little Missouri National Grassland, they are listed by the State of North Dakota as high-interest species.

Present recreational use includes hunting in the fall, hiking, nature study, dispersed camping, and wildlife viewing. Livestock grazing also occurs in the area.

Magpie: Capability Analyses

Environment

Opportunity for Solitude and Serenity: The opportunities for solitude and serenity are high as a result of the rugged terrain. Some two-tracks do occur in the area; however, the overall area remains relatively inaccessible.

Natural Appearance and Integrity: Overall, this roadless area retains a natural appearance, representative of rolling grasslands and rough badlands terrain. Most of the ecological processes, including flash flooding, but with the exception of frequent natural wildfire, remain intact. Closer examination reveals signs of livestock activities. Cattle may be frequently encountered during the warmer grazing season. Livestock developments, including developed springs, fences, water wells, primitive trails, stock tanks and dugouts, detract from the natural setting, although most range developments have been constructed to blend with the natural surroundings as much as possible. In addition, about five miles of buried range-water pipeline and six miles of utility line exist in the area. The Maah-Daah-Hey Trail is located in the area.

Challenge: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Recreation Opportunities: Current recreation includes hiking, hunting, sight-seeing, viewing wildlife, photography, picnicking, viewing wildflowers, nature study, and related activities. The Maah-Daah-Hey Trail winds through about seven and a half miles of the area. The Ice Caves, a nominated Special Interest Area and one of only two known cave systems in North Dakota, lie in the area; the Ice Caves are a day-use and picnicking destination, with geological features of some interest. Horseback riding is popular in the Magpie area.

Special Features

Unique Characteristics and Scenic Features: The Ice Caves, nominated as a 240-acre Special Interest Area, is found in the Magpie area. Fossils found in Fort Union (also known as Ludlow)

Opportunities for Outdoor Education: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Manageability

Size and Shape: The 21,280-acre Magpie area straddles the Medora and McKenzie Ranger Districts. Most of the area (14,580 acres) lies on the Medora District, while 6,700 acres lies on the McKenzie District. The Magpie area is more or less shaped like a boot. It is about four miles wide east to west and seven miles long north to south at its widest points. It contains no inholdings.

Potential to Manage Boundaries: Significant signing and posting would be required. Some illegal motorized trespass may be expected, especially during fall hunting season.

Magpie: Availability Analyses

Resource Values and Potentials

Oil and Gas: The potential for oil and gas in the area is high. Part of the area is currently leased but has not yet been developed. The remaining portion is available for leasing. A permit application for seismic exploration is currently being analyzed.

Coal: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Livestock Grazing: Eighteen permittees operate in the area. The area produces about 8,544 animal units months of livestock grazing annually. About 23 allotments are either fully or partially located in the area.

Locatable Minerals: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Common Minerals: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Timber: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Recreation: Motorized recreation would be prohibited under a Wilderness designation. Current nonmotorized recreation activities, such as dispersed camping, hiking, horseback riding, and nature study, would be allowed. Wilderness designation would preclude off-highway motorized recreation, such as ATV and snowmobile use. Walk-in hunting opportunities would increase. Backcountry experiences would be enhanced with the exclusion of motorized activities. Opportunities for physically challenged and elderly access may be reduced or eliminated in the area.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Peregrine falcon; whooping crane: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.
- Bald eagle: Effects from Wilderness designation would have a beneficial effect on wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.

Bighorn Sheep: Wilderness designation would have beneficial effects on bighorn sheep due to the lack of human disturbances and reductions in motorized activities a designation would bring, especially during the birthing season.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitats. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access within Wilderness areas.

Black-tailed prairie dogs and species closely associated with prairie dog towns and colonies: Prairie dogs and prairie dog-associated species would largely benefit from Wilderness designations, primarily because the poisoning of prairie dog towns, accomplished mainly with motorized support, would be greatly reduced. In addition, fewer prairie dog shooters would frequent prairie dog towns in Wilderness areas due to restrictions on motorized access. However, prairie dogs and associated species may be adversely affected by a Wilderness designation due to the reduction anticipated in predator control, which would result from motorized restrictions.

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around both aerial- and ground-nesting raptor sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Little Missouri National Grassland include: the black-tailed prairie dog, plains sharp-tailed grouse and the sage grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered that fall under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the table at the very end of this document.

Management Obligations, Constraints, or Encumbrances

Mineral Leases and Subsurface Rights: Land origination in the Magpie area is about 19,540 acres acquired and 1,740 acres from the public domain. About 2,427 acres of private, subsurface minerals ownership beneath federal lands exist in the area and is subject to minerals leasing. Leasing may be exercised at any point in the life of the lease. Currently, leases are generally for a 10-year period. Once production on a lease is established, the lease is valid throughout the life of production. The life of production from an oil well on the district is between five and twenty-five years.

Existing Contracts and Agreements: Both the Medora Grazing Association and the McKenzie County Grazing Association hold 10-year livestock grazing agreements in the area.

Biotic Control Measures and Fire Protection: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Effects on Adjacent Lands: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Magpie: Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The nearest Wilderness areas are in Theodore Roosevelt National Park. The 19,410-acre Theodore Roosevelt Wilderness, North Unit, is about 12 miles to the north, while the 10,510-acre Theodore Roosevelt Wilderness, South Unit, is 19 miles to the south. Both Wilderness areas represent mixed-grass prairies in a badlands setting. The Magpie Wilderness would also represent a mixed-grass prairie in a badlands setting.

Representation of Landforms and Ecosystems: This area represents a mixed-grass prairie with the following ecosystem types present: hardwood draws, upland grasslands, rolling grasslands and upland breaks. The landscape includes badlands and rolling prairies.

Biota: No species are dependent upon a Wilderness designation to remain viable in this area. Most key species would benefit, however, from a designation.

Public Interests and Concerns: The area is found in a sparsely populated region of the country. Dickinson, Williston, and Bismarck / Mandan, North Dakota, with an estimated population of less than 125,000, and Glendive and Sydney, Montana, with a combined population of about 25,000, are the nearest cities of any size, and none of them is closer than 40 miles from the area.

A considerable number of people and organizations have requested that the Forest Service designate some grassland Wilderness somewhere within the 191-million-acre National Forest System. Currently, Congress has not designated Wilderness area on any of the 20 national grasslands within that System.

Two Wilderness areas have been designated in the Little Missouri Badlands: the 10,510-acre Theodore Roosevelt Wilderness, South Unit, and the 19,410-acre Theodore Roosevelt Wilderness, North Unit, both of which are located in the Theodore Roosevelt National Park. These two Wilderness areas offer nearby designated Wilderness which, in most ways, represent most of the key characteristics found in the Magpie area, including appearance and vegetative cover types. No other designated Wilderness areas, however, exist in the Little Missouri Badlands, a recognized biogeographical sub-unit of the Great Plains.

Magpie: Environmental Consequences

Management Prescription Allocations by Alternative:

Medora Ranger District			McKenzie Ranger District		
Alternative 2:	MA 2.1	240 acres	Alternative 2:	MA 6.1	6,700 acres
	MA 2.2	60 acres			
	MA 3.51	480 acres			
	MA 6.1	13,800 acres			
Alternative 3:	MA 1.31	7,490 acres	Alternative 3:	MA 1.31	6,700 acres
	MA 2.1	240 acres			
	MA 2.2	60 acres			
	MA 3.65	6,790 acres			
Alternative 4:	MA 1.31	14,280 acres	Alternative 4:	MA 1.31	6,700 acres
	MA 2.1	240 acres			
	MA 2.2	60 acres			

Medora Ranger District			McKenzie Ranger District		
Alternative 5:	MA 2.2	60 acres	Alternative 5:	MA 6.1	6,700 acres
	MA 3.51	480 acres			
	MA 6.1	14,040 acres			

Designation: Wilderness

Prescription: MA 1.2A Suitable Wilderness

Alternatives: Wilderness designation is not considered in any alternative because of the area's existing level of mineral development.

Designation: Non-wilderness

Prescription: MA 1.31 Backcountry Recreation Nonmotorized

Alternatives: 3 and 4

Environmental Consequences: With rare exceptions, travel is nonmotorized. Recreation opportunities would be those associated with the primitive and nonmotorized end of the spectrum such as walking, hiking, horseback riding, and nonmotorized hunting. Overall wildlife would tend to benefit from reduced human activity. Opportunities for discovery of cultural, historical, and paleontological resources would exist but interpretive opportunities would be limited or forgone. Livestock grazing would continue as present. Valid existing rights would be recognized. Because the area is leased for oil and gas and contains a small area of private minerals, oil and gas developments could occur. Where mineral development occurs, the semi-primitive, nonmotorized character of the area would be lost for the duration of the activity.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Construction of new range developments would not be allowed to detract from the semi-primitive character of the area. Oil and gas development on existing leases would require the area to be reclaimed to as near as possible its original condition at the close of the lease.

Economic and Social Effects: Opportunities for nonmotorized activities would be increased while at the same time reducing opportunities for motorized activities. Because oil and gas development of existing leases could occur; restricting other users could cause conflict. Those accustomed to accessing the area by vehicle might resent vehicle restrictions. Economic benefits from oil and gas developments would continue as long as production occurs in the area.

Designation: Non-wilderness

Prescription: MA 2.1 Special Interest Areas

Alternatives: 2, 3, and 4

Environmental Consequences: Recreation opportunities that maintain and enhance the characteristics for which the SIA was designated will be available. Livestock grazing would continue as present. Valid existing rights and leases would be recognized

Mitigation Measures: OHV trail construction will be prohibited. Oil and gas leasing would be no surface occupancy.

Economic and Social Effects: Recreational and interpretive opportunities would be emphasized. The area would continue to provide the existing mix of economic benefits.

Designation: Non-wilderness

Prescription: MA 2.2 Research Natural Areas

Alternatives: 2, 4, and 5

Environmental Consequences: With rare exceptions, travel is nonmotorized. Recreation opportunities would be those associated with the primitive and semi-primitive end of the spectrum such as walking and hiking. Uses that maintain or improve the ecological characteristics for which the RNA was designated would be allowed. Livestock grazing would continue as present. The area would be made unavailable for leasing until establishment of the RNA, at which time it would be withdrawn from mineral entry.

Mitigation Measures: Motorized travel is limited to administrative, law enforcement, emergency, and scientific purposes. Existing roads would be closed or obliterated unless necessary for administrative, scientific, or valid private access. Recreational use would be restricted if is hinders achievement of the desired condition for the RNA. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Construction of new range developments would not be allowed to detract from the semi-primitive character of the area.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings will be increased while at the same time reducing opportunities for motorized recreation. Those accustomed to accessing the area by motorized means might resent vehicle restrictions. If the area is withdrawn from leasing, oil and gas development opportunities would be foregone.

Designation: Non-wilderness

Prescription: MA 3.51 Bighorn Sheep

Alternatives: 2 and 5

Environmental Consequences: Recreational activities and motorized travel would be discouraged during breeding and lambing periods. Livestock grazing would continue. Valid existing rights and leases would be recognized.

Mitigation Measures: Construction of new travel routes would be prohibited except to honor valid and existing rights and leases. Snowmobile use would be prohibited. Existing and adjoining allotments in this area would not permit conversion to domestic sheep. Oil and gas leasing would be no surface occupancy.

Economic and Social Effects: Opportunities for nonmotorized activities would be increased while at the same time reducing opportunities for motorized activities. Those accustomed to accessing the area by vehicle might resent vehicle restrictions. Economic benefits from oil and gas revenues may be reduced if development opportunities are foregone.

Designation: Non-wilderness

Prescription: MA 6.1 Rangeland with Broad Resource Emphasis

Alternatives: 2 and 5

Environmental Consequences: Motorized access would be allowed unless specific areas are designated as closed or restricted to designated roads and trails. A full spectrum of motorized recreation opportunities would be allowed. Construction of recreation facilities, roads, power lines, and other features would be allowed. Livestock grazing would continue. Existing oil and gas leasing would continue and new leasing would be permitted. Oil and gas developments such as roads, pipelines, and drilling pads would likely occur.

Mitigation Measures: Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is a high probability, if the area is designated MA 6.1 it would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased while at the same time opportunities for nonmotorized activities reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would be reduced. All users, including oil and gas, would be permitted the same motorized access. The area would continue to provide the existing mix of economic benefits while roadless primitive and semi-primitive character could be lost permanently making future wilderness designation unlikely.

Ponderosa Pine: An Overview of the Affected Environment

The 7,470-acre Ponderosa Pine area is located about 8 miles northwest of Amidon, North Dakota, and about 20 miles south of the south unit of Theodore Roosevelt National Park. More specifically, the Ponderosa Pine area is located, either partly or fully, in: T. 136 N., R. 102 W., Sections 10, 15, 22-23, 27-29 and 32-35, and T. 135 N., R. 102 W., Sections 2-4. It lies within the Little Missouri Badlands, a scenic combination of rugged terrain and open space. Access from Belfield, North Dakota, is south on U.S. Highway 85 for 11 miles, then west and south on Forest Development Road 767 for about 18 miles, then west on Forest Development Road 769 for about three miles, then south on Forest Development Road 727 for about two miles.

The Ponderosa Pine area is located within the Little Missouri Badlands, a biogeographical sub-unit of the Great Plains Region. Robert G. Bailey further identifies the area as a part of the Great Plains-Palouse Dry Steppe Province ecoregion of the Temperate Steppe Division (71). Topography varies from rolling grasslands to rugged badlands terrain. Extensive areas of ponderosa pine forests intermix with pine/grassland savanna and upland grasslands. Elevation varies from about 2,400 to 2,600 feet above sea level.

The most remarkable feature of the area is the forest of ponderosa pine. An area of blue bunch grass occurs in association with the ponderosa pine, as does wolfberry and creeping cedar. Except for two minor stands within 20 miles to the north, this site provides the most northeasterly natural stand of ponderosa pine in North America. Other representative vegetation includes dwarf sage, western wheatgrass, big sandgrass, and blue grama. The area has light to moderate levels of leafy spurge infestations.

Some of the ponderosa pine are more than 200 years old. Theodore Roosevelt may have taken logs from the area to build his Maltese Cross ranch house in the 1880s. The historic Dakota National Forest was located in the area. North Dakota's only national forest lasted less than ten years, from 1908 to 1917.

Wildlife typical of the area includes white-tailed deer, mule deer, turkey, neotropical grassland birds, upland birds, badgers, coyotes, and a variety of reptiles.

Sand Creek flows through the area, and drains into the Little Missouri River to the north.

Several two-track roads and a water tank are found in the southern portion of the Ponderosa Pine area.

Typical recreation includes hiking, hunting, horseback riding, and camping. The Forest Service's Burning Coal Vein Campground, including the atypical "columnar junipers," is about a mile east of the area. Livestock grazing occurs in the area. Oil and gas leases exist in the southern three sections of the area.

Ponderosa Pine: Capability Analyses

Environment

Opportunity for Solitude and Serenity: Within the ponderosa pine stands, a visitor should find a high degree of solitude and serenity, accentuated by the sights and smells of a forested community and the sounds of wind blowing through the trees.

Natural Appearance and Integrity: Overall, this roadless area retains a natural appearance, representative of rolling grasslands savanna and moderately rough badlands terrain. Most of the ecological processes, including flash flooding, but with the exception of frequent natural wildfire, remain intact. Closer examination reveals signs of livestock activities. Cattle may be frequently encountered during the warmer grazing season. Livestock developments, including developed springs, fences, water wells, primitive trails, stock tanks and dugouts, detract from the natural setting, although most range developments have been constructed to blend with the natural surroundings as much as possible. In addition, about one and a half miles of utility line exist in the area.

Challenge: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Recreation Opportunities: This is a good day-use destination because of its proximity to Medora and Dickinson, North Dakota. The ponderosa pine stands are unique this far north in the Little Missouri Badlands and provide good hiking, picnicking, and scenic viewing opportunities. A local outfitter / guide holds a permit to bring visitors into the area. Hunting, hiking, photography, and dispersed camping occur. The Burning Coal Vein Campground is about a mile to the east of the Ponderosa Pine area. The area is historic as the former Dakota National Forest, established in 1908 and decommissioned in 1917. Off-highway motorized

recreation, horseback riding, nature study, mountain biking, canoeing in the nearby Little Missouri River and other associated activities are common.

Special Features

Unique Characteristics and Scenic Features: The ponderosa pine forest, essentially the most northeasterly occurrence of ponderosa pine in North America, and a forest in the middle of the Great Plains, is found in this area. Fossils found in Fort Union (also known as Ludlow) Formation deposits represent the Paleocene (65 to 45 million years ago) period.

Opportunities for Outdoor Education: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Manageability

Size and Shape: The 7,470-acre Ponderosa Pine area is irregular in shape, sort of like a thin zigzag sitting to the north atop a square. It is about four miles wide east to west and six miles long north to south. It contains no inholdings.

Potential to Manage Boundaries: The irregular shape of the area should not pose major challenges in signing and posting the boundaries, especially since most of the boundaries are already fenced. The potential for illegal trespass may be high given the number of nearby roads in the area and the large amount of adjacent private land.

Ponderosa Pine: Availability Analyses

Resource Values and Potentials

Oil and Gas: Oil and gas potential is high. The area is available for lease under no surface occupancy stipulations.

Coal: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Livestock Grazing: Eight permittees operate on eight allotments in the area. The area produces about 7,987 animal unit months of livestock grazing annually.

Locatable Minerals: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Common Minerals: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Timber: Currently, no commercial timber-cutting activities exist in the area. No timber management plan exists for the area. However, to maintain the integrity and health of the ponderosa pine stands, a plan should be written that would address selective cutting and prescribed burning.

Recreation: Motorized recreation would be prohibited under a Wilderness designation. Current nonmotorized recreation activities, such as dispersed camping, hiking, horseback riding, and nature study, would be allowed. Wilderness designation would preclude off-highway motorized recreation, such as ATV and snowmobile use. Walk-in hunting opportunities would increase. Backcountry experiences would be enhanced with the exclusion of motorized activities. Opportunities for physically challenged and elderly access may be reduced or eliminated in the area.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Peregrine falcon; whooping crane: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.
- Bald eagle: Effects from Wilderness designation would have a beneficial effect on wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitats. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access within Wilderness areas.

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around both aerial- and ground-nesting raptor sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Little Missouri National Grassland include: the black-tailed prairie dog, plains sharp-tailed grouse and the sage grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered that fall under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the table at the very end of this document.

Management Obligations, Constraints, or Encumbrances

Mineral Leases and Subsurface Rights: Land origination in the Ponderosa Pine area is about 7,471 acres acquired and 70 acres from the public domain. No acres of private, subsurface minerals ownership exist in the area. Any leasing in the Ponderosa Pine area would be allowed only under no-surface-occupancy stipulations.

Existing Contracts and Agreements: The Little Missouri Grazing Association holds a 10-year livestock grazing agreement for the area.

Biotic Control Measures and Fire Protection: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Effects on Adjacent Lands: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Ponderosa Pine: Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The nearest Wilderness area is the 10,510-acre Theodore Roosevelt Wilderness, South Unit, in the Theodore Roosevelt National Park. The Theodore Roosevelt Wilderness, South Unit is about 20 miles to the north. The Theodore Roosevelt Wilderness, South Unit, represents a mixed-grass prairie in a badlands setting. The Ponderosa Pine Wilderness would also represent a mixed-grass / ponderosa pine savanna in a badlands setting.

Representation of Landforms and Ecosystems: This area represents a mixed-grass prairie with the following ecosystem types present: ponderosa pine, upland grasslands, and terraces. The landscape includes badlands and rolling savanna.

Biota: No species are dependent upon a Wilderness designation to remain viable in the area. Most key species probably would benefit, however, from a designation.

Public Interests and Concerns: The area is found in a sparsely populated region of the country. Dickinson, Williston, and Bismarck / Mandan, North Dakota, with an estimated population of less than 125,000, and Glendive and Sydney, Montana, with a combined population of about 25,000, are the nearest cities of any size, and none of them are closer than 40 miles from the area.

A considerable number of people and organizations have requested that the Forest Service designate some grassland Wilderness somewhere within the 190-million-acre National Forest System. Currently, the Forest Service provides no Wilderness area on any of the 20 national grasslands within that System.

Two Wilderness areas have been designated in the Little Missouri Badlands: the 10,510-acre Theodore Roosevelt Wilderness, South Unit, and the 19,410-acre Theodore Roosevelt Wilderness, North Unit, both of which are located in the Theodore Roosevelt National Park. These two Wilderness areas offer nearby designated Wilderness which, in most ways, represent most of the key characteristics found in the Ponderosa Pine area, including appearance and vegetative cover types. No other designated Wilderness areas, however, exist in the Little Missouri Badlands, a recognized biogeographical sub-unit of the Great Plains.

Ponderosa Pine: Environmental Consequences

Management Prescription Allocations by Alternative

Alternative 2:	MA 6.1	7,470 acres
Alternative 3:	MA 1.31	3,880 acres
	MA 2.2	3,560 acres
	MA 4.22	30 acres
Alternative 4:	MA 1.2	7,470 acres
Alternative 5:	MA 1.31	7,440 acres
	MA 3.4	30 acres

Designation: Wilderness

Prescription: MA 1.2 or 1.2A Recommended or Suitable Wilderness

Alternatives: 4

Environmental Consequences: Travel would be by nonmotorized, nonmechanical. Recreation opportunities would be those associated with the primitive and nonmotorized end of the spectrum such as walking, hiking, horseback riding, and nonmotorized hunting. Opportunities for discovery of cultural, historical, and paleontological resources would exist but interpretive opportunities may be limited or foregone. Wildlife would tend to benefit from reduced human activity, but some opportunities for fish and wildlife enhancement, and ecosystem restoration would be foregone. Grazing of livestock would continue where grazing was established at the time the wilderness is designated. Valid existing rights would be recognized.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Maintenance of existing range developments would be permitted. Construction of new range developments would not be allowed to detract from the wilderness character of the area. Stipulations, such as no surface occupancy and reclamation efforts designed at protecting the wilderness values to the extent possible, may be authorized by Congress on existing rights and leases. The area may be Congressionally designated as administratively unavailable.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings will be increased while at the same time reducing opportunities for motorized recreation. If the area is withdrawn from leasing, oil and gas development opportunities would be foregone.

Designation: Non-wilderness

Prescription: MA 1.31 Backcountry Recreation Nonmotorized

Alternatives: 3, 5

Environmental Consequences: With rare exceptions, travel is nonmotorized. Recreation opportunities would be those associated with the primitive and nonmotorized end of the spectrum such as walking, hiking, horseback riding, and nonmotorized hunting. Overall, wildlife would tend to benefit from reduced human activity. Opportunities for discovery of cultural, historical, and paleontological resources would exist but interpretive opportunities would be limited or forgone. Livestock grazing would continue as present. Valid existing rights would be recognized. Where mineral development occurs, the semi-primitive, nonmotorized character of the area would be lost for the duration of the activity.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Construction of new range developments would not be allowed to detract from the semi-primitive character of the area. Oil and gas development on existing leases would require the area to be reclaimed to as near as possible its original condition at the close of the lease.

Economic and Social Effects: Opportunities for nonmotorized activities would be increased while at the same time reducing opportunities for motorized activities. Because oil and gas development of existing leases could occur; restricting other users could cause conflict. Those accustomed to accessing the area by vehicle might resent vehicle restrictions. Economic benefits from oil and gas developments would continue as long as production occurs in the area.

Designation: Non-wilderness

Prescription: MA 2.2 Research Natural Areas

Alternatives: 3

Environmental Consequences: With rare exceptions, travel is nonmotorized. Recreation opportunities would be those associated with the primitive and semi-primitive end of the spectrum such as walking and hiking. Uses that maintain or improve the ecological characteristics for which the RNA was designated would be allowed. Livestock grazing would continue as present. The area would be made unavailable for leasing until establishment of the RNA, at which time it would be withdrawn from mineral entry.

Mitigation Measures: Motorized travel is limited to administrative, law enforcement, emergency, and scientific purposes. Existing roads would be closed or obliterated unless necessary for administrative, scientific or valid private access. Recreational use would be restricted if is hinders achievement of the desired condition for the RNA. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Construction of new range developments would not be allowed to detract from the semi-primitive character of the area.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings will be increased while at the same time reducing opportunities for motorized recreation. Those accustomed to accessing the area by motorized means might resent vehicle restrictions. If the area is withdrawn from leasing, oil and gas development opportunities would be foregone.

Designation: Non-wilderness

Prescription: MA 3.4 Scenic River Recommendation

Alternatives: 5

Environmental Consequences: Recreation opportunities would be those associated with the primitive and semi-primitive end of the spectrum such as walking, hiking, horseback riding, and canoeing. Motorized water-bound-craft would be allowed. Recreational developments necessary for river access may be present. Livestock grazing would continue. Existing oil and gas leases and rights would be recognized.

Mitigation Measures: Motorized travel routes may be designated with restrictions. Livestock grazing would be managed to maintain the values for which the river is designated. For segments recommended for wild designation, oil and gas leases would require no surface occupancy. “Scenic” or “recreational” segments would be stipulated to maintain the scenic values of the area.

Economic and Social Effects: Opportunities for nonmotorized activities would be increased while at the same time reducing opportunities for motorized activities. Those accustomed to accessing the area by vehicle might resent vehicle restrictions. Economic benefits from oil and gas revenues may be reduced if development opportunities are foregone.

Designation: Non-wilderness

Prescription: MA 6.1 Rangeland with Broad Resource Emphasis

Alternatives: 2

Environmental Consequences: Motorized access would be allowed unless specific areas are designated as closed or restricted to designated roads and trails. A full spectrum of motorized recreation opportunities would be allowed. Construction of recreation facilities, roads, power lines, and other features would be allowed. Livestock grazing would continue. Existing oil and gas leasing would continue and new leasing would be permitted. Oil and gas developments such as roads, pipelines, and drilling pads would likely occur.

Mitigation Measures: Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is a high probability, if the area is designated MA 6.1 it would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased while at the same time opportunities for nonmotorized activities reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would be reduced. All users, including oil and gas, would be permitted the same motorized access. The area would continue to provide the existing mix of economic benefits while roadless primitive and semi-primitive character could be lost permanently making future wilderness designation unlikely.

Scairt Woman: An Overview of the Affected Environment

The 6,100-acre Scairt Woman area (5,460 acres on the Medora Ranger District and 640 acres on the McKenzie Ranger District) is located about 40 miles northwest of Dickinson, North Dakota, and about 16 miles south of Theodore Roosevelt National Park, North Unit. More specifically, the Scairt Woman area is located, either partly or fully, in: T. 144 N., R. 100 W., Sections 2-5, 8-10, 14-15 and 22-23, and T. 145 N., R. 99 W., Section 31. It lies within the Little Missouri Badlands, a scenic combination of rugged terrain and open space. Access from Belfield, North Dakota, is north on U.S. Highway 85 for about 25 miles, then west on Forest Development Road 713 for about five miles.

The Scairt Woman area is located within the Little Missouri Badlands, a biogeographical sub-unit of the Great Plains Region. Robert G. Bailey further identifies the area as a part of the Great Plains-Palouse Dry Steppe Province ecoregion of the Temperate Steppe Division (71). Topography of the area varies from gently rolling grasslands to rugged badlands with deeply incised drainages and numerous clay buttes. Elevation ranges from about 2,600 feet to 2,700 feet above sea level.

The terrain offers a variety of plant growth. Many of the steep drainages on north-facing slopes are occupied by a dense growth of Rocky Mountain juniper. Green ash and American elm occupy the wooded draws. Dominant grasses include western wheatgrass, green needlegrass, and blue grama with some little bluestem in the sandy areas and threadleaf sedge on the

southern exposures. Understory shrub species in draws include buffaloberry, skunkbush sumac, chokecherry, snowberry, woods rose, and many others. A scattered infestation of leafy spurge, a noxious weed, occurs in the area.

Representative wildlife includes numerous raptors, numerous predators, like bobcats and coyotes, mule and white-tailed deer, pronghorn antelope; numerous reptiles, like the bull snake and rattlesnake; and neotropical grassland birds.

Typical uses of the area include recreation and livestock grazing.

Scairt Woman: Capability Analyses

Environment

Opportunity for Solitude and Serenity: Opportunities for solitude and serenity are high when the visitor moves into more rugged drainages. On high-elevation areas, the opportunities diminish. There, visitors are isolated, but may see signs of human activity outside the area's boundaries.

Natural Appearance and Integrity: Overall, this roadless area retains a natural appearance, representative of rolling grasslands and rough badlands terrain. Most of the ecological processes, including flash flooding, but with the exception of frequent natural wildfire, remain intact. Closer examination reveals signs of livestock activities. Cattle may be frequently encountered during the warmer grazing season. Livestock developments, including developed springs, fences, water wells, primitive trails, stock tanks and dugouts, detract from the natural setting, although most range developments have been constructed to blend with the natural surroundings as much as possible. In addition, about half a mile of buried pipeline and seven miles of utility line exist in the area.

Challenge: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Recreation Opportunities: Current recreation includes big game and upland bird hunting, nature study, photography, dispersed camping and other associated activities.

Special Features

Unique Characteristics and Scenic Features: Fossils found in Fort Union (also known as Ludlow) Formation deposits represent the Paleocene (65 to 45 million years ago) period.

Opportunities for Outdoor Education: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Manageability

Size and Shape: The 6,100-acre Scairt Woman area is more or less rectangular in shape. This area straddles the Medora and McKenzie Ranger Districts. About 5,460 acres lie on the Medora District and about 640 acres lie on the McKenzie District. It contains no inholdings.

Potential to Manage Boundaries: Significant signing and posting would be required. Some illegal motorized trespass may be expected, especially during the fall hunting season.

Scairt Woman: Availability Analyses

Resource Values and Potentials

Oil and Gas: Oil and gas potential for the area is high. Part of the area is currently leased but has not yet been developed. The remaining portion is available for leasing. A permit application for seismic exploration is currently being analyzed.

Coal: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Livestock Grazing: Five permittees operate in the area. About 2,810 animal unit months of livestock grazing are produced annually. Eight allotments are either fully or partially located in the area.

Locatable Minerals: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Common Minerals: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Timber: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Recreation: Motorized recreation would be prohibited under a Wilderness designation. Current nonmotorized recreation activities, such as dispersed camping, hiking, horseback riding, and nature study, would be allowed. Wilderness designation would preclude off-highway motorized recreation, such as ATV and snowmobile use. Walk-in hunting opportunities would increase. Backcountry experiences would be enhanced with the exclusion of motorized activities. Opportunities for physically challenged and elderly access may be reduced or eliminated in the area.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Peregrine falcon; whooping crane: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.
- Bald eagle: Effects from Wilderness designation would have a beneficial effect on wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitats. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access within Wilderness areas.

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around both aerial- and ground-nesting raptor site sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Little Missouri National Grassland include: the black-tailed prairie dog, plains sharp-tailed grouse and the sage grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered that fall under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the table at the very end of this document.

Management Obligations, Constraints, or Encumbrances

Mineral Leases and Subsurface Rights: No oil and gas leases exist on the portion within the McKenzie Ranger District. Land origination within the Scairt Woman area is about 6,020 acres acquired and 80 acres (on the Medora Ranger District) from the public domain. About 1,280 acres of private, subsurface minerals ownership beneath federal lands on the Medora Ranger District exist in the area. These acres are subject to minerals leasing. Leases may be exercised at any point in the life of the lease. Currently, leases are generally for a 10-year period. Once production on a lease is established, the lease is valid throughout the life of production. The life of production from an oil well on the district is between five and twenty-five years.

Existing Contracts and Agreements: Both the Medora Grazing Association and the McKenzie County Grazing Association hold 10-year grazing agreements in the area.

Biotic Control Measures and Fire Protection: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Effects on Adjacent Lands: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Scairt Woman: Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The nearest Wilderness areas are in Theodore Roosevelt National Park. The 19,410-acre Theodore Roosevelt Wilderness, North Unit, is about 15 miles to the north, while the 10,510-acre Theodore Roosevelt Wilderness, South Unit, is about 21 miles to the southwest. Both Wilderness areas represent mixed-grass prairies in a badlands setting. The Scairt Woman Wilderness would also represent a mixed-grass prairie in a rugged badlands setting.

Representation of Landforms and Ecosystems: This area represents a mixed-grass prairie with the following ecosystem types present: hardwood draws, upland grasslands, rolling grasslands and upland breaks. The landscape includes badlands and rolling prairies.

Biota: No species are dependent upon a Wilderness designation to remain viable in this area. Most key species probably would benefit, however, from a designation.

Public Interests and Concerns: The area is found in a sparsely populated region of the country. Dickinson, Williston, and Bismarck / Mandan, North Dakota, with an estimated population of less than 125,000, and Glendive and Sydney, Montana, with a combined population of about 25,000, are the nearest cities of any size, and none of them are closer than 40 miles from the area.

A considerable number of people and organizations have requested that the Forest Service designate some grassland Wilderness somewhere within the 191-million-acre National Forest System. Currently, Congress has not designated Wilderness area on any of the 20 national grasslands within that System.

Two Wilderness areas have been designated in the Little Missouri Badlands: the 10,510-acre Theodore Roosevelt Wilderness, South Unit, and the 19,410-acre Theodore Roosevelt Wilderness, North Unit, both of which are located in the Theodore Roosevelt National Park. These two Wilderness areas offer nearby designated Wilderness which, in most ways, represent most of the key characteristics found in the Scairt Woman area, including appearance and vegetative cover types. No other designated Wilderness areas, however, exist in the Little Missouri Badlands, a recognized biogeographical sub-unit of the Great Plains.

Scairt Woman: Environmental Consequences

Management Prescription Allocations by Alternative

Medora Ranger District			McKenzie Ranger District		
Alternative 2:	MA 6.1	5,460 acres	Alternative 2:	MA 6.1	640 acres
Alternative 3:	MA 3.65	3,500 acres	Alternative 3:	MA 3.65	640 acres
	MA 6.1	1,960 acres			
Alternative 4:	MA 1.31	5,460 acres	Alternative 4:	MA 1.31	640 acres
Alternative 5:	MA 6.1	5,460 acres	Alternative 5:	MA 6.1	640 acres

Designation: Wilderness

Prescription: MA 1.2 Recommended Wilderness

Alternatives: Wilderness designation is not considered in any alternative because of the area's existing level of mineral development.

Designation: Non-wilderness

Prescription: MA 1.31 Backcountry Recreation Nonmotorized

Alternatives: 4, 5

Environmental Consequences: With rare exceptions, travel is nonmotorized. Recreation opportunities would be those associated with the primitive and nonmotorized end of the spectrum such as walking, hiking, horseback riding, and nonmotorized hunting. Overall wildlife would tend to benefit from reduced human activity. Opportunities for discovery of cultural, historical and paleontological resources would exist but interpretive opportunities would be limited or forgone. Livestock grazing would continue as present. Valid existing rights would be recognized. Because the area is leased for oil and gas and contains a small area of private minerals, oil and gas developments could occur. Where mineral development occurs, the semi-primitive, nonmotorized character of the area would be lost for the duration of the activity.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Construction of new range developments would not be allowed to detract from the semi-primitive character of the area. Oil and gas development on existing leases would require the area to be reclaimed to as near as possible its original condition at the close of the lease.

Economic and Social Effects: Opportunities for nonmotorized activities would be increased while at the same time reducing opportunities for motorized activities. Because oil and gas development of existing leases could occur; restricting other users could cause conflict. Those accustomed to accessing the area by vehicle might resent vehicle restrictions. Economic benefits from oil and gas developments would continue as long as production occurs in the area.

Designation: Non-wilderness

Prescription: MA 3.65 Rangelands with Diverse Natural-appearing Landscapes

Alternatives: 3

Environmental Consequences: Motorized access would be allowed unless specific areas are designated as closed or restricted to designated roads and trails. A full spectrum of motorized recreation opportunities would be allowed. Construction of recreation facilities, roads, power lines, and other features would be allowed. Livestock grazing would continue. Existing oil and gas leasing would continue and new leasing would be permitted. Oil and gas developments such as roads, pipelines, and drilling pads would likely occur.

Mitigation Measures: Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is a high probability, if the area is designated MA 3.65 it would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased while at the same time opportunities for nonmotorized activities reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would be reduced. All users, including oil and gas, would be permitted the same motorized access. The area would continue to provide the existing mix of economic benefits while roadless primitive and semi-primitive character would be lost permanently making future wilderness designation unlikely.

Designation: Non-wilderness

Prescription: MA 6.1 Rangeland with Broad Resource Emphasis

Alternatives: 2,3

Environmental Consequences: Motorized access would be allowed unless specific areas are designated as closed or restricted to designated roads and trails. A full spectrum of motorized recreation opportunities would be allowed. Construction of recreation facilities, roads, power lines, and other features would be allowed. Livestock grazing would continue. Existing oil and gas leasing would continue and new leasing would be permitted. Oil and gas developments such as roads, pipelines, and drilling pads would likely occur.

Mitigation Measures: Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is a high probability, if the area is designated MA 6.1 it would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased while at the same time opportunities for nonmotorized activities reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would be reduced. All users, including oil and gas, would be permitted the same motorized access. The area would continue to provide the existing mix of economic benefits while roadless primitive and semi-primitive character could be lost permanently making future wilderness designation unlikely.

Strom Hanson: An Overview of the Affected Environment

The 18,810-acre Strom Hanson area is located about 30 miles southwest of Beach, North Dakota, and about 40 miles south of the south unit of Theodore Roosevelt National Park. In addition, Strom Hanson lies about 15 miles northeast of Marmarth, North Dakota. More specifically, this area is located, either partly or fully, in: T. 134 N., R. 105 W., Sections 1-2 and 11-12, and T. 134 N., R. 104 W., Sections 5-7 and 18, and T. 135 N. R. 105 W., Sections 1-15, 17-28 and 34-35, and T. 136 N., R. 105 W., Section 31, and T. 135 N., R. 104 W., Sections 18 and 29-31. Strom Hanson lies within the Little Missouri Badlands, a scenic combination of rugged terrain and open space. Access from Beach, North Dakota, is south on North Dakota State Highway 16 for about 27 miles, then east on Forest Development Road 867 for about five miles.

The Strom Hanson area is located within the Little Missouri Badlands, a biogeographical sub-unit of the Great Plains Region. Robert G. Bailey further identifies the area as a part of the Great Plains-Palouse Dry Steppe Province ecoregion of the Temperate Steppe Division (71). Topography varies from gentle rolling grasslands to extremely rugged badlands terrain with deeply incised stream channels and numerous clay buttes. Extensive areas of upland grasslands are interspersed between upland breaks. The Little Missouri River curls through the area, providing dense stands of large cottonwood forests. Elevation varies from about 2,400 feet along the Little Missouri River to 2,713 feet above sea level in the southeastern portion of the area.

The rough, broken terrain within the area has varied plant growth. Many of the steep drainages on north-facing slopes are occupied by a dense growth of Rocky Mountain juniper. Green ash and American elm occupy the wooded draws. Deer Creek and Boyce Creek support healthy stands of boxelder and cottonwood, as does the Little Missouri River. Dominant grasses include western wheatgrass, green needlegrass, and blue grama, with some little bluestem in the sandy areas and threadleaf sedge on the southern exposures. Understory shrub species in draws include buffaloberry, skunkbush sumac, chokecherry, snowberry, woods rose, and many others. An area of limber pine can be found about two miles to the south and west of the Strom Hanson area. A light and scattered infestation of leafy spurge, a noxious weed, occurs in the area.

The alluvial floodplains support a riparian community consisting of cottonwoods and associated species. The terraces immediately above the floodplain tend to support silver sage and extensive western wheatgrass stands.

The Strom Hanson area supports viable populations of mule deer, white-tailed deer, pronghorn antelope, turkeys, and sharp-tailed grouse. Some cliffs drop to the Little Missouri River providing nest sites for golden eagles as well as aerie sites for prairie falcons. Prairie dogs exist in the area. Although the wildlife habitats and species represented with the Strom Hanson area are not unique to the Little Missouri National Grassland, they are considered important to North Dakota.

Several two-track roads have been formed in the area. Ranchers use livestock water wells within the Strom Hanson area.

Typical recreation includes hiking, hunting canoeing, inner-tubing, fishing, horseback riding, and camping. Other uses include livestock grazing.

Strom Hanson: Capability Analyses

Environment

Opportunity for Solitude and Serenity: This area is remote. It remains miles away from any frequently used travelways. The area does offer high opportunities for solitude and serenity, although the overall terrain of Strom Hanson is not particularly rugged.

Natural Appearance and Integrity: Overall, this roadless area retains a natural appearance, representative of rolling grasslands and rough badlands terrain. Most of the ecological processes, including flash flooding, but with the exception of frequent natural wildfire, remain intact. Closer examination reveals signs of livestock activities. Cattle may be frequently encountered during the warmer grazing season. Livestock developments, including developed springs, fences, water wells, primitive trails, stock tanks and dugouts, detract from the natural setting, although most range developments have been constructed to blend with the natural surroundings as much as possible. About two miles of range-water pipeline and about two and a half miles of utility line exist in the area.

Challenge: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Recreation Opportunities: Current recreation is mostly determined by its rather remote and rugged location. Big game and upland bird hunting occurs, as does dispersed camping, hiking, photography, nature study, and other associated activities. Some petrified wood is collected for personal use from the area. Horseback riding, canoeing on the nearby Little Missouri River and driving for pleasure also occur.

Special Features

Unique Characteristics and Scenic Features: Fossils found in Fort Union (also known as Ludlow) Formation deposits represent the Paleocene (65 to 45 million years ago) period.

Opportunities for Outdoor Education: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Manageability

Size and Shape: The 18,810-acre Strom Hanson area is irregular in shape. It is about eight miles wide east to west and about 10 miles long north to south. It contains nine inholdings, one of which is a section of state school land. About 2,570 acres of inholdings exist in the area. Most of the inholding acreage exists north and west of the Little Missouri River.

Potential to Manage Boundaries: Due to the high number of inholdings in the area, boundary management would be complicated. In addition, the highly irregular shape of the area would make signing and posting of the boundary quite difficult.

Strom Hanson: Availability Analyses

Resource Values and Potentials

Oil and Gas: Oil and gas potential is moderate. The area is available for lease under no surface occupancy stipulations. There are no current leases or development in the area.

Coal: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Livestock Grazing: Six permittees operate on six allotments. The area produces about 6,704 animal unit months of livestock grazing annually.

Locatable Minerals: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Common Minerals: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Timber: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Recreation: Motorized recreation would be prohibited under a Wilderness designation. Current nonmotorized recreation activities, such as dispersed camping, hiking, horseback riding, and nature study, would be allowed. Wilderness designation would preclude off-highway motorized recreation, such as ATV and snowmobile use. Walk-in hunting opportunities would increase. Backcountry experiences would be enhanced with the exclusion of motorized activities. Opportunities for physically challenged and elderly access may be reduced or eliminated in the area.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Peregrine falcon; whooping crane: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.
- Bald eagle: Effects from Wilderness designation would have a beneficial effect on wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitats. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access within Wilderness areas.

Black-tailed prairie dogs and species closely associated with prairie dog towns and colonies: Prairie dogs and prairie dog-associated species would largely benefit from Wilderness designations, primarily because the poisoning of prairie dog towns, accomplished mainly with motorized support, would be greatly reduced. In addition, fewer prairie dog shooters would frequent prairie dog towns in Wilderness areas due to restrictions on motorized access. However, prairie dogs and associated species may be adversely affected by a Wilderness designation due to the reduction anticipated in predator control, which would result from motorized restrictions.

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around both aerial- and ground-nesting raptor sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Little Missouri National Grassland include: the black-tailed prairie dog, plains sharp-tailed grouse and the sage grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered falling under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the table at the very end of this document.

Management Obligations, Constraints, or Encumbrances

Mineral Leases and Subsurface Rights: Land origination within the Strom-Hanson area is about 17,750 acres acquired and 1,060 acres from the public domain. About 160 acres of private, subsurface minerals ownership exists in the area under federal surface ownership. Owners of these private subsurface minerals have the right to explore and develop these minerals and these private subsurface ownership areas are subject to minerals leasing. Leases may be exercised at any point in the life of the lease. Currently, leases are generally for a 10-year period. Once production on a lease is established, the lease is valid throughout the life of production. The life of production from an oil well on the district is between five and twenty-five years. Leasing in the Strom Hanson area will be allowed only under no-surface occupancy stipulations.

Existing Contracts and Agreements: The Little Missouri Grazing Association holds the 10-year grazing agreement in the area.

Biotic Control Measures and Fire Protection: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Effects on Adjacent Lands: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Strom Hanson: Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The nearest Wilderness area is the 10,510-acre Theodore Roosevelt Wilderness, South Unit, in the Theodore Roosevelt National Park. The Theodore Roosevelt Wilderness, South Unit is about 36 miles to the northeast. The Theodore Roosevelt Wilderness, South Unit, represents a mixed-grass prairie in a badlands setting. The Strom Hanson Wilderness would also represent a mixed-grass prairie in a badlands setting.

Representation of Landforms and Ecosystems: This area represents a mixed-grass prairie with the following ecosystem types present: river bottoms, hardwood draws, upland grasslands, rolling grasslands, terraces, upland breaks and river breaks. The landscape includes badlands and rolling prairies.

Biota: No species are dependent upon a Wilderness designation to remain viable in this area. Most key species would benefit, however, from a designation.

Public Interests and Concerns: The area is found in a sparsely populated region of the country. Dickinson, Williston, and Bismarck / Mandan, North Dakota, with an estimated population of less than 125,000, and Glendive and Sydney, Montana, with a combined population of about 25,000, are the nearest cities of any size, and none of them is closer than 50 miles from the area.

A considerable number of people and organizations have requested that the Forest Service designate some grassland Wilderness somewhere within the 191-million-acre National Forest System. Currently, Congress has not designated Wilderness area on any of the 20 national grasslands within that System.

Two Wilderness areas have been designated in the Little Missouri Badlands: the 10,510-acre Theodore Roosevelt Wilderness, South Unit, and the 19,410-acre Theodore Roosevelt Wilderness, North Unit, both of which are located in the Theodore Roosevelt National Park. These two Wilderness areas offer nearby designated Wilderness which, in most ways, represent many of the characteristics found in the Strom Hanson area. No other designated Wilderness areas, however, exist in the Little Missouri Badlands, a recognized biogeographical sub-unit of the Great Plains.

Strom Hanson: Environmental Consequences

Management Prescription Allocations by Alternative:

Alternative 2:	MA 2.1	250 acres
	MA 6.1	18,560 acres
Alternative 3:	MA 2.1	250 acres
	MA 3.65	12,910 acres
	MA 4.22	1,980 acres
	MA 6.1	3,670 acres

Alternative 4:	MA 2.1	70 acres
	MA 3.4	1,010 acres
	MA 3.65	12,940 acres
	MA 4.4	1,150 acres
	MA 6.1	3,640 acres
Alternative 5:	MA 2.1	70 acres
	MA 3.4	1,010 acres
	MA 4.4	1,040 acres
	MA 6.1	16,690 acres

Designation: Wilderness

Prescription: MA 1.2 Recommended Wilderness

Alternatives: Wilderness designation is not considered in any alternative because of the area's existing level of mineral development.

Designation: Non-wilderness

Prescription: MA 2.1 Special Interest Areas

Alternatives: 2, 3, 4, and 5

Environmental Consequences: Recreation opportunities that maintain and enhance the characteristics for which the SIA was designated will be available. Livestock grazing would continue as present. Valid existing rights and leases would be recognized

Mitigation Measures: OHV trail construction will be prohibited. Oil and gas leasing would be no surface occupancy.

Economic and Social Effects: Recreational and interpretive opportunities would be emphasized. The area would continue to provide the existing mix of economic benefits.

Designation: Non-wilderness

Prescription: MA 3.4 Scenic River Recommendation

Alternatives: 4 and 5

Environmental Consequences: Recreation opportunities would be those associated with the primitive and semi-primitive end of the spectrum such as walking, hiking, horseback riding, and canoeing. Motorized water-bound-craft would be allowed. Recreational developments necessary for river access may be present. Livestock grazing would continue. Existing oil and gas leases and rights would be recognized.

Mitigation Measures: Motorized travel routes may be designated with restrictions. Livestock grazing would be managed to maintain the values for which the river is designated. For segments recommended for wild designation, oil and gas leases would require no surface occupancy. "Scenic" or "recreational" segments would be stipulated to maintain the scenic values of the area.

Economic and Social Effects: Opportunities for nonmotorized activities would be increased while at the same time reducing opportunities for motorized activities. Those accustomed to accessing the area by vehicle might resent vehicle restrictions. Economic benefits from oil and gas revenues may be reduced if development opportunities are foregone.

Designation: Non-wilderness

Prescription: MA 3.65 Rangelands with Diverse Natural-appearing Landscapes

Alternatives: 3

Environmental Consequences: Motorized access would be allowed unless specific areas are designated as closed or restricted to designated roads and trails. A full spectrum of motorized recreation opportunities would be allowed. Construction of recreation facilities, roads, power lines, and other features would be allowed. Livestock grazing would continue. Existing oil and gas leasing would continue and new leasing would be permitted. Oil and gas developments such as roads, pipelines, and drilling pads would likely occur.

Mitigation Measures: **Although**, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is a high probability, if the area is designated MA 3.65 it would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased while at the same time opportunities for nonmotorized activities reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would be reduced. All users, including oil and gas, would be permitted the same motorized access. The area would continue to provide the existing mix of economic benefits while roadless primitive and semi-primitive character would be lost permanently making future wilderness designation unlikely.

Designation: Non-wilderness

Prescription: MA 4.22 River and Travel Corridors

Alternatives: 3

Environmental Consequences: Motorized access would be allowed unless specific areas are designated as closed or restricted to designated roads and trails. A variety of recreation opportunities would be allowed. Livestock grazing would continue. Existing oil and gas leasing would continue and new leasing would be permitted.

Mitigation Measures: Constructed public launch sites will be visually subordinate to the river and river corridor. OHV trail construction would be prohibited. Timing, seasonal, or location stipulations may be appropriate related to oil and gas development to maintain the scenic values of the area. Leasing within the corridor would be NSO.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings would be moderate. Economic benefits from oil and gas revenues may be reduced if development opportunities are foregone due to restrictions and stipulations.

Designation: Non-wilderness

Prescription: MA 4.4 Recreation Rivers Recommendation

Alternatives: 4 and 5

Environmental Consequences: Motorized access would be allowed unless specific areas are designated as closed or restricted to designated roads and trails. A variety of recreational opportunities would be allowed. Livestock grazing would continue. Existing oil and gas leasing would continue and new leasing would be permitted.

Mitigation Measures: Timing, seasonal, or location stipulations may be appropriate related to oil and gas development to maintain the scenic values of the area. Leasing within the corridor would be no surface occupancy.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings would be reduced. Economic benefits from oil and gas revenues may be reduced if development opportunities are foregone.

Designation: Non-wilderness

Prescription: MA 6.1 Rangelands with Broad Resource Emphasis

Alternatives: 2, 3, 4, and 5

Environmental Consequences: Motorized access would be allowed unless specific areas are designated as closed or restricted to designated roads and trails. A full spectrum of motorized recreation opportunities would be allowed. Construction of recreation facilities, roads, power lines, and other features would be allowed. Livestock grazing would continue. Existing oil and gas leasing would continue and new leasing would be permitted. Oil and gas developments such as roads, pipelines, and drilling pads would likely occur.

Mitigation Measures: Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is a high probability, if the area is designated MA 6.1 it would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased while at the same time opportunities for nonmotorized activities reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would be reduced. All users, including oil and gas, would be permitted the same motorized access. The area would continue to provide the existing mix of economic benefits while roadless primitive and semi-primitive character could be lost permanently making future wilderness designation unlikely.

Tracy Mountain: An Overview of the Affected Environment

The 9,730-acre Tracy Mountain area is located about six miles south of Medora, North Dakota, and about six miles south of Theodore Roosevelt National Park, South Unit. More specifically, the Tracy Mountain area is located, either partly or fully, in: T. 138 N., R. 101 W., Sections 2-7, 9, 11 and 18, and T. 139 N., R. 101 W., Sections 27-34, and T. 139 N., R. 102 W., Sections 25-26, and T. 138 N., R. 102 W., Sections 1-2 and 11-13. It lies within the Little Missouri Badlands, a scenic combination of rugged terrain and open space. Access from Medora is south on Forest Highway 3 for six miles.

The Tracy Mountain area is located within the Little Missouri Badlands, a biogeographical sub-unit of the Great Plains Region. Robert G. Bailey further identifies the area as a part of the Great Plains-Palouse Dry Steppe Province ecoregion of the Temperate Steppe Division (71). Topography includes moderately rugged badlands with some incised drainages. The area is bordered on the north by Sully Creek. The area drains to the west into the Little Missouri River. The most prominent landmark is Tracy Mountain in the southeastern portion of the area. Elevation ranges from about 2,550 to 2,900 feet above sea level.

The semi-rugged nature of the terrain offers a variety of vegetation, including Rocky Mountain juniper, green ash, cottonwood, and silver sage in the bottomlands. Dominant grasses include blue grama, western wheatgrass, green needlegrass, little bluestem, and needle-and-thread. Understory shrub species include wild rose, green sage, wolfberry, buffalo berry, dwarf juniper, and rabbit brush. A light infestation of leafy spurge, a noxious weed, occurs in the area.

Western portions of this area provide a lambing area for bighorn sheep. Winter range for pronghorn antelope exists, as well. In addition, other species include white-tailed and mule deer, coyotes, badgers, a number of reptiles, neotropical grassland birds, upland birds, and a number of raptors, including kestrels, owls, golden eagles, and hawks.

Recreation and livestock grazing are typical uses in the area.

Tracy Mountain: Capability Analyses

Environment

Opportunity for Solitude and Serenity: The western half of the area provides fairly high opportunities for solitude and serenity because of the broken terrain. The eastern half doesn't have as much relief as the western half. In addition, developments on adjacent lands are visible from the eastern half. Opportunities for solitude and serenity in the eastern half are moderate.

Natural Appearance and Integrity: Overall, this roadless area retains a natural appearance, representative of rolling grasslands and rough badlands terrain. Most of the ecological processes, including flash flooding, but with the exception of frequent natural wildfire, remain intact. Closer examination reveals signs of livestock activities. Cattle may be frequently encountered during the warmer grazing season. Livestock developments, including developed springs, fences, water wells, primitive trails, stock tanks and dugouts, detract from the natural setting, although most range developments have been constructed to blend with the natural surroundings as much as possible. In addition, about two and one-half miles of buried range-water pipeline exist in the area.

Challenge: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Recreation Opportunities: Current recreation includes hiking, dispersed camping, photography, horseback riding, nature study and other associated activities. "Initial Rock," where troops under General George Custer etched their initials into rock on his 1876 campaign to the Little Bighorn, is found in this area. Good sharp-tailed grouse and deer hunting exist in the area. Birdwatching and wildflower viewing are also common.

Special Features

Unique Characteristics and Scenic Features: Western portions of this area provide lambing for bighorn sheep. Antelope winter range also exists. Black cottonwood is also found in the area. Fossils found in Fort Union (also known as Ludlow) Formation deposits represent the Paleocene (65 to 45 million years ago) period.

Opportunities for Outdoor Education: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Manageability

Size and Shape: The 9,730-acre Tracy Mountain area is irregular in shape, appearing something like a half circle. It is about six-mile wide east to west and five miles long north to south. It contains no inholdings.

Potential to Manage Boundaries: Significant signing and posting would be necessary under a Wilderness designation. The potential for illegal motorized trespass under a Wilderness designation is high, due to the number of nearby roads. Overall, the potential to manage this area under a Wilderness designation is fairly high.

Tracy Mountain: Availability Analyses

Resource Values and Potentials

Oil and Gas: Oil and gas potential in the area is high. The eastern half of the area is providing opportunities for oil and gas development. Since the DEIS was released, approximately 1 mile of road has been developed. Staking for drilling is occurring on several sites. Two applications for permit to drill have been approved and two more are being processed.

Coal: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Livestock Grazing: Seven permittees operate on six allotments in the area. The area produces about 2,712 animal unit months of livestock grazing annually.

Locatable Minerals: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Common Minerals: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Timber: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Recreation: Motorized recreation would be prohibited under a Wilderness designation. Current nonmotorized recreation activities, such as dispersed camping, hiking, horseback riding and nature study, would be allowed. Wilderness designation would preclude off-highway motorized recreation, such as ATV and snowmobile use. Walk-in hunting opportunities would increase. Backcountry experiences would be enhanced with the exclusion of motorized activities. Opportunities for physically challenged and elderly access into the area may be reduced.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Peregrine falcon; whooping crane: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.
- Bald eagle: Effects from Wilderness designation would have a beneficial effect on wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.

Bighorn Sheep: Wilderness designation would have beneficial effects on bighorn sheep due to the lack of human disturbances and reductions in motorized activities a designation would bring, especially during the birthing season.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitats. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access within Wilderness areas.

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around both aerial- and ground-nesting raptor sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Little Missouri National Grassland include: the black-tailed prairie dog, plains sharp-tailed grouse and the sage grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered that fall under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the table at the very end of this document.

Management Obligations, Constraints, or Encumbrances

Mineral Leases and Subsurface Rights: Land origination within the Tracy Mountain area is about 8,975 acres acquired and 780 acres from the public domain. About 1,549 acres of private, subsurface minerals ownership beneath federal lands exist in the area. These acres are subject to minerals leasing. Leases may be exercised at any point in the life of the lease. Currently, leases are generally for a 10-year period. Once production on a lease is established, the lease is valid throughout the life of production. The life of production from an oil well on the district is between five and twenty-five years. Some on-the-ground staking of possible oil well locations has recently occurred in the southeastern corner of the area.

Existing Contracts and Agreements: The Medora Grazing Association holds a 10-year grazing agreement for the area.

Biotic Control Measures and Fire Protection: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Effects on Adjacent Lands: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Tracy Mountain: Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The nearest Wilderness area is the 10,510-acre Theodore Roosevelt Wilderness, South Unit, in the Theodore Roosevelt National Park. The Theodore Roosevelt Wilderness, South Unit is about 11 miles to the north. The Theodore Roosevelt Wilderness, South Unit, represents a mixed-grass prairie in a badlands setting. The Tracy Mountain Wilderness would also represent a mixed-grass prairie in a badlands setting.

Representation of Landforms and Ecosystems: This area represents a mixed-grass prairie with the following ecosystem types present: hardwood draws, upland grasslands, rolling grasslands, upland breaks, and hilly scoria. The landscape includes badlands and rolling prairies.

Biota: No species are dependent upon a Wilderness designation to remain viable in the area. Most key species probably would benefit, however, from a designation.

Public Interests and Concerns: The area is found in a sparsely populated region of the country. Dickinson, Williston, and Bismarck / Mandan, North Dakota, with an estimated population of less than 125,000, and Glendive and Sydney, Montana, with a combined population of about 25,000, are the nearest cities of any size, and none of them are closer than 25 miles from the area.

A considerable number of people and organizations have requested that the Forest Service designate some grassland Wilderness somewhere within the 191-million-acre National Forest System. Currently, Congress has not designated Wilderness area on any of the 20 national grasslands within that System.

Two Wilderness areas have been designated in the Little Missouri Badlands: the 10,510-acre Theodore Roosevelt Wilderness, South Unit, and the 19,410-acre Theodore Roosevelt Wilderness, North Unit, both of which are located in the Theodore Roosevelt National Park. These two Wilderness areas offer nearby designated Wilderness which, in most ways, represent most of the key characteristics found in the Tracy Mountain area, including appearance and vegetative cover types. No other designated Wilderness areas, however, exist in the Little Missouri Badlands, a recognized biogeographical sub-unit of the Great Plains.

Tracy Mountain: Environmental Consequences

Management Prescription Allocations by Alternative

Alternative 2:	MA 2.1	290 acres
	MA 3.51	6,340 acres
	MA 6.1	3,100 acres
Alternative 3:	MA 1.31	8,840 acres
	MA 2.1	290 acres
	MA 3.65	600 acres
Alternative 4:	MA 1.31	9,730 acres

Alternative 5:	MA 1.31	6,630 acres
	MA 6.1	3,100 acres

Designation: Wilderness

Prescription: MA 1.2 Recommended Wilderness

Alternatives: Wilderness designation is not considered in any alternative because of the area's existing level of mineral development.

Designation: Non-wilderness

Prescription: MA 1.31 Backcountry Recreation Nonmotorized

Alternatives: 3, 4, and 5

Environmental Consequences: With rare exceptions, travel is nonmotorized. Recreation opportunities would be those associated with the primitive and nonmotorized end of the spectrum such as walking, hiking, horseback riding, and nonmotorized hunting. Overall, wildlife would tend to benefit from reduced human activity. Opportunities for discovery of cultural, historical, and paleontological resources would exist but interpretive opportunities would be limited or forgone. Livestock grazing would continue as present. Valid existing rights would be recognized. Because the area is leased for oil and gas and contains a small area of private minerals, additional oil and gas developments could occur. Where mineral development occurs, the semi-primitive, nonmotorized character of the area would be lost for the duration of the activity.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Construction of new range developments would not be allowed to detract from the semi-primitive character of the area. Oil and gas development on existing leases would require the area to be reclaimed to as near as possible its original condition at the close of the lease.

Economic and Social Effects: Opportunities for nonmotorized activities would be increased while at the same time reducing opportunities for motorized activities. Because oil and gas development of existing leases could occur; restricting other users could cause conflict. Those accustomed to accessing the area by vehicle might resent vehicle restrictions. Economic benefits from oil and gas developments would continue as long as production occurs in the area.

Designation: Non-wilderness

Prescription: MA 2.1 Special Interest Area

Alternatives: 2 and 3

Environmental Consequences: Recreation opportunities that maintain and enhance the characteristics for which the SIA was designated will be available. Livestock grazing would continue as present. Valid existing rights and leases would be recognized

Mitigation Measures: OHV trail construction will be prohibited. Oil and gas leasing would be no surface occupancy.

Economic and Social Effects: Recreational and interpretive opportunities would be emphasized. The area would continue to provide the existing mix of economic benefits.

Designation: Non-wilderness

Prescription: MA 3.51 Bighorn Sheep

Alternatives: 2

Environmental Consequences: Recreational activities and motorized travel would be discouraged during breeding and lambing periods. Livestock grazing would continue. Valid existing rights and leases would be recognized.

Mitigation Measures: Construction of new travel routes would be prohibited except to honor valid and existing rights and leases. Snowmobile use would be prohibited. Existing and adjoining allotments in this area would not permit conversion to domestic sheep. Oil and gas leasing would be no surface occupancy.

Economic and Social Effects: Opportunities for nonmotorized activities would be increased while at the same time reducing opportunities for motorized activities. Those accustomed to accessing the area by vehicle might resent vehicle restrictions. Economic benefits from oil and gas revenues may be reduced if development opportunities are foregone.

Designation: Non-wilderness

Prescription: MA 3.65 Rangeland with Diverse Natural-appearing Landscapes

Alternatives: 3

Environmental Consequences: Motorized access would be allowed unless specific areas are designated as closed or restricted to designated roads and trails. A full spectrum of motorized recreation opportunities would be allowed. Construction of recreation facilities, roads, power lines, and other features would be allowed. Livestock grazing would continue. Existing oil and gas leasing would continue and new leasing would be permitted. Oil and gas developments such as roads, pipelines, and drilling pads would likely occur.

Mitigation Measures: Although mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is a high probability, if the area is designated MA 3.65 it would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased while at the same time opportunities for nonmotorized activities reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would be reduced. All users, including oil and gas, would be permitted the same motorized access. The area would continue to provide the existing mix of economic benefits while roadless primitive and semi-primitive character would be lost permanently making future wilderness designation unlikely.

Designation: Non-wilderness

Prescription: MA 6.1 Rangeland with Broad Resource Emphasis

Alternatives: 2 and 5

Environmental Consequences: Motorized access would be allowed unless specific areas are designated as closed or restricted to designated roads and trails. A full spectrum of motorized recreation opportunities would be allowed. Construction of recreation facilities, roads, power lines, and other features would be allowed. Livestock grazing would continue. Existing oil and gas leasing would continue and new leasing would be permitted. Oil and gas developments such as roads, pipelines, and drilling pads would likely occur.

Mitigation Measures: Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is a high probability, if the area is designated MA 6.1 it would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased while at the same time opportunities for nonmotorized activities reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would be reduced. All users, including oil and gas, would be permitted the same motorized access. The area would continue to provide the existing mix of economic benefits while roadless primitive and semi-primitive character could be lost permanently making future wilderness designation unlikely.

Twin Buttes: An Overview of the Affected Environment

The 13,380-acre Twin Buttes area is located about 45 miles west of Dickinson, North Dakota, and about five miles west of the south unit of Theodore Roosevelt National Park. In addition, Twin Buttes is about eight miles northeast of Sentinel Butte, North Dakota. More specifically, the Twin Buttes area is located, either partly or fully, in: T. 141 N., R. 102 W., Sections 4-5 and 7-9, and T. 142 N., R. 102 W., Sections 29-33, and T. 141 N., R. 103 W., Sections 1-4, 9-11, 13-15, 21-24, 26-27 and 34. It lies within the Little Missouri Badlands, a scenic combination of rugged terrain and open space. Access from Medora is west about two miles on Interstate 94, then north for about eight miles on Forest Development Road 730.

The Twin Buttes area is located within the Little Missouri Badlands, a biogeographical sub-unit of the Great Plains Region. Robert G. Bailey further identifies the area as a part of the Great Plains-Palouse Dry Steppe Province ecoregion of the Temperate Steppe Division (71). Topography consists of rolling grasslands to moderately rugged badlands terrain with deeply incised drainages and numerous clay buttes. Areas of rolling grasslands occur along the western third of the area. In addition, intermittent sandstone caps exist, as do petrified logs. Elevation varies from 2,400 feet to 2,900 feet above sea level.

The rough, broken terrain within the area has varied plant growth. On some of the non-grassy areas, predominate vegetation consists of big sagebrush, rabbit brush, four-wing salt brush, yucca and cactus. Green ash, Rocky Mountain juniper, willow, and cottonwood occupy the wooded draws and north-facing slopes. Dominant grasses include western wheatgrass, green needlegrass, and blue grama with little bluestem in the sandy areas and threadleaf sedge on the southern exposures. Understory shrub species in the draws include buffaloberry, skunkbrush sumac, chokecherry, wild plum, snowberry, woods rose, and many others. The area shows a heavy infestation of leafy spurge.

The alluvial floodplains along the lower reaches of Wannagan Creek support a riparian community consisting of cottonwoods and associated species. The terraces immediately above the floodplain tend to support silver sage and extensive western wheatgrass stands.

The Twin Buttes area supports viable populations of mule deer, pronghorn antelope, and sharp-tailed grouse. Also present are rattlesnakes, horned toads, turkey, fox, coyote, jack rabbits, and prairie dogs. Although the wildlife habitats and species represented within the Twin Buttes area are not unique within the Little Missouri National Grassland, they are considered important to North Dakota.

Typical recreation includes hiking, hunting, horseback riding, and camping. Livestock grazing occurs in the area.

Twin Buttes: Capability Analyses

Environment

Opportunity for Solitude and Serenity: This area is remote and is generally removed from frequently used travelways. In addition, the open nature of the area's badlands and rolling hills offer opportunities to experience high levels of solitude and serenity.

Natural Appearance and Integrity: Overall, this roadless area retains a natural appearance, representative of rolling grasslands and rough badlands terrain. Most of the ecological processes, including flash flooding, but with the exception of frequent natural wildfire, remain intact. Closer examination reveals signs of livestock activities. Cattle may be frequently encountered during the warmer grazing season. Livestock developments, including developed springs, fences, water wells, primitive trails, stock tanks and dugouts, detract from the natural setting, although most range developments have been constructed to blend with the natural surroundings as much as possible. In addition, about two miles of utility line and two and one-half miles of buried range-water pipeline exist in the area.

Challenge: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Recreation Opportunities: Current recreation includes elk, bighorn sheep and deer hunting, upland bird hunting, hiking, mountain biking, horseback riding, photography, nature study and other associated activities.

Special Features

Unique Characteristics and Scenic Features: Fossils found in Fort Union (also known as Ludlow) Formation deposits represent the Paleocene (65 to 45 million years ago) period.

Opportunities for Outdoor Education: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Manageability

Size and Shape: The 13,380-acre Twin Buttes area is rather irregular in shape. It is about seven miles wide east to west and seven-mile long north to south. It contains four inholdings, three of which are state lands. About 2,240 acres of inholdings are found in the area.

Potential to Manage Boundaries: The generally open nature of the topography, with few natural barriers, would require significant signing and posting under a Wilderness designation. The potential for illegal motorized trespass under a Wilderness designation exists, especially during the fall hunting season.

Twin Buttes: Availability Analyses

Resource Values and Potentials

Oil and Gas: Oil and gas potential is high. Portions of this area are available for lease and other portions are not administratively available for lease. **Coal**: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Livestock Grazing: Seven permittees operate on six allotments in the area. The area produces about 3,068 animal unit months of livestock grazing annually.

Locatable Minerals: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Common Minerals: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Timber: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Recreation: Motorized recreation would be prohibited under a Wilderness designation. Current nonmotorized recreation activities, such as dispersed camping, hiking, horseback riding, and nature study, would be allowed. Wilderness designation would preclude off-highway motorized recreation, such as ATV and snowmobile use. Walk-in hunting opportunities would increase. Backcountry experiences would be enhanced with the exclusion of motorized activities. Opportunities for physically challenged and elderly access may be reduced or eliminated in the area.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Peregrine falcon; whooping crane: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.
- Bald eagle: Effects from Wilderness designation would have a beneficial effect on wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitats. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access within Wilderness areas.

Black-tailed prairie dogs and species closely associated with prairie dog towns and colonies: Prairie dogs and prairie dog-associated species would largely benefit from Wilderness designations, primarily because the poisoning of prairie dog towns, accomplished mainly with

motorized support, would be greatly reduced. In addition, fewer prairie dog shooters would frequent prairie dog towns in Wilderness areas due to restrictions on motorized access. However, prairie dogs and associated species may be adversely affected by a Wilderness designation due to the reduction anticipated in predator control, which would result from motorized restrictions.

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around both aerial- and ground-nesting raptor site sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Little Missouri National Grassland include: the black-tailed prairie dog, plains sharp-tailed grouse and the sage grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered that fall under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the table at the very end of this document.

Management Obligations, Constraints, or Encumbrances

Mineral Leases and Subsurface Rights: Land origination within the Twin Buttes area is about 12,633 acres acquired and 760 acres from the public domain. About 905 acres of private, subsurface minerals ownership beneath federal lands exist in the area.

Existing Contracts and Agreements: The Medora Grazing Association holds the 10-year grazing agreement in the area.

Biotic Control Measures and Fire Protection: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Effects on Adjacent Lands: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Twin Buttes: Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The nearest Wilderness area is the 10,510-acre Theodore Roosevelt Wilderness, South Unit, in the Theodore Roosevelt National Park. The Theodore Roosevelt Wilderness, South Unit is about two miles to the southeast. The 19,410-acre Theodore Roosevelt Wilderness, North Unit, lies about 31 miles to the north. Both Wilderness areas represent mixed-grass prairies in a badlands setting. The Twin Buttes Wilderness would also represent a mixed-grass prairie in a badlands setting.

Representation of Landforms and Ecosystems: This area represents a mixed-grass prairie with the following ecosystem types present: hardwood draws, upland grasslands, and upland breaks. The landscape includes badlands and rolling prairies.

Biota: No species are dependent upon a Wilderness designation to remain viable in the area. Most key species probably would benefit, however, from a designation.

Public Interests and Concerns: The area is found in a sparsely populated region of the country. Dickinson, Williston, and Bismarck / Mandan, North Dakota, with an estimated population of less than 125,000, and Glendive and Sydney, Montana, with a combined population of about 25,000, are the nearest cities of any size, and none of them are closer than 40 miles from the area.

A considerable number of people and organizations have requested that the Forest Service designate some grassland Wilderness somewhere within the 191-million-acre National Forest System. Currently, Congress has not designated Wilderness area on any of the 20 national grasslands within that System.

Two Wilderness areas have been designated in the Little Missouri Badlands: the 10,510-acre Theodore Roosevelt Wilderness, South Unit, and the 19,410-acre Theodore Roosevelt Wilderness, North Unit, both of which are located in the Theodore Roosevelt National Park. These two Wilderness areas offer nearby designated Wilderness which, in most ways, represent most of the key characteristics found in the Twin Buttes area, including appearance and vegetative cover types. No other designated Wilderness areas, however, exist in the Little Missouri Badlands, a recognized biogeographical sub-unit of the Great Plains.

Twin Buttes: Environmental Consequences

Management Prescription Allocations by Alternative

Alternative 2:	MA 3.51	420 acres
	MA 6.1	12,960 acres
Alternative 3:	MA 1.2A	8,020 acres
	MA 1.31	930 acres
	MA 6.1	4,430 acres
Alternative 4:	MA 1.2	8,940 acres
	MA 1.31	4,440 acres
Alternative 5:	MA 1.2	8,940 acres
	MA 3.51	420 acres
	MA 6.1	4,020 acres

Designation: Wilderness

Prescription: MA 1.2 or 1.2A Recommended or Suitable Wilderness

Alternatives: 3, 4, and 5

Environmental Consequences: Travel would be by nonmotorized, nonmechanical. Recreation opportunities would be those associated with the primitive and nonmotorized end of the spectrum such as walking, hiking, horseback riding, and nonmotorized hunting. Opportunities for discovery of cultural, historical, and paleontological resources would exist but interpretive opportunities may be limited or foregone. Wildlife would tend to benefit from reduced human activity, but some opportunities for fish and wildlife enhancement, and ecosystem restoration would be foregone. Grazing of livestock would continue where grazing was established at the time the wilderness is designated. Valid existing rights and leases would be recognized.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Maintenance of existing range developments would be permitted. Construction of new range developments would not be allowed to detract from the wilderness character of the area. Stipulations, such as no surface occupancy, and reclamation efforts designed at protecting the wilderness values to the extent possible may be authorized by Congress on existing rights and leases. The area may be Congressionally designated as administratively unavailable.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings will be increased while at the same time reducing opportunities for motorized recreation. If the area is withdrawn from leasing, oil and gas development opportunities would be foregone.

Designation: Non-wilderness

Prescription: MA 1.31 Backcountry Recreation Nonmotorized

Alternatives: 3 and 4

Environmental Consequences: With rare exceptions, travel is nonmotorized. Recreation opportunities would be those associated with the primitive and nonmotorized end of the spectrum such as walking, hiking, horseback riding, and nonmotorized hunting. Overall, wildlife would tend to benefit from reduced human activity. Opportunities for discovery of cultural, historical, and paleontological resources would exist but interpretive opportunities would be limited or forgone. Livestock grazing would continue as present. Valid existing rights would be recognized. Because the area is leased for oil and gas and contains a small area of private minerals, oil and gas developments could occur. Where mineral development occurs, the semi-primitive, nonmotorized character of the area would be lost for the duration of the activity.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Construction of new range developments would not be allowed to detract from the semi-primitive character of the area. Oil and gas development on existing leases would require the area to be reclaimed to as near as possible its original condition at the close of the lease.

Economic and Social Effects: Opportunities for nonmotorized activities would be increased while at the same time reducing opportunities for motorized activities. Because oil and gas development of existing leases could occur; restricting other users could cause conflict. Those accustomed to accessing the area by vehicle might resent vehicle restrictions. Economic benefits from oil and gas developments would continue as long as production occurs in the area.

Designation: Non-wilderness

Prescription: MA 3.51 Bighorn Sheep

Alternatives: 2 and 5

Environmental Consequences: Recreational activities and motorized travel would be discouraged during breeding and lambing periods. Livestock grazing would continue. Valid existing rights and leases would be recognized.

Mitigation Measures: Construction of new travel routes would be prohibited except to honor valid and existing rights and leases. Snowmobile use would be prohibited. Existing and adjoining allotments in this area would not permit conversion to domestic sheep. Oil and gas leasing would be no surface occupancy.

Economic and Social Effects: Opportunities for nonmotorized activities would be increased while at the same time reducing opportunities for motorized activities. Those accustomed to accessing the area by vehicle might resent vehicle restrictions. Economic benefits from oil and gas revenues may be reduced if development opportunities are foregone.

Designation: Non-wilderness

Prescription: MA 6.1 Rangelands with Broad Resource Emphasis

Alternatives: 2 and 5

Environmental Consequences: Motorized access would be allowed unless specific areas are designated as closed or restricted to designated roads and trails. A full spectrum of motorized recreation opportunities would be allowed. Construction of recreation facilities, roads, power lines, and other features would be allowed. Livestock grazing would continue. Existing oil and gas leasing would continue and new leasing would be permitted. Oil and gas developments such as roads, pipelines, and drilling pads would likely occur.

Mitigation Measures: Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is a high probability, if the area is designated MA 6.1 it would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased while at the same time opportunities for nonmotorized activities reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would be reduced. All users, including oil and gas, would be permitted the same motorized access. The area would continue to provide the existing mix of economic benefits while roadless primitive and semi-primitive character could be lost permanently making future wilderness designation unlikely.

Wannagan: An Overview of the Affected Environment

The 6,030-acre Wannagan area is located about 40 miles west of Dickinson, North Dakota, and adjoins the northwestern boundary of the south unit of Theodore Roosevelt National Park. More specifically, the Wannagan area is located, either partly or fully, in: T. 141 N., R. 102 W., Sections 9-11, 14-15, 17, 20-23, 27-30, and T. 141 N., R. 103 W., Sections 13 and 23-25. It lies within the Little Missouri Badlands, a scenic combination of rugged terrain and open space. Access from Medora is west for two miles on Interstate 94, then north on Forest Development Road 730 for five miles.

The Wannagan area is located within the Little Missouri Badlands, a biogeographical sub-unit of the Great Plains Region. Robert G. Bailey further identifies the area as a part of the Great Plains-Palouse Dry Steppe Province ecoregion of the Temperate Steppe Division (71). Topography of the area varies from gently rolling grasslands to extremely rugged badlands terrain with deeply incised drainages and numerous clay buttes. The badlands of the Wannagan area are rugged, with few trees, except near creek bottoms. Elevation varies from 2,600 feet along portions of the area adjoining the Theodore Roosevelt National Park to 2,200 feet above sea level along the Little Missouri River.

The rough, broken terrain within the area has varied plant growth. On some of the non-grassy areas, predominate vegetation consists of big sagebrush, rabbit brush and four-wing salt brush. Many of the steep drainages on north-facing slopes are occupied by a dense growth of Rocky Mountain juniper. Green ash and American elm occupy the wooded draws. Dominant grasses include western wheatgrass, green needlegrass, and blue grama with some little bluestem in the sandy areas. A heavy infestation of leafy spurge, a noxious weed, occurs in the area.

The alluvial floodplains along the lower reaches of Wannagan Creek support a riparian community consisting of cottonwoods and associated species. The terraces immediately above the floodplain tend to support silver sage and extensive western wheatgrass stands.

Rutting along two-track roads is an existing management concern.

The Wannagan area supports viable populations of mule deer, pronghorn antelope, turkeys, and sharp-tailed grouse. Bighorn sheep may be using the northern portions of the area. Elk, including many of trophy size, also live in the area. Although the wildlife habitats and species represented within the Wannagan area are not unique within the Little Missouri National Grassland, they are considered important to North Dakota.

The Wannagan area adjoins a portion of the Theodore Roosevelt National Park (Petrified Forest Plateau) that is an official Wilderness area (the 10,510-acre Theodore Roosevelt, South Unit, Wilderness) as classified by Congress. Consequently, the essentially roadless character of Wannagan serves as a buffer to the Wilderness area within the national park.

Wannagan: Capability Analyses

Environment

Opportunity for Solitude and Serenity: The topography of the area does not offer a high opportunity for solitude and serenity.

Natural Appearance and Integrity: Overall, this roadless area retains a natural appearance, representative of rolling grasslands and rough badlands terrain. Most of the ecological processes, including flash flooding, but with the exception of frequent natural wildfire, remain intact. Closer examination reveals signs of livestock activities. Cattle may be frequently encountered during the warmer grazing season. Livestock developments, including developed springs, fences, water wells, primitive trails, stock tanks and dugouts, detract from the natural setting, although most range developments have been constructed to blend with the natural surroundings as much as possible. In addition, about one and a half miles of utility line and one mile of buried range-water pipeline exist in the area.

Challenge: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Recreation Opportunities: Current recreation includes elk, bighorn sheep and deer hunting, upland game hunting, hiking, dispersed camping, horseback riding, mountain biking, photography, nature study and other associated activities. The Maah-Daah-Hey Trail winds through about a mile and a half of the area. Some visitors to the Wannagan area probably access it on foot or horseback through the 10,510-acre Theodore Roosevelt Wilderness, South Unit, which lies adjacent to the southeast.

Special Features

Unique Characteristics and Scenic Features: Fossils found in Fort Union (also known as Ludlow) Formation deposits represent the Paleocene (65 to 45 million years ago) period.

Opportunities for Outdoor Education: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Manageability

Size and Shape: The 6,030-acre Wannagan area is sort of rectangular in shape. It is about five miles wide east to west and four miles long north to south. It contains no inholdings.

Potential to Manage Boundaries: The potential to manage the northern, western, and eastern boundaries of the area would be low due to the intermingling of adjacent lands of other ownership. A high probability of trespass exists, too, by hunters looking for trophy-sized elk in the area. The southern boundary would be easy to manage due to the adjacent Theodore Roosevelt National Park.

Wannagan: Availability Analyses

Resource Values and Potentials

Oil and Gas: Oil and gas potential is high. The southeastern portion of the area next to Theodore Roosevelt National Park carries no-surface-occupancy stipulations, essentially protecting this portion of the Wannagan area from future oil and gas development. The remaining area is currently leased but not yet developed.

Coal: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Livestock Grazing: Five permittees operate on five allotments in the area. The area produces about 2,343 animal unit months of livestock grazing annually.

Locatable Minerals: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Common Minerals: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Timber: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Recreation: Motorized recreation would be prohibited under a Wilderness designation. Current nonmotorized recreation activities, such as dispersed camping, hiking, horseback riding, and nature study, would be allowed. Wilderness designation would preclude off-highway motorized recreation, such as ATV and snowmobile use. Walk-in hunting opportunities would increase. Backcountry experiences would be enhanced with the exclusion

of motorized activities. Opportunities for physically challenged and elderly access may be reduced or eliminated in the area.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Peregrine falcon; whooping crane: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.
- Bald eagle: Effects from Wilderness designation would have a beneficial effect on wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.

Bighorn Sheep: Wilderness designation would have beneficial effects on bighorn sheep due to the lack of human disturbances and reductions in motorized activities a designation would bring, especially during the birthing season.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitats. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access within Wilderness areas.

Black-tailed prairie dogs and species closely associated with prairie dog towns and colonies: Prairie dogs and prairie dog-associated species would largely benefit from Wilderness designations, primarily because the poisoning of prairie dog towns, accomplished mainly with motorized support, would be greatly reduced. In addition, fewer prairie dog shooters would frequent prairie dog towns in Wilderness areas due to restrictions on motorized access. However, prairie dogs and associated species may be adversely affected by a Wilderness designation due to the reduction anticipated in predator control, which would result from motorized restrictions.

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around both aerial- and ground-nesting raptor sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Little Missouri National Grassland include: the black-tailed prairie dog, plains sharp-tailed grouse and the sage grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered that fall under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the table at the very end of this document.

Management Obligations, Constraints, or Encumbrances

Mineral Leases and Subsurface Rights: Land origination within the Wannagan area is about 5,410 acres acquired and 620 acres from the public domain. Nearly the whole area is under lease; however, the southeastern portion, comprising about 1,300 acres, carries a no-surface occupancy stipulation for visual purposes. The southeastern area essentially serves as a buffer zone for the existing 10,510-acre Wilderness area in the South Unit of Theodore Roosevelt National Park. Less than one acre of private, subsurface minerals ownership beneath federal lands exist in the area

Existing Contracts and Agreements: The Medora Grazing Association holds a 10-year grazing agreement for the area.

Biotic Control Measures and Fire Protection: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Effects on Adjacent Lands: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Medora Ranger District.

Wannagan: Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The nearest Wilderness area is the 10,510-acre Theodore Roosevelt Wilderness, South Unit, in the Theodore Roosevelt National Park. The Theodore Roosevelt Wilderness, South Unit is directly adjacent to the Wannagan area to the southeast. The 19,410-acre Theodore Roosevelt Wilderness, North Unit, lies about 35 miles to the north. Both Wilderness areas represent mixed-grass prairies in a badlands setting. The Wannagan Wilderness would also represent a mixed-grass prairie in a badlands setting and would essentially increase the overall contiguous acreage of the 10,510-acre Theodore Roosevelt Wilderness, South Unit.

Representation of Landforms and Ecosystems: This area represents a mixed-grass prairie with the following ecosystem types present: hardwood draws, upland grasslands, hilly scoria and upland breaks. The landscape includes badlands and rolling prairies.

Biota: No species are dependent upon a Wilderness designation to remain viable in this area. Most key species would benefit, however, from a designation.

Public Interests and Concerns: The area is found in a sparsely populated region of the country. Dickinson, Williston, and Bismarck/Mandan, North Dakota, with an estimated population of less than 125,000, and Glendive and Sydney, Montana, with a combined population of about 25,000, are the nearest cities of any size, and none of them are closer than 35 miles from the area.

A considerable number of people and organizations have requested that the Forest Service designate some grassland Wilderness somewhere within the 191-million-acre National Forest System. Currently, Congress has not designated Wilderness area on any of the 20 national grasslands within that System.

Two Wilderness areas have been designated in the Little Missouri Badlands: the 10,510-acre Theodore Roosevelt Wilderness, South Unit, and the 19,410-acre Theodore Roosevelt Wilderness, North Unit, both of which are located in the Theodore Roosevelt National Park. These two Wilderness areas offer nearby designated Wilderness which, in most ways, represent most of the key characteristics found in the Wannagan area, including appearance and

vegetative cover types. No other designated Wilderness areas, however, exist in the Little Missouri Badlands, a recognized biogeographical sub-unit of the Great Plains.

Wannagan: Environmental Consequences

Management Prescription Allocations by Alternative

Alternative 2:	MA 3.51	150 acres
	MA 6.1	5,880 acres
Alternative 3:	MA 1.31	4,900 acres
	MA 6.1	1,130 acres
Alternative 4:	MA 1.2	1,600 acres
	MA 1.31	4,430 acres
Alternative 5:	MA 1.2	1,600 acres
	MA 3.51	150 acres
	MA 6.1	4,280 acres

Designation: Wilderness

Prescription: MA 1.2 or 1.2A Recommended or Suitable Wilderness

Alternatives: 4 and 5

Environmental Consequences: Travel would be by nonmotorized, nonmechanical. Recreation opportunities would be those associated with the primitive and nonmotorized end of the spectrum such as walking, hiking, horseback riding, and nonmotorized hunting. Opportunities for discovery of cultural, historical, and paleontological resources would exist but interpretive opportunities may be limited or foregone. Wildlife would tend to benefit from reduced human activity, but some opportunities for fish and wildlife enhancement, and ecosystem restoration would be foregone. Grazing of livestock would continue where grazing was established at the time the wilderness is designated. Valid existing rights and leases would be recognized.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Maintenance of existing range developments would be permitted. Construction of new range developments would not be allowed to detract from the wilderness character of the area. Stipulations, such as no surface occupancy, and reclamation efforts designed at protecting the wilderness values to the extent possible may be authorized by Congress on existing rights and leases. The area may be Congressionally designated as administratively unavailable.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings will be increased while at the same time reducing opportunities for motorized recreation. If the area is withdrawn from leasing, oil and gas development opportunities would be foregone.

Designation: Non-wilderness

Prescription: MA 1.31 Backcountry Recreation Nonmotorized

Alternatives: 3 and 4

Environmental Consequences: With rare exceptions, travel is nonmotorized. Recreation opportunities would be those associated with the primitive and nonmotorized end of the spectrum such as walking, hiking, horseback riding, and nonmotorized hunting. Overall, wildlife would tend to benefit from reduced human activity. Opportunities for discovery of cultural, historical, and paleontological resources would exist but interpretive opportunities would be limited or forgone. Livestock grazing would continue as present. Valid existing rights would be recognized. Because the area is leased for oil and gas and contains a small area of private minerals, oil and gas developments could occur. Where mineral development occurs, the semi-primitive, nonmotorized character of the area would be lost for the duration of the activity.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Construction of new range developments would not be allowed to detract from the semi-primitive character of the area. Oil and gas development on existing leases would require the area to be reclaimed to as near as possible its original condition at the close of the lease.

Economic and Social Effects: Opportunities for nonmotorized activities would be increased while at the same time reducing opportunities for motorized activities. Because oil and gas development of existing leases could occur; restricting other users could cause conflict. Those accustomed to accessing the area by vehicle might resent vehicle restrictions. Economic benefits from oil and gas developments would continue as long as production occurs in the area.

Designation: Non-wilderness

Prescription: MA 3.51 Bighorn Sheep

Alternatives: 2 and 5

Environmental Consequences: Recreational activities and motorized travel would be discouraged during breeding and lambing periods. Livestock grazing would continue. Valid existing rights and leases would be recognized.

Mitigation Measures: Construction of new travel routes would be prohibited except to honor valid and existing rights and leases. Snowmobile use would be prohibited. Existing and adjoining allotments in this area would not permit conversion to domestic sheep. Oil and gas leasing would be no surface occupancy.

Economic and Social Effects: Opportunities for nonmotorized activities would be increased while at the same time reducing opportunities for motorized activities. Those accustomed to accessing the area by vehicle might resent vehicle restrictions. Economic benefits from oil and gas revenues may be reduced if development opportunities are foregone.

Designation: Non-wilderness

Prescription: MA 6.1 Rangelands with Broad Resource Emphasis

Alternatives: 2, 3 and 5

Environmental Consequences: Motorized access would be allowed unless specific areas are designated as closed or restricted to designated roads and trails. A full spectrum of motorized recreation opportunities would be allowed. Construction of recreation facilities, roads, power lines, and other features would be allowed. Livestock grazing would continue. Existing oil and gas leasing would continue and new leasing would be permitted. Oil and gas developments such as roads, pipelines, and drilling pads would likely occur.

Mitigation Measures: Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is a high probability, if the area is designated MA 6.1 it would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased while at the same time opportunities for nonmotorized activities reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would be reduced. All users, including oil and gas, would be permitted the same motorized access. The area would continue to provide the existing mix of economic benefits while roadless primitive and semi-primitive character could be lost permanently making future wilderness designation unlikely.

Criteria Common to All Roadless Areas on this Administrative Unit

Capability Criteria

Challenge: Challenge centers around survival in a dry and harsh environment. Summer temperatures can exceed 100° Fahrenheit with no drinkable water sources. Winter temperatures can drop to -35° Fahrenheit with wind-chill factors in excess of -80°. Broken terrain and open landscapes are deceptive and may disorient the visitor's ability to mark their directions. Hiking may be much more difficult than anticipated with steep slopes and difficult terrain. Prairie rattlesnakes may be encountered and can be dangerous.

Opportunities for Outdoor Education: A visitor should find features to stimulate curiosity: geology, grassland ecosystems, grassland flora and fauna, bared soil layers, shifting weather patterns and cloud types, incredibly clear night skies offering unimpeded views of the stars. Skills in maneuvering a rugged terrain, using a compass, taking precautions for snake and spider bites, heat stroke (and frostbite or freezing to death in the winter), setting up a primitive campsite, and outdoor cooking may all test and develop a visitor's understanding of the outdoors.

Availability Criteria

Coal: Although significant lignite coal reserves exist on the Little Missouri National Grassland (LMNG), no current production occurs and previous historic development has been minimal. Currently, no coal-leased acres exist on the Little Missouri National Grassland. Several lignite-fueled power plants exist in North Dakota, and 1991 estimates indicate that 29 million tons of lignite were mined in the state. Therefore, because a market exists, the potential for development is low to moderate.

Locatable Minerals: No records exist in geological literature that documents the occurrence or development of any hardrock minerals on or near the LMNG, a region that is sedimentary in origin. Uranium, sometimes considered a locatable mineral, is available for location if it is found on public domain lands. If uranium is found on acquired lands, it is available only by lease. Uranium deposits on the LMNG are generally of low grade. Although the occurrence potential for uranium is moderate to high, the current development potential is low.

Common Minerals: Scoria, a baked and fused clay, is common throughout the LMNG. Although it wears quickly, scoria is the only local source for road surfacing material. Adequate private sources for this aggregate exist. Therefore, a low potential exists for development of scoria resources on the LMNG.

Timber: With the exception of the Ponderosa Pine area, no merchantable timber exists. Rocky Mountain juniper is widespread enough to provide some post and pole timbers; however, the location of the juniper often makes it quite uneconomical to harvest.

Biotic Control Measures and Fire Protection: Chemical, biological and mechanical control methods are used to stem the expansion of undesirable plant species, such as leafy spurge and spotted knapweed. Wildfire suppression would be addressed in Wilderness management plans that would be developed if any of the roadless areas are designated by Congress as Wilderness.

Effects on Adjacent Lands: Any increase in visitation, which may occur under a Wilderness designation, could increase the potential for accidental fire starts. Adjacent land values next to a designated Wilderness may rise or fall depending on local markets. As well, the potential for trespass from a designated Wilderness onto adjacent lands of other ownership might increase. These effects are estimated to be the same for all roadless areas on the Medora Ranger District, although additional effects are presented in this report for the Bullion Butte area (see "Effects on Adjacent Lands" under the Bullion Butte section).

Little Missouri National Grassland

McKenzie Ranger District

Collar/Bennett-Cottonwood: An Overview of the Affected Environment

The 19,700-acre Collar/Bennett-Cottonwood area is located about 45 miles southeast of Williston, North Dakota, about 30 miles southwest of Watford City, South Dakota, and about two and one-half miles northwest of Grassy Butte, North Dakota. More specifically, the Collar/Bennett-Cottonwood area is located, either partly or fully, in: T. 147 N., R 100 W., Sections 22, 27-28 and 30-34, and T. 146 N., R. 100 W., Sections 1-6, 8-14 and 23-26, and T. 146 N., R. 99 W., Sections 6-7, 18-21, 27-30 and 32-33, and T. 145 N., R. 99 W., Section 4 and 5. Access from Watford City is via U.S. Highway 85 south for about 25 miles, then west on Forest Development Road 823 for eight miles.

The Collar/Bennett-Cottonwood area is located within the Little Missouri Badlands, a biogeographical sub-unit of the Great Plains Region. Robert G. Bailey further identifies the area as a part of the Great Plains-Palouse Dry Steppe Province ecoregion of the Temperate Steppe Division (71). Topography of the area varies from gentle rolling grasslands to extremely rugged

badlands terrain with deeply incised stream channels and numerous clay buttes. Extensive areas of upland grasslands are interspersed between upland breaks. The area is drained to the northwest via Bennett, Collar, and Cottonwood Creeks. The Bennett, Collar, and Cottonwood Creeks are prominent landscape features. The Little Missouri River forms a portion of the northwestern boundary. Elevation varies from 2,000 feet to 2,628 feet above sea level. The rough, broken terrain within the area has limited plant growth.

On some of the non-grass areas, predominate vegetation consists of big sagebrush, rabbit brush and four-wing salt brush. Many of the steep drainages on north-facing slopes are occupied by a dense growth of Rocky Mountain juniper. Green ash and American elm occupy the wooded draws. Dominant grasses include western wheatgrass, green needlegrass, and blue grama with some little bluestem in the sandy areas and threadleaf sedge on the southern exposures. Understory shrub species in draws include buffaloberry, woods rose, and many others. Leafy spurge, a noxious weed, exists within the Little Missouri River corridor along the area's northwestern boundary.

The alluvial floodplains along Bennett, Collar, and Cottonwood Creeks support a riparian community consisting of cottonwoods and associated species. The terraces immediately above the floodplain tend to support silver sage and extensive western wheatgrass stands.

Various two-track roads exist in the area. A scoria pit can also be found in the area, but has not been used for several years. Oil and gas facilities exist along Bennett Creek.

The Collar/Bennett-Cottonwood area supports populations of bighorn sheep, mule deer, white-tailed deer, turkeys, and sharp-tailed grouse. Active prairie dog towns occur in the flat-bottomed canyon of Bennett Creek. Although the wildlife habitats and species represented are not unique within the Little Missouri National Grassland, they are considered important to North Dakota.

Present recreation use includes hiking, hunting, horseback riding, and camping. The Maah-Daah-Hey Trail winds through the area. The northern portion of Collar/Bennett-Cottonwood is managed for livestock grazing and oil and gas production. The long-term intent for the remaining area is to minimize development of oil and gas in the area and to provide a key bighorn sheep area.

Collar/Bennett-Cottonwood: Capability Analyses

Environment

Opportunity for Solitude and Serenity: Collar/Bennett-Cottonwood offers a relatively high opportunity for solitude and serenity. The northern portion of the area provides a high level of solitude and serenity resulting from its very rugged and dissected topographic character. The canyonland terrain allows the visitor to separate from developments and become isolated from others. Some two-track roads exist; however, developed roads only exist along the perimeter of the area and along Bennett Creek. Agricultural fields may be viewed from some areas. Flat ridgelines in the area provide fewer opportunities to become isolated from others.

Natural Appearance and Integrity: The area is quite natural in appearance. Developments are fairly sparse. Collar / Bennett-Cottonwood is one of the most scenic areas on the McKenzie Ranger District. Scenic panorama views can be had from the ridgetops. A visitor can view canyonland topography across the badlands and well into the North Unit of Theodore Roosevelt National Park. The area is high in plant diversity. A healthy mosaic of vegetation in the uplands, bottomlands, and woody draws is apparent. Most of the natural processes, including flash flooding, are intact; however, fire has been suppressed in the past. Livestock use the area from summer to fall. Livestock developments, including developed springs, fences, water wells, primitive trails, stock tanks and dugouts, detract from the natural setting, although most range developments have been constructed to blend with the natural surroundings as much as possible.

Challenge: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the McKenzie Ranger District.

Recreation Opportunities: The area provides hiking, hunting, horseback riding, birdwatching, scenic sight-seeing, dispersed camping, wildlife viewing, photography and picnicking, among other activities. The Maah-Daah-Hey Trail winds through about eight miles of the area.

Special Features

Unique Characteristics and Scenic Features: This area is one of the most scenic areas on the McKenzie Ranger District. It consists of rugged canyonlands and color-banded buttes. The scenic Little Missouri River can be viewed from the area. A flat ridgeline and the abrupt breaks into the Badlands Breaks afford a very scenic view into the Little Missouri River Valley and associated canyonlands. A high incidence of woody draws can be found. A nominated Research Natural Area of about 11,000 acres, which is notable for its diverse botanical features, exists within Collar / Bennett-Cottonwood. Bighorn sheep frequently use the area. Fossils found in Fort Union (also known as Ludlow) Formation deposits represent the Paleocene (65 to 45 million years ago) period.

Opportunities for Outdoor Education: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the McKenzie Ranger District.

Manageability

Size and Shape: The 19,700-acre Collar / Bennett-Cottonwood area is irregular in shape, stretching southeast to northwest across the landscape. It is as narrow as two mile across, but as wide as four miles elsewhere. The area is about 13 miles long northwest to southeast and two to four miles wide northeast to southwest. Two private inholdings of about 300 acres exist in the area. One mile of common boundary on a northern section of the area is shared with the North Unit of Theodore Roosevelt National Park.

Potential to Manage Boundaries: Boundary management would be somewhat challenging due to the rugged terrain of the area. Surveys and signing may be required, especially adjacent to private land. Trespass onto private land from the area is a concern. Motorized trespass into Collar / Bennett-Cottonwood, should it be designated as a Wilderness, is a concern, particularly because of the relative lack of law enforcement available for the area. Existing fencelines could serve to provide clear and visible signing. Other areas, including the Badlands Breaks, would require new signing. The one mile of shared boundary with Theodore Roosevelt National Park would offer cooperative boundary management opportunities.

Collar/Bennett-Cottonwood: Availability Analyses

Resource Values and Potentials

Oil and Gas: Oil and gas potential is high. The northern portion of the area has current leases and development. The remaining area is available for lease under no surface occupancy stipulations. Four oil and gas wells currently exist along Bennett Creek and there is oil and gas development along the eastern and southern boundaries of the area.

Coal: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the McKenzie Ranger District.

Livestock Grazing: The area produces about 4,925 animal unit months of livestock grazing annually. Ten permittees operate in the area. Nine allotments are either fully or partly located in the area.

Locatable Minerals: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the McKenzie Ranger District.

Common Minerals: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the McKenzie Ranger District.

Timber: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the McKenzie Ranger District.

Recreation: The Maah-Daah-Hey Trail provides a developed trail experience and is used by hikers, mountain bikers, and horseback riders. Big game and upland game hunting is popular in the fall. Other recreation includes dispersed camping, outfitter rides, sight-seeing, birdwatching, mountain biking, photography, and prairie dog shooting.

Motorized recreation would be prohibited under a Wilderness designation. Current nonmotorized recreation activities, such as dispersed camping, hiking, horseback riding and nature study, would be allowed. Wilderness designation would preclude off-highway motorized recreation, such as ATV and snowmobile use. Walk-in hunting opportunities would increase. Backcountry experiences would be enhanced with the exclusion of motorized activities. Opportunities for physically challenged and elderly access into the area may be reduced.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Peregrine falcon; whooping crane: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.
- Bald eagle: Effects from Wilderness designation would have a beneficial effect on wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.

Bighorn Sheep: Wilderness designation would have beneficial effects on bighorn sheep due to the lack of human disturbances and reductions in motorized activities a designation would bring, especially during the birthing season.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitats. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access within Wilderness areas.

Black-tailed prairie dogs and species closely associated with prairie dog towns and colonies: Prairie dogs and prairie dog-associated species would largely benefit from Wilderness designations, primarily because the poisoning of prairie dog towns, accomplished mainly with motorized support, would be greatly reduced. In addition, fewer prairie dog shooters would frequent prairie dog towns in Wilderness areas due to restrictions on motorized access. However, prairie dogs and associated species may be adversely affected by a Wilderness designation due to the reduction anticipated in predator control, which would result from motorized restrictions.

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around both aerial- and ground-nesting raptor sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Little Missouri National Grassland include: the black-tailed prairie dog, plains sharp-tailed grouse and the sage grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered that fall under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the table at the very end of this document.

Management Obligations, Constraints, or Encumbrances

Mineral Leases and Subsurface Rights: Land origination within the Collar/Bennett-Cottonwood area is about 14,860 acres acquired and 4,840 acres from the public domain. About 1,730 acres of private subsurface minerals ownership beneath federally owned surface occurs in the area and are subject to minerals leasing. Currently, leases are generally for a 10-year period. Once production on a lease is established, the lease is valid throughout the life of production. The life of production for an oil well on the district is between five and twenty years.

Existing Contracts and Agreements: The McKenzie County Grazing Association holds the existing grazing agreement in the area.

Biotic Control Measures and Fire Protection: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the McKenzie Ranger District.

Effects on Adjacent Lands: Designation could increase vehicular traffic on adjacent roads. Any increase in visitation to the area, which may occur under a Wilderness designation, could increase the potential for accidental fire starts. Adjacent land values next to a designated Wilderness may rise or fall depending upon local markets. As well, the potential for trespass from a designated Wilderness onto adjacent lands of other ownership might increase.

Collar/Bennett-Cottonwood: Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The nearest Wilderness areas are in Theodore Roosevelt National Park. The 19,410-acre Theodore Roosevelt Wilderness, North Unit, lies directly adjacent to the area on the north, while the 10,510-acre Theodore Roosevelt Wilderness, South Unit, is 33 miles to the south. Both Wilderness areas represent mixed-grass prairies in a badlands setting. Bennett-Cottonwood would also represent a mixed-grass prairie in a badlands setting.

Representation of Landforms and Ecosystems: Collar / Bennett-Cottonwood represents a mixed-grass prairie with the following ecosystem types present: hardwood draws, river bottoms, upland grasslands, rolling grasslands, terraces, and upland breaks. The landscape includes badlands and rolling prairies.

Biota: No species are dependent upon a Wilderness designation to remain viable in the area. Most key species probably would benefit, however, from a designation.

Public Interests and Concerns: The area is found in a sparsely populated region of the country. Dickinson, Williston, and Bismarck / Mandan, North Dakota, with an estimated population of less than 125,000, and Glendive and Sydney, Montana, with a combined population of about 25,000, are the nearest cities of any size, and none of them is closer than 45 miles from the area.

A considerable number of people and organizations have requested that the Forest Service designate some grassland Wilderness somewhere within the 191-million-acre National Forest System. Currently, Congress has not designated Wilderness area on any of the 20 national grasslands within that System.

Two Wilderness areas have been designated in the Little Missouri Badlands: the 10,510-acre Theodore Roosevelt Wilderness, South Unit, and the 19,410-acre Theodore Roosevelt Wilderness, North Unit, both of which are located in the Theodore Roosevelt National Park. These two Wilderness areas offer nearby designated Wilderness which, in most ways, represent most of the key characteristics found in the Collar / Bennett-Cottonwood area, including appearance and vegetative cover types. No other designated Wilderness areas, however, exist in the Little Missouri Badlands, a recognized biogeographical sub-unit of the Great Plains.

Collar/Bennett-Cottonwood: Environmental Consequences

Management Prescription Allocations by Alternative

Alternative 2:	MA 3.51	6,270 acres
	MA 6.1	13,430 acres
Alternative 3:	MA 1.31	13,550 acres
	MA 2.2	5,890 acres
	MA 3.65	100 acres
	MA 4.22	160 acres
Alternative 4:	MA 1.2	15,590 acres
	MA 1.3	13,960 acres
	MA 3.4	150 acres
Alternative 5:	MA 1.3	119,550 acres
	MA 3.4	150 acres

Designation: Wilderness

Prescription: MA 1.2 Recommended Wilderness

Alternatives: 4

Environmental Consequences: Travel would be by nonmotorized, nonmechanical. Recreation opportunities would be those associated with the primitive and nonmotorized end of the spectrum such as walking, hiking, horseback riding, and nonmotorized hunting. Opportunities for discovery of cultural, historical, and paleontological resources would exist but interpretive opportunities may be limited or foregone. Wildlife would tend to benefit from reduced human activity, but some opportunities for fish and wildlife enhancement, and ecosystem restoration would be foregone. Grazing of livestock would continue where grazing was established at the time the wilderness is designated. Valid existing rights and leases would be recognized.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Maintenance of existing range developments would be permitted. Construction of new range developments would not be allowed to detract from the wilderness character of the area. Stipulations, such as no surface occupancy, and reclamation efforts designed at protecting the wilderness values to the extent possible may be authorized by Congress on existing rights and leases. The area may be Congressionally designated as administratively unavailable.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings will be increased while at the same time reducing opportunities for motorized recreation. If the area is withdrawn from leasing, oil and gas development opportunities would be foregone.

Designation: Non-wilderness

Prescription: MA 1.31 Backcountry Recreation Nonmotorized

Alternatives: 3, 4, and 5

Environmental Consequences: With rare exceptions, travel is nonmotorized. Recreation opportunities would be those associated with the primitive and nonmotorized end of the spectrum such as walking, hiking, horseback riding, and nonmotorized hunting. Overall, wildlife would tend to benefit from reduced human activity. Opportunities for discovery of cultural, historical, and paleontological resources would exist but interpretive opportunities would be limited or forgone. Livestock grazing would continue as present. Valid existing rights would be recognized. Because the area is leased for oil and gas and contains a small area of private minerals, additional oil and gas developments could occur. Where mineral development occurs, the semi-primitive, nonmotorized character of the area would be lost for the duration of the activity.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Construction of new range developments would not be allowed to detract from the semi-primitive character of the area. Oil and gas development on existing leases would require the area to be reclaimed to as near as possible its original condition at the close of the lease.

Economic and Social Effects: Opportunities for nonmotorized activities would be increased while at the same time reducing opportunities for motorized activities. Because oil and gas development of existing leases could occur; restricting other users could cause conflict. Those accustomed to accessing the area by vehicle might resent vehicle restrictions. Economic benefits from oil and gas developments would continue as long as production occurs in the area.

Designation: Non-wilderness

Prescription: MA 2.2 Research Natural Areas

Alternatives: 3

Environmental Consequences: With rare exceptions, travel is nonmotorized. Recreation opportunities would be those associated with the primitive and semi-primitive end of the spectrum such as walking and hiking. Uses that maintain or improve the ecological characteristics for which the RNA was designated would be allowed. Livestock grazing would continue as present. The area would be made unavailable for leasing until establishment of the RNA, at which time it would be withdrawn from mineral entry.

Mitigation Measures: Motorized travel is limited to administrative, law enforcement, emergency, and scientific purposes. Existing roads would be closed or obliterated unless necessary for administrative, scientific, or valid private access. Recreational use would be restricted if is hinders achievement of the desired condition for the RNA. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Construction of new range developments would not be allowed to detract from the semi-primitive character of the area.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings will be increased while at the same time reducing opportunities for motorized recreation. Those accustomed to accessing the area by motorized means might resent vehicle restrictions. If the area is withdrawn from leasing, oil and gas development opportunities would be foregone.

Designation: Non-wilderness

Prescription: MA 3.4 Scenic River Recommendation

Alternatives: 4 and 5

Environmental Consequences: Recreation opportunities would be those associated with the primitive and semi-primitive end of the spectrum such as walking, hiking, horseback riding, and canoeing. Motorized water-bound-craft would be allowed. Recreational developments necessary for river access may be present. Livestock grazing would continue. Existing oil and gas leases and rights would be recognized.

Mitigation Measures: Motorized travel routes may be designated with restrictions. Livestock grazing would be managed to maintain the values for which the river is designated. For segments recommended for wild designation, oil and gas leases would require no surface occupancy. "Scenic" or "recreational" segments would be stipulated to maintain the scenic values of the area.

Economic and Social Effects: Opportunities for nonmotorized activities would be increased while at the same time reducing opportunities for motorized activities. Those accustomed to accessing the area by vehicle might resent vehicle restrictions. Economic benefits from oil and gas revenues may be reduced if development opportunities are foregone.

Designation: Non-wilderness

Prescription: MA 3.51 Bighorn Sheep

Alternatives: 2

Environmental Consequences: Recreational activities and motorized travel would be discouraged during breeding and lambing periods. Livestock grazing would continue. Valid existing rights and leases would be recognized.

Mitigation Measures: Construction of new travel routes would be prohibited except to honor valid and existing rights and leases. Snowmobile use would be prohibited. Existing and adjoining allotments in this area would not permit conversion to domestic sheep. Oil and gas leasing would be no surface occupancy.

Economic and Social Effects: Opportunities for nonmotorized activities would be increased while at the same time reducing opportunities for motorized activities. Those accustomed to accessing the area by vehicle might resent vehicle restrictions. Economic benefits from oil and gas revenues may be reduced if development opportunities are foregone.

Designation: Non-wilderness

Prescription: MA 4.22 River and Travel Corridors

Alternatives: 3

Environmental Consequences: Motorized access would be allowed unless specific areas are designated as closed or restricted to designated roads and trails. A variety of recreation opportunities would be allowed. Livestock grazing would continue. Existing oil and gas leasing would continue and new leasing would be permitted.

Mitigation Measures: Constructed public launch sites will be visually subordinate to the river and river corridor. OHV trail construction would be prohibited. Timing, seasonal, or location stipulations may be appropriate related to oil and gas development to maintain the scenic values of the area. Leasing within the corridor would be NSO.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings would be moderate. Economic benefits from oil and gas revenues may be reduced if development opportunities are foregone due to restrictions and stipulations.

Designation: Non-wilderness

Prescription: MA 6.1 Rangeland with Broad Resource Emphasis

Alternatives: 2

Environmental Consequences: Motorized access would be allowed unless specific areas are designated as closed or restricted to designated roads and trails. A full spectrum of motorized recreation opportunities would be allowed. Construction of recreation facilities, roads, power lines, and other features would be allowed. Livestock grazing would continue. Existing oil and gas leasing would continue and new leasing would be permitted. Oil and gas developments such as roads, pipelines, and drilling pads would likely occur.

Mitigation Measures: Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is a high probability, if the area is designated MA 6.1 it would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased while at the same time opportunities for nonmotorized activities reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would be reduced. All users, including oil and gas, would be permitted the same motorized access. The area would continue to provide the existing mix of economic benefits while roadless primitive and semi-primitive character could be lost permanently making future wilderness designation unlikely.

Johns Town/Horse Creek: An Overview of the Affected Environment

The 24,450-acre Johns Town / Horse Creek area is located about 20 miles southwest of Watford City, North Dakota. More specifically, the Johns Town / Horse Creek area is located, either partly or fully, in: T. 150 N., R104 W., Section 25, T. 149 N., R. 104 W., Sections 1 and 12, T 148 N., R. 103 W., Sections 4 and 5, T. 150 N., R. 103 W., Sections 26-35, and T. 149 N., R. 103 W., Sections 1-15, 17-19 and 32-35. It lies within the Rolling Prairie Geographic Area, a scenic grasslands landscape characterized by open space. Access to the area from Watford City is via U.S. Highway 85 west for 17 miles, then eight miles south and nine miles west on State Highway 68, then two and a half miles north on Forest Development Road (FDR) 849. FDR 849 defines the western boundary to the area.

The Johns Town / Horse Creek area is located in the Little Missouri Badlands, a biogeographical sub-unit of the Great Plains Region. Robert G. Bailey further identifies the area as a part of the Great Plains-Palouse Dry Steppe Province ecoregion of the Temperate Steppe Division (71).

Johns Town / Horse Creek features rolling mixed-grass prairie dissected by small, woody draws. It is far less rugged and more characteristic of rolling prairie than the other Little Missouri National Grassland areas examined in this report. The elevation of the area is around 2,000 to 2,200 feet above sea level.

Mixed-grass prairie is the dominant plant community, and includes western wheatgrass, needle-and-thread, and junegrass. Forbs are plentiful. Green ash and American elm are the most common trees in the area.

Sharp-tailed grouse leks (mating and dancing grounds) exist in the area, as does a prairie dog colony. Upland birds, antelope, and deer are plentiful.

Two-track roads, a small wooden corral, and several livestock reservoirs exist in the area. Two buried pipelines exist, but do not detract from the primitive setting of the area.

Johns Town/Horse Creek: Capability Analyses

Environment

Opportunity for Solitude and Serenity: The area offers moderate opportunities for solitude and serenity. Use increases during the fall hunting season. The area has been ranched heavily in the past, and displays a high number of range developments, such as stock tanks and developed springs. These developments do detract from the grassland experience. The area is vast, with big open skies. The best opportunities for solitude and serenity lie to the eastern portions of Johns Town / Horse Creek where the fewest range developments exist.

Natural Appearance and Integrity: The area is a scenic rolling grassland, although not rugged. A moderate level of range developments detracts from the natural appearance. Developments occur most often on the western portions of the area. Upland vegetation is in fairly good health, although the woody draws may be in decline. Livestock developments, including developed springs, fences, water wells, primitive trails, stock tanks and dugouts, detract from the natural setting, although most range developments have been constructed to blend with the natural surroundings as much as possible.

Challenge: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the McKenzie Ranger District.

Recreation Opportunities: Current recreation includes hiking, hunting, dispersed camping, birdwatching, nature study, and other associated activities.

Special Features

Unique Characteristics and Scenic Features: The rolling grasslands and topography can be scenic. Antelope hunting is quite popular in this area. Opportunities to witness traditional ranching operations may be found in this area. Fossils found in Fort Union (also known as Ludlow) Formation deposits represent the Paleocene (65 to 45 million years ago) period.

Opportunities for Outdoor Education: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the McKenzie Ranger District.

Manageability

Size and Shape: The 24,450-acre Johns Town / Horse Creek area is somewhat triangular in shape. It is about eight miles long north to south and about six miles wide east to west at its widest point. The area has one section of state land that is considered an inholding.

Potential to Manage Boundaries: Roads and fences generally surround the area, which would make the potential to manage the area's boundaries high. Some concern exists for trespass from the area onto private lands to the east. Enforcing no motorized access under a Wilderness designation would prove very difficult.

Johns Town/Horse Creek: Availability Analyses

Resource Values and Potentials

Oil and Gas: Oil and gas potential is high. The northern part of the area is leased and developed with four well sites. The southern portion of the area was determined to be available for leasing; however, the site-specific decision was made not to lease the area.

Coal: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the McKenzie Ranger District.

Livestock Grazing: Nineteen permittees operate in the area. The area produces about 9,587 animal unit months of livestock grazing annually. Three allotments are either fully or partially located in the area.

Locatable Minerals: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the McKenzie Ranger District.

Common Minerals: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the McKenzie Ranger District.

Timber: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the McKenzie Ranger District.

Recreation: Motorized recreation would be prohibited under a Wilderness designation. Current nonmotorized recreation activities, such as dispersed camping, hiking, horseback riding and nature study, would be allowed. Wilderness designation would preclude off-highway motorized recreation, such as ATV and snowmobile use. Walk-in hunting opportunities would increase. Backcountry experiences would be enhanced with the exclusion of motorized activities. Opportunities for physically challenged and elderly access into the area may be reduced.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Peregrine falcon; whooping crane: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.
- Bald eagle: Effects from Wilderness designation would have a beneficial effect on wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.
- Black-footed ferret: Effects from Wilderness designation would be both beneficial and adverse. Beneficial effects result from the reduced human disturbances and reduced potential mortality due to motorized vehicles. In addition, ferrets would benefit from the significant reduction in prairie dog shooters, who would lose motorized access to prairie dog towns in a Wilderness area. Adverse effects result from restrictions on the motorized support to aid in ferret reintroduction projects. Ferrets may be targeted for reintroduction projects in the future in several areas on the Northern Great Plains, including this area.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitats. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access within Wilderness areas.

Black-tailed prairie dogs and species closely associated with prairie dog towns and colonies: Prairie dogs and prairie dog-associated species would largely benefit from Wilderness designations, primarily because the poisoning of prairie dog towns, accomplished mainly with motorized support, would be greatly reduced. In addition, fewer prairie dog shooters would frequent prairie dog towns in Wilderness areas due to restrictions on motorized access. However, prairie dogs and associated species may be adversely affected by a Wilderness designation due to the reduction anticipated in predator control, which would result from motorized restrictions.

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around both aerial- and ground-nesting raptor sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Little Missouri National Grassland include: the black-tailed prairie dog, plains sharp-tailed grouse and the sage grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered that fall under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the table at the very end of this document.

Management Obligations, Constraints, or Encumbrances

Mineral Leases and Subsurface Rights: Land origination within the Johns Town / Horse Creek area is about 24,250 acres acquired and 200 acres from the public domain. No acres of private subsurface minerals ownership occur in the area.

Existing Contracts and Agreements: The McKenzie County Grazing Association holds the livestock grazing permit in force in the area.

Biotic Control Measures and Fire Protection: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the McKenzie Ranger District.

Effects on Adjacent Lands: Designation could increase vehicular traffic on adjacent roads. Any increase in visitation to the area, which may occur under a Wilderness designation, could increase the potential for accidental fire starts. Adjacent land values next to a designated Wilderness may rise or fall depending upon local markets. As well, the potential for trespass from a designated Wilderness onto adjacent lands of other ownership might increase.

Johns Town/Horse Creek: Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The nearest Wilderness areas are in Theodore Roosevelt National Park. The 19,410-acre Theodore Roosevelt Wilderness, North Unit, is about 15 miles to the southeast, while the 10,510-acre Theodore Roosevelt Wilderness, South Unit, is more than 50 miles to the south-southeast. Both represent mixed-grass prairies in a badlands setting. Johns Town / Horse Creek would more closely represent a mixed-grass prairie in a rolling plains setting.

Representation of Landforms and Ecosystems: The Johns Town / Horse Creek area represents a mixed-grass prairie with the following ecosystem types present: hardwood draws, upland grasslands, terraces, rolling grasslands and upland breaks. The landscape is primarily characterized as rolling prairie.

Biota: No species are dependent upon a Wilderness designation to remain viable in the area. A Wilderness area may impede any future reintroductions of the black-footed ferret in the area. Most other key species would probably benefit from a Wilderness designation.

Public Interests and Concerns: The area is found in a sparsely populated region of the country. Dickinson, Williston, and Bismarck / Mandan, North Dakota, with an estimated population of less than 125,000, and Glendive and Sydney, Montana, with a combined population of about 25,000, are the nearest cities of any size, and none of them is closer than 30 miles from the area.

A considerable number of people and organizations have requested that the Forest Service designate some grassland Wilderness somewhere within the 191-million-acre National Forest System. Currently, Congress has not designated Wilderness area on any of the 20 national grasslands within that System.

Two Wilderness areas have been designated in the Little Missouri Badlands: the 10,510-acre Theodore Roosevelt Wilderness, South Unit, and the 19,410-acre Theodore Roosevelt Wilderness, North Unit, both of which are located in the Theodore Roosevelt National Park. These two Wilderness areas offer share some of the characteristics found in the Johns Town / Horse Creek area. However, Johns Town / Horse Creek more closely represents a rolling plains, while the two Theodore Roosevelt Wilderness areas represent badlands terrain. No other designated Wilderness areas, however, exist in the Little Missouri Badlands, a recognized biogeographical sub-unit of the Great Plains.

Johns Town/Horse Creek: Environmental Consequences

Management Prescription Allocations by Alternative:

Alternative 2:	MA 6.1	24,450 acres
Alternative 3:	MA 3.63	23,750 acres
	MA 6.1	700 acres
Alternative 4:	MA 1.2	5,460 acres
	MA 1.31	7,450 acres
	MA 3.63	10,830acres
	MA 6.1	710 acres
Alternative 5:	MA 1.2	5,460 acres
	MA 6.1	18,990 acres

Designation: Wilderness

Prescription: MA 1.2 Recommended Wilderness

Alternatives: 4 and 5

Environmental Consequences: Travel would be by nonmotorized, nonmechanical. Recreation opportunities would be those associated with the primitive and nonmotorized end of the spectrum such as walking, hiking, horseback riding, and nonmotorized hunting. Opportunities for discovery of cultural, historical, and paleontological resources would exist but interpretive opportunities may be limited or foregone. Wildlife would tend to benefit from reduced human activity, but some opportunities for fish and wildlife enhancement, and ecosystem restoration would be foregone. Grazing of livestock would continue where grazing was established at the time the wilderness is designated. Valid existing rights and leases would be recognized.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Maintenance of existing range developments would be permitted. Construction of new range developments would not be allowed to detract from the wilderness character of the area. Stipulations, such as no surface occupancy, and reclamation efforts designed at protecting the wilderness values to the extent possible may be authorized by Congress on existing rights and leases. The area may be Congressionally designated as administratively unavailable.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings will be increased while at the same time reducing opportunities for motorized recreation. If the area is withdrawn from leasing, oil and gas development opportunities would be foregone.

Designation: Non-wilderness

Prescription: MA 1.31 Backcountry Recreation Nonmotorized

Alternatives: 4

Environmental Consequences: With rare exceptions, travel is nonmotorized. Recreation opportunities would be those associated with the primitive and nonmotorized end of the spectrum such as walking, hiking, horseback riding, and nonmotorized hunting. Overall, wildlife would tend to benefit from reduced human activity. Opportunities for discovery of cultural, historical, and paleontological resources would exist but interpretive opportunities would be limited or forgone. Livestock grazing would continue as present. Valid existing rights would be recognized. Because the area is leased for oil and gas and contains a small area of private minerals, additional oil and gas developments could occur. Where mineral development occurs, the semi-primitive, nonmotorized character of the area would be lost for the duration of the activity.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Construction of new range developments would not be allowed to detract from the semi-primitive character of the area. Oil and gas development on existing leases would require the area to be reclaimed to as near as possible its original condition at the close of the lease.

Economic and Social Effects: Opportunities for nonmotorized activities would be increased while at the same time reducing opportunities for motorized activities. Because oil and gas development of existing leases could occur; restricting other users could cause conflict. Those accustomed to accessing the area by vehicle might resent vehicle restrictions. Economic benefits from oil and gas developments would continue as long as production occurs in the area.

Designation: Non-wilderness

Prescription: MA 3.63 Black-Footed Ferret Reintroduction Habitat

Alternatives: 3 and 4

Environmental Consequences: Motorized travel would be allowed. Recreation activities would be allowed. Livestock grazing would continue as present. Valid existing rights would be recognized. Oil and gas developments such as roads, pipelines, and drilling pads would likely occur.

Mitigation Measures: Motorized travel associated with oil and gas development would be limited to daylight hours and existing roads. No new road construction would occur in the southern portion of the area under no surface occupancy stipulations. Recreational shooting of prairie dogs would be prohibited.

Economic and Social Effects: The area would continue to provide a mix of economic benefits.

Designation: Non-wilderness

Prescription: MA 6.1 Rangelands with Broad Resource Emphasis

Alternatives: 2, 4, and 5

Environmental Consequences: Motorized access would be allowed unless specific areas are designated as closed or restricted to designated roads and trails. A full spectrum of motorized recreation opportunities would be allowed. Construction of recreation facilities, roads, power lines, and other features would be allowed. Livestock grazing would continue. Existing oil and gas leasing would continue and new leasing would be permitted. Oil and gas developments such as roads, pipelines, and drilling pads would likely occur.

Mitigation Measures: Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is a high probability, if the area is designated MA 6.1 it would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased while at the same time opportunities for nonmotorized activities reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would be reduced. All users, including oil and gas, would be permitted the same motorized access. The area would continue to provide the existing mix of economic benefits while roadless primitive and semi-primitive character could be lost permanently making future wilderness designation unlikely.

Lone Butte: An Overview of the Affected Environment

The 11,470-acre Lone Butte area is located about 50 miles southeast of Williston, North Dakota, 18 miles southeast of Watford City, and about three miles southeast of the north unit of Theodore Roosevelt National Park. More specifically, the Lone Butte area is located, either partly or fully, in: T. 147 N., R. 98 W., Sections 8, 10-11, 14-15, 17, 19-24, 26-30 and 32-35. It lies within the Little Missouri Badlands, a scenic combination of rugged terrain and open space. Access to the area from Watford City is via U.S. Highway 85 south for 18 miles. U.S. Highway 85 forms the area's western boundary.

The Lone Butte area is located within the Little Missouri Badlands, a biogeographical sub-unit of the Great Plains Region. Robert G. Bailey further identifies the area as a part of the Great Plains-Palouse Dry Steppe Province ecoregion of the Temperate Steppe Division (71). Topography varies from gentle rolling grasslands to extremely rugged badlands terrain with deeply incised stream channels and numerous clay buttes. Extensive areas of upland grasslands are interspersed between upland breaks. Elevation varies from about 2,000 feet to 2,750 feet above sea level. Lone Butte is the area's most prominent landmark. Dry Creek is also a recognizable feature.

The rough, broken terrain within the area has limited plant growth. On some of the non-grass areas, predominate vegetation consists of big sagebrush, rabbit brush and four-wing salt brush. Many of the steep drainages on north-facing slopes are occupied by a dense growth of Rocky Mountain juniper. Green ash and American elm occupy the wooded draws. Dominant grasses include western wheatgrass, green needlegrass, and blue grama with some little bluestem in the sandy areas and threadleaf sedge on the southern exposures. Understory shrub species in draws include buffaloberry, skunkbush sumac, chokecherry, snowberry, woods rose, and many others. Leafy spurge, a noxious weed, occurs along the Little Missouri River corridor north of the area.

The alluvial floodplains along Dry Creek support a riparian community consisting of cottonwoods and associated species. The terraces immediately above the floodplain tend to support silver sage and extensive western wheatgrass stands.

The Lone Butte area lies directly to the east of Summit Campground, a Forest Service facility. Combined with its proximity to Theodore Roosevelt National Park, Lone Butte is a frequent destination for recreationists. Typical recreation includes hiking, hunting, horseback riding, and camping. The northern portion of the area provides excellent views of the Little Missouri River.

The Lone Butte area supports populations of bighorn sheep, mule deer, white-tailed deer, turkeys, and sharp-tailed grouse. Golden eagles and prairie falcons have been known to form aeries in the area. Several sharp-tailed grouse leks (mating and dancing grounds) have been sighted on the area's ridgetops. Although the wildlife habitats and species represented within

the area are not unique to the Little Missouri National Grassland, they are considered important to North Dakota.

Lone Butte: Capability Analyses

Environment

Opportunity for Solitude and Serenity: The opportunities for solitude and serenity are very high in the Lone Butte area. The nature of the topography, which is rugged and remote, provides only poor vehicular access. The rolling grasslands and ridgetops break steeply and abruptly into badlands terrain where visitors can become isolated and removed from the signs and sounds of other people.

Natural Appearance: This area is very high in natural appearance. Fencing is limited, as are two-tracks roads. Some range developments exist. The area is considered very scenic and relatively pristine. The area contains a good deal of woody draws, riparian vegetation along Dry Creek and upland grasslands in fairly high condition. Livestock developments, including developed springs, fences, water wells, primitive trails, stock tanks and dugouts, detract from the natural setting, although most range developments have been constructed to blend with the natural surroundings as much as possible.

Challenge: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the McKenzie Ranger District.

Recreation Opportunities: Current recreation in the area includes hiking, dispersed camping, photography, hunting, horseback riding, birdwatching, and other associated activities.

Special Features

Unique Characteristics and Scenic Features: This area is very scenic and rugged, with extremely sharp slopes slicing away from ridgetops. The north end of the area provides excellent vista views across the Little Missouri River Valley. Bighorn sheep frequently use the area. Other fine panoramic views can be had from the ridgetops. Fossils found in Fort Union (also known as Ludlow) Formation deposits represent the Paleocene (65 to 45 million years ago) period.

Opportunities for Outdoor Education: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the McKenzie Ranger District.

Manageability

Size and Shape: The 11,470-acre Lone Butte area is more or less square. It is about six and a half miles wide east to west at its widest point and four miles long north to south at its widest point. It is contiguous with no inholdings.

Potential to Manage Boundaries: The potential to manage the area is moderate to high. The highway on its western flank and fence lines or steep topography elsewhere would allow for visible signing and would pose difficulties for those who would try to illegally trespass with motorized vehicles. The southern and eastern boundaries are adjacent to private land, which have road access to the area.

Lone Butte: Availability Analyses

Resource Values and Potentials

Oil and Gas: Oil and gas potential is high. The area is administratively available for lease; however, the land is not being offered for lease at this time. There is one productive well site located within the eastern boundary of the area. This well was developed under a previous leasing decision. Once production on a lease is established, the lease is valid throughout the life of production. In addition, there is also development outside the eastern boundary of the area.
Coal: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the McKenzie Ranger District.

Livestock Grazing: The area produces about 2,037 animal unit months of livestock grazing annually. Eight permittees operate in the area. Three allotments are either fully or partly located in the area.

Locatable Minerals: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the McKenzie Ranger District.

Common Minerals: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the McKenzie Ranger District.

Timber: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the McKenzie Ranger District.

Recreation: Motorized recreation would be prohibited under a Wilderness designation. Current nonmotorized recreation activities, such as dispersed camping, hiking, horseback riding, and nature study, would be allowed. Wilderness designation would preclude off-highway motorized recreation, such as ATV and snowmobile use. Walk-in hunting opportunities would increase. Backcountry experiences would be enhanced with the exclusion of motorized activities. Opportunities for physically challenged and elderly access into the area may be reduced.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Peregrine falcon; whooping crane: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.
- Bald eagle: Effects from Wilderness designation would have a beneficial effect on wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.

Bighorn Sheep: Wilderness designation would have beneficial effects on bighorn sheep due to the lack of human disturbances and reductions in motorized activities a designation would bring, especially during the birthing season.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitats. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access within Wilderness areas.

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around both aerial- and ground-nesting raptor sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Little Missouri National Grassland include: the black-tailed prairie dog, plains sharp-tailed grouse and the sage grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered that fall under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the table at the very end of this document.

Management Obligations, Constraints, or Encumbrances

Mineral Leases and Subsurface Rights: Land origination within the Lone Butte area is about 7,070 acres acquired and 4,400 acres from the public domain. No acres of private, subsurface minerals ownership exist in the area.

Existing Contracts and Agreements: The McKenzie County Grazing Association holds the livestock grazing permit in the area. An individual currently holds a permit to provide outfitting and guiding into the Lone Butte area.

Biotic Control Measures and Fire Protection: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the McKenzie Ranger District.

Effects on Adjacent Lands: Few impacts are anticipated because the topography of the area is so rugged. Such topography would likely restrict visitor trespass onto adjacent land. Lone Butte is surrounded by National Forest System land on the western and northern boundaries and by private land on the southern and eastern boundaries. Leafy spurge is known to be present along the Little Missouri River and its drainage bottoms. The presence of noxious weeds, such as leafy spurge, must be monitored and addressed, regardless of the management of the area, including Wilderness. Any increase in visitation to the area, which may occur under a Wilderness designation, could increase the potential for accidental fire starts. Adjacent land values next to a designated Wilderness may rise or fall depending on local markets.

Lone Butte: Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The nearest Wilderness areas are in Theodore Roosevelt National Park. The 19,410-acre Theodore Roosevelt Wilderness, North Unit, is about four miles to the northwest, while the 10,510-acre Theodore Roosevelt Wilderness, South Unit, is 43 miles to the south. Both represent a mixed-grass prairie in a badlands setting. Lone Butte would also represent a mixed-grass prairie in a badlands setting.

Representation of Landforms and Ecosystems: This area represents a mixed-grass prairie with the following ecosystem types present: hardwood draws, upland grasslands, rolling grasslands and upland breaks. The landscape includes badlands and rolling prairies.

Biota: No species are dependent upon a Wilderness designation to remain viable in the area. Most key species probably would benefit, however, from a designation.

Public Interests and Concerns: The area is found in a sparsely populated region of the country. Dickinson, Williston, and Bismarck / Mandan, North Dakota, with an estimated population of less than 125,000, and Glendive and Sydney, Montana, with a combined population of about 25,000, are the nearest cities of any size, and none of them is closer than 50 miles from the area.

A considerable number of people and organizations have requested that the Forest Service designate some grassland Wilderness somewhere within the 191-million-acre National Forest System. Currently, Congress has not designated Wilderness area on any of the 20 national grasslands within that System.

Two Wilderness areas have been designated in the Little Missouri Badlands: the 10,510-acre Theodore Roosevelt Wilderness, South Unit, and the 19,410-acre Theodore Roosevelt Wilderness, North Unit, both of which are located in the Theodore Roosevelt National Park. These two Wilderness areas offer nearby designated Wilderness which, in most ways, represent most of the key characteristics found in the Lone Butte area, including appearance and vegetative cover types. No other designated Wilderness areas, however, exist in the Little Missouri Badlands, a recognized biogeographical sub-unit of the Great Plains.

Lone Butte: Environmental Consequences

Management Prescription Allocations by Alternative:

Alternative 2:	MA 3.51	8,160 acres
	MA 6.1	3,310 acres
Alternative 3:	MA 1.31	10,950 acres
	MA 3.51	400 acres
	MA 3.65	60 acres
	MA 4.22	60 acres
Alternative 4:	MA 1.2	11,470 acres
Alternative 5:	MA 3.51	8,160 acres
	MA 4.4	60 acres
	MA 6.1	3,250 acres

Designation: Wilderness

Prescription: MA 1.2 Recommended Wilderness

Alternatives: 4

Environmental Consequences: Travel would be by nonmotorized, nonmechanical. Recreation opportunities would be those associated with the primitive and nonmotorized end of the spectrum such as walking, hiking, horseback riding, and nonmotorized hunting. Opportunities for discovery of cultural, historical, and paleontological resources would exist but interpretive opportunities may be limited or foregone. Wildlife would tend to benefit from reduced human activity, but some opportunities for fish and wildlife enhancement, and ecosystem restoration would be foregone. Grazing of livestock would continue where grazing was established at the time the wilderness is designated. Valid existing rights and leases would be recognized.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Maintenance of existing range developments would be permitted. Construction of new range developments would not be allowed to detract from the wilderness character of the area. Stipulations, such as no surface occupancy, and reclamation efforts designed at protecting the wilderness values to the extent possible may be authorized by Congress on existing rights and leases. The area may be Congressionally designated as administratively unavailable.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings will be increased while at the same time reducing opportunities for motorized recreation. If the area is withdrawn from leasing, oil and gas development opportunities would be foregone.

Designation: Non-wilderness

Prescription: MA 1.31 Backcountry Recreation Nonmotorized

Alternatives: 3

Environmental Consequences: With rare exceptions, travel is nonmotorized. Recreation opportunities would be those associated with the primitive and nonmotorized end of the spectrum such as walking, hiking, horseback riding, and nonmotorized hunting. Overall, wildlife would tend to benefit from reduced human activity. Opportunities for discovery of cultural, historical, and paleontological resources would exist but interpretive opportunities would be limited or forgone. Livestock grazing would continue as present. Valid existing rights would be recognized. Because the area is leased for oil and gas and contains a small area of private minerals, additional oil and gas developments could occur. Where mineral development occurs, the semi-primitive, nonmotorized character of the area would be lost for the duration of the activity.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Construction of new range developments would not be allowed to detract from the semi-primitive character of the area. Oil and gas development on existing leases would require the area to be reclaimed to as near as possible its original condition at the close of the lease.

Economic and Social Effects: Opportunities for nonmotorized activities would be increased while at the same time reducing opportunities for motorized activities. Because oil and gas development of existing leases could occur; restricting other users could cause conflict. Those accustomed to accessing the area by vehicle might resent vehicle restrictions. Economic benefits from oil and gas developments would continue as long as production occurs in the area.

Designation: Non-wilderness

Prescription: MA 3.51 Bighorn Sheep

Alternatives: 2, 3, and 5

Environmental Consequences: Recreational activities and motorized travel would be discouraged during breeding and lambing periods. Livestock grazing would continue. Valid existing rights and leases would be recognized.

Mitigation Measures: Construction of new travel routes would be prohibited except to honor valid and existing rights and leases. Snowmobile use would be prohibited. Existing and adjoining allotments in this area would not permit conversion to domestic sheep. Oil and gas leasing would be no surface occupancy.

Economic and Social Effects: Opportunities for nonmotorized activities would be increased while at the same time reducing opportunities for motorized activities. Those accustomed to accessing the area by vehicle might resent vehicle restrictions. Economic benefits from oil and gas revenues may be reduced if development opportunities are foregone.

Designation: Non-wilderness

Prescription: MA 3.65 Rangeland with Diverse Natural-appearing Landscapes

Alternatives: 3

Environmental Consequences: Motorized access would be allowed unless specific areas are designated as closed or restricted to designated roads and trails. A full spectrum of motorized recreation opportunities would be allowed. Construction of recreation facilities, roads, power lines, and other features would be allowed. Livestock grazing would continue. Existing oil and gas leasing would continue and new leasing would be permitted. Oil and gas developments such as roads, pipelines, and drilling pads would likely occur.

Mitigation Measures: Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is a high probability, if the area is designated MA 3.65 it would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased while at the same time opportunities for nonmotorized activities reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would be reduced. All users, including oil and gas, would be permitted the same motorized access. The area would continue to provide the existing mix of economic benefits while roadless primitive and semi-primitive character would be lost permanently making future wilderness designation unlikely.

Designation: Non-wilderness

Prescription: MA 4.22 River and Travel Corridors

Alternatives: 3

Environmental Consequences: Motorized: access would be allowed unless specific areas are designated as closed or restricted to designated roads and trails. A variety of recreation opportunities would be allowed. Livestock grazing would continue. Existing oil and gas leasing would continue and new leasing would be permitted.

Mitigation Measures: Constructed public launch sites will be visually subordinate to the river and river corridor. OHV trail construction would be prohibited. Timing, seasonal, or location stipulations may be appropriate related to oil and gas development to maintain the scenic values of the area. Leasing within the corridor would be NSO.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings would be moderate. Economic benefits from oil and gas revenues may be reduced if development opportunities are foregone due to restrictions and stipulations.

Designation: Non-wilderness

Prescription: MA 4.4 Recreation River Recommendation

Alternatives: 5

Environmental Consequences: Motorized access would be allowed unless specific areas are designated as closed or restricted to designated roads and trails. A variety of recreational opportunities would be allowed. Livestock grazing would continue. Existing oil and gas leasing would continue and new leasing would be permitted.

Mitigation Measures: Timing, seasonal, or location stipulations may be appropriate related to oil and gas development to maintain the scenic values of the area. Leasing within the corridor would be no surface occupancy.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings would be reduced. Economic benefits from oil and gas revenues may be reduced if development opportunities are foregone.

Designation: Non-wilderness

Prescription: MA 6.1 Rangeland with Broad Resource Emphasis

Alternatives: 2 and 5

Environmental Consequences: Motorized access would be allowed unless specific areas are designated as closed or restricted to designated roads and trails. A full spectrum of motorized recreation opportunities would be allowed. Construction of recreation facilities, roads, power lines, and other features would be allowed. Livestock grazing would continue. Existing oil and gas leasing would continue and new leasing would be permitted. Oil and gas developments such as roads, pipelines, and drilling pads would likely occur.

Mitigation Measures: Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is a high probability, if the area is designated MA 6.1 it would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased while at the same time opportunities for nonmotorized activities reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would be reduced. All users, including oil and gas, would be permitted the same motorized access. The area would continue to provide the existing mix of economic benefits while roadless primitive and semi-primitive character could be lost permanently making future wilderness designation unlikely.

Long X Divide: An Overview of the Affected Environment

The 10,100-acre Long X Divide area is located about 15 miles south of Watford City, North Dakota. The north unit of Theodore Roosevelt National Park shares a boundary with Long X Divide immediately to the north and west. More specifically, the Long X Divide area is located, either partly or fully, in: T. 147 N., R. 99 W., Sections 2-4, 7-11, 13-15 and 17-19, 22-24 and T. 147 N., R. 100 W., Sections 12-13 and 23-24. It lies within the Little Missouri Badlands, a scenic combination of rugged terrain and open space. Access to the area from Watford City is south for 15 miles via U.S. Highway 85, then west for one mile on Forest Development Road 842. The area lies directly to the south and west of this road.

The Long X Divide area is located within the Little Missouri Badlands, a biogeographical sub-unit of the Great Plains Region. Robert G. Bailey further identifies the area as a part of the Great Plains-Palouse Dry Steppe Province ecoregion of the Temperate Steppe Division (71). Topography varies from gentle rolling grasslands to extremely rugged badlands terrain with deeply incised stream channels and numerous clay buttes. The area is located in the steepest and deepest section of the Little Missouri Badlands. Extensive areas of upland grasslands are interspersed between upland breaks. Elevation varies from between about 2,300 and 2,500 feet above sea level.

The vegetation ranges from riparian forests along the Little Missouri River to juniper-forested slopes to rolling, mixed-grass prairie on the uplands. Small pockets of aspen forests can be found in the area, a rather unusual community for the Little Missouri Badlands. Leafy spurge, a noxious weed, occurs along the Little Missouri River corridor.

Populations of mule deer, neotropical grassland birds, upland birds, reptiles, and some furbearers are common to the area.

The Job Corps Spike Camp, also known as the Long X Spike Camp and mapped as the CCC (Civilian Conservation Corps) Camp, sits just to the north of the Long X Divide area. This developed campground has historical CCC connections and serves as an entry point into the rugged Long X Divide area and the trailhead for the Maah-Daah-Hey Trail.

Two-track roads do exist in the area. The Maah-Daah-Hey Trail also passes through the area for about six and one-half miles. The 19,410-acre Theodore Roosevelt Wilderness, North Unit, lies adjacent to the Long X Divide area.

Long X Divide: Capability Analyses

Environment

Opportunity for Solitude and Serenity: The area offers a relatively high opportunity for solitude and serenity, especially in the eastern portion of the area where the terrain is more rugged. A visitor can become isolated from the sounds and sights of other people.

Natural Appearance and Integrity: The eastern portion of the area appears nearly pristine. In the western portions, some areas, where flat, contain a number of range developments. Elsewhere in the western portions, the land is rugged and appears very natural. Overall, this area contains a high level of natural integrity. Vegetative health is relatively high, and natural processes, including flash flooding, but excluding wildfire, are intact. Livestock developments, including developed springs, fences, water wells, primitive trails, stock tanks and dugouts, detract from the natural setting, although most range developments have been constructed to blend with the natural surroundings as much as possible.

Challenge: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the McKenzie Ranger District.

Recreation Opportunities: Current recreation includes hunting, horseback riding, hiking, dispersed camping, photography, nature study and other associated activities. The Maah-Daah-Hey Trail winds for about six and one-half miles through the area. Other trails in Long X Divide include the four and one-half mile Summit Trail and the eight and one-half mile Long X Loop. The Job Corps Spike Camp, also known as the Long X Spike Camp and mapped as the CCC (Civilian Conservation Corps) Camp, sits just to the north of the Long X Divide area. This developed campground has historical CCC connections and serves as an entry point into the rugged Long X Divide area.

Special Features

Unique Characteristics and Scenic Features: Aspen is found in the area, which is relatively rare for the North Dakota badlands. The historic Long X Cattle Trail, used in the late 19th century, cuts through the Long X Divide area. The area is very scenic and offers views into the Theodore Roosevelt National Park. Fossils found in Fort Union (also known as Ludlow) Formation deposits represent the Paleocene (65 to 45 million years ago) period.

Opportunities for Outdoor Education: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the McKenzie Ranger District.

Manageability

Size and Shape: The 10,100-acre Long X Divide is more or less rectangular. It is about six and one-half miles wide east to west and about four miles long north to south. The Long X Divide area is contiguous with no inholdings.

Potential to Manage Boundaries: The area offers high potential to manage boundaries. The national park shares the northern and western boundaries while National Forest System lands lie to the east. Only on the southern flank is the private land interface significant. This southern boundary is also marked by a fence, which could be easily signed and visible to the public. Some potential motorized trespass is possible under a Wilderness designation, especially in the south or northeast along U.S. Highway 85.

Long X Divide: Availability Analyses

Resource Values and Potentials

Oil and Gas: Oil and gas potential is high. There is no existing development and the area is not administratively available for lease.

Coal: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the McKenzie Ranger District.

Livestock Grazing: Six permittees operate in the area. The area produces about 2,246 animal unit months of livestock grazing annually. Three allotments are either fully or partially located in the area.

Locatable Minerals: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the McKenzie Ranger District.

Common Minerals: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the McKenzie Ranger District.

Timber: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the McKenzie Ranger District.

Recreation: Motorized recreation would be prohibited under a Wilderness designation. Current nonmotorized recreation activities, such as dispersed camping, hiking, horseback riding and nature study, would be allowed. Currently, an outfitter holds a permit for taking visitors by horseback into the area. That permit would not be affected by Wilderness designation. Wilderness designation would preclude off-highway motorized recreation, such as ATV and snowmobile use. Walk-in hunting opportunities would increase. Backcountry experiences would be enhanced with the exclusion of motorized activities. Opportunities for physically challenged and elderly access into the area may be reduced.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Peregrine falcon; whooping crane: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.
- Bald eagle: Effects from Wilderness designation would have a beneficial effect on wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.

Bighorn Sheep: Wilderness designation would have beneficial effects on bighorn sheep due to the lack of human disturbances and reductions in motorized activities a designation would bring, especially during the birthing season.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitats. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access within Wilderness areas.

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around both aerial- and ground-nesting raptor sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Little Missouri National Grassland include: the black-tailed prairie dog, plains sharp-tailed grouse and the sage grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered that fall under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the table at the very end of this document.

Management Obligations, Constraints, or Encumbrances

Mineral Leases and Subsurface Rights: About 1,780 acres within Long X Divide originate from the public domain and about 8,320 acres originate from acquired lands. No acres of private, subsurface minerals ownership exist in the area.

Existing Contracts and Agreements: The McKenzie County Grazing Association holds the livestock permit for the area.

Biotic Control Measures and Fire Protection: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the McKenzie Ranger District.

Effects on Adjacent Lands: Low impacts would be anticipated under a Wilderness designation. The most likely impact might occur along the southern boundary where private lands intersect with the Long X Divide area. Leafy spurge is known to be present along the Little Missouri River and its drainage bottoms. The presence of noxious weeds, such as leafy spurge, must be monitored and addressed, regardless of the management of the area, including Wilderness. Any increase in visitation to the area, which may occur under a Wilderness designation, could increase the potential for accidental fire starts. Adjacent land values next to a designated Wilderness might rise or fall depending upon the local markets. As well, the potential for trespass from a designated Wilderness onto adjacent lands of other ownership might increase.

Long X Divide: Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The nearest Wilderness areas are in Theodore Roosevelt National Park. The 19,410-acre Theodore Roosevelt Wilderness, North Unit, lies directly adjacent to the Long X Divide area to the north, while the 10,510-acre Theodore Roosevelt Wilderness, South Unit, is 41 miles to the south. Both represent mixed-grass prairies in a badlands setting. Long X Divide would also represent a mixed-grass prairie in a rugged badlands setting.

Representation of Landforms and Ecosystems: This area represents a mixed-grass prairie with the following ecosystem types present: river bottoms, upland grasslands, terraces, rolling grasslands and upland breaks. The landscape includes badlands and rolling prairies.

Biota: No species are dependent upon a Wilderness designation to remain viable in the area. Most key species probably would benefit, however, from a designation.

Public Interests and Concerns: The area is found in a sparsely populated region of the country. Dickinson, Williston, and Bismarck/Mandan, North Dakota, with an estimated population of less than 125,000, and Glendive and Sydney, Montana, with a combined population of about 25,000, are the nearest cities of any size, and none of them is closer than 40 miles from the area.

A considerable number of people and organizations have requested that the Forest Service designate some grassland Wilderness somewhere within the 191-million-acre National Forest System. Currently, the Forest Service provides no Wilderness area on any of the 20 national grasslands within that System.

Two Wilderness areas have been designated in the Little Missouri Badlands: the 10,510-acre Theodore Roosevelt Wilderness, South Unit, and the 19,410-acre Theodore Roosevelt Wilderness, North Unit, both of which are located in the Theodore Roosevelt National Park. These two Wilderness areas offer nearby designated Wilderness which, in most ways, represent most of the key characteristics found in the Long X Divide area, including appearance and vegetative cover types. No other designated Wilderness areas, however, exist in the Little Missouri Badlands, a recognized biogeographical sub-unit of the Great Plains.

Long X Divide: Environmental Consequences

Management Prescription Allocations by Alternative

Alternative 2:	MA 3.51	20 acres
	MA 6.1	10,080 acres
Alternative 3:	MA 1.2A	10,100 acres
Alternative 4:	MA 1.2	10,100 acres
Alternative 5:	MA 1.2	10,100 acres

Designation: Wilderness

Prescription: MA 1.2 or 1.2A Recommended or Suitable Wilderness

Alternatives: 3, 4, and 5

Environmental Consequences: Travel would be by nonmotorized, nonmechanical. Recreation opportunities would be those associated with the primitive and nonmotorized end of the spectrum such as walking, hiking, horseback riding, and nonmotorized hunting. Opportunities for discovery of cultural, historical, and paleontological resources would exist but interpretive opportunities may be limited or foregone. Wildlife would tend to benefit from reduced human activity, but some opportunities for fish and wildlife enhancement, and ecosystem restoration would be foregone. Grazing of livestock would continue where grazing was established at the time the wilderness is designated. Valid existing rights and leases would be recognized.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Maintenance of existing range developments would be permitted. Construction of new range developments would not be allowed to detract from the wilderness character of the area. Stipulations, such as no surface occupancy, and reclamation efforts

designed at protecting the wilderness values to the extent possible may be authorized by Congress on existing rights and leases. The area may be Congressionally designated as administratively unavailable.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings will be increased while at the same time reducing opportunities for motorized recreation. If the area is withdrawn from leasing, oil and gas development opportunities would be foregone.

Designation: Non-wilderness

Prescription: MA 3.51 Bighorn Sheep

Alternatives: 2

Environmental Consequences: Recreational activities and motorized travel would be discouraged during breeding and lambing periods. Livestock grazing would continue. Valid existing rights and leases would be recognized.

Mitigation Measures: Construction of new travel routes would be prohibited except to honor valid and existing rights and leases. Snowmobile use would be prohibited. Existing and adjoining allotments in this area would not permit conversion to domestic sheep. Oil and gas leasing would be no surface occupancy.

Economic and Social Effects: Opportunities for nonmotorized activities would be increased while at the same time reducing opportunities for motorized activities. Those accustomed to accessing the area by vehicle might resent vehicle restrictions. Economic benefits from oil and gas revenues may be reduced if development opportunities are foregone.

Designation: Non-wilderness

Prescription: MA 6.1 Rangeland with Broad Resource Emphasis

Alternatives: 2

Environmental Consequences: Motorized access would be allowed unless specific areas are designated as closed or restricted to designated roads and trails. A full spectrum of motorized recreation opportunities would be allowed. Construction of recreation facilities, roads, power lines, and other features would be allowed. Livestock grazing would continue. Existing oil and gas leasing would continue and new leasing would be permitted. Oil and gas developments such as roads, pipelines, and drilling pads would likely occur.

Mitigation Measures: Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is a high probability, if the area is designated MA 6.1 it would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased while at the same time opportunities for nonmotorized activities reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would be reduced. All users, including oil and gas, would be permitted the same motorized access. The area would continue to provide the existing mix of economic benefits while roadless primitive and semi-primitive character could be lost permanently making future wilderness designation unlikely.

Magpie

The 6,100-acre portion of the Magpie area on the McKenzie Ranger District shares a contiguous boundary with the Medora Ranger District. Since 14,580 acres of the Magpie lie within the Medora Ranger District, the narrative for the Magpie area is found under the Medora Ranger District section.

Scairt Woman

The 240-acre portion of the Scairt Woman area on the McKenzie Ranger District shares a contiguous boundary with the Medora Ranger District. Since 5,460 acres in the Scairt Woman area lie within the Medora Ranger District, the narrative for the Scairt Woman area is found under the Medora Ranger District section.

Criteria Common to All Roadless Areas on this Administrative Unit

Capability Criteria

Challenge: centers around survival in a dry and harsh environment. Summer temperatures can exceed 100° Fahrenheit with no drinkable water sources. Winter temperatures can drop to -35° Fahrenheit with wind-chill factors in excess of -80° F. Broken terrain and open landscapes are deceptive and may disorient the visitor's ability to mark their directions. Hiking may be much more difficult than anticipated with steep slopes and difficult terrain. Prairie rattlesnakes may be encountered and can be dangerous.

Opportunities for Outdoor Education: A visitor should find features to stimulate curiosity: geology, grassland ecosystems, grassland flora and fauna, bared soil layers, shifting weather patterns and cloud types, incredibly clear night skies offering unimpeded views of the stars. Skills in maneuvering a rugged terrain, using a compass, taking precautions for snake and spider bites, heat stroke (and frostbite or freezing to death in the winter), setting up a primitive campsite, and outdoor cooking may all test and develop a visitor's understanding of the outdoors.

Availability Criteria

Coal: Although significant lignite coal reserves exist on the Little Missouri National Grassland (LMNG), no current production occurs and previous historic development has been minimal. Currently, no coal-leased acres exist on the LMNG. Several lignite-fueled power plants exist in North Dakota and 1991 estimates indicate that 29 million tons of lignite were mined in the state. Therefore, because a market exists, the potential for development is low to moderate.

Locatable Minerals: No records exist in geological literature that documents the occurrence or development of any hardrock minerals on or near the Little Missouri National Grassland (LMNG), a region that is sedimentary in origin. Uranium, sometimes considered a locatable mineral, is available for location if it is found on public domain lands. If uranium is found on acquired lands, it is available only by lease. Uranium deposits on the LMNG are generally of low grade. Although the occurrence potential for uranium is moderate to high, the current development potential is low.

Common Minerals: Scoria, a baked and fused clay, is common throughout the LMNG. Although it wears quickly, scoria is the only local source for road surfacing material. Adequate private sources for this aggregate exist. Therefore, a low potential exists for development of scoria resources on the LMNG.

Timber: No merchantable timber exists. Rocky Mountain juniper is widespread enough to provide some post and pole timbers; however, the location of the juniper often makes it quite uneconomical to harvest

Management Obligations, Constraints, or Encumbrances

Biotic Control Measures and Fire Protection: Chemical, biological and mechanical control methods are used to stem the expansion of undesirable plant species, such as leafy spurge and spotted knapweed. Wildfire suppression would be addressed in Wilderness management plans that would be developed if any of the roadless areas are designated by Congress as Wilderness.

Sheyenne National Grassland

Delamere: An Overview of the Affected Environment

The 5,090-acre Delamere area lies about 12 miles east of Lisbon, North Dakota, and one mile south of McLeod, North Dakota. Specifically, the Delamere area is located, either partly or fully, in: Township 134 North, Range 52 West, Section 31, Township 134 North, Range 53 West, Section 36, Township 133 North, Range 52 West, Sections 5-8 and 17-18, and Township 133 North, Range 53 West, Sections 1 and 12-13. Access is via State Highway 27, then south on Ransom County Road 53 to Ransom County Road 133. Drive west on Road 133 for one mile. The Delamere area lies north of Road 133.

The Delamere area lies within the Prairie Parkland (Temperate) Province ecoregion of the Prairie Division as identified by Robert G. Bailey (45-46). Its topography consists of drifting swales of tallgrass prairie, the result of an ancient glacial delta, which formed this sand dune region some 10,000 to 25,000 years ago. Elevation in this area ranges between 1,071 and 1,081 feet above sea level.

Tallgrass and mixed-grass species thrive in the area, including big bluestem, little bluestem, switchgrass, and prairie junegrass. Tree species include bur oak and aspen. Shrub species include willow buckbrush. The threatened western prairie-fringed orchid occurs on the national grassland, one of only a few meta-populations in the nation. Nationally, both tallgrass and oak savanna are tiny remnants of their historic occurrence. At least 42 rare or sensitive plant species (as identified by the Forest Service) exist on the national grassland. The last of just two appreciable populations of the greater prairie chicken in North Dakota are found on the Sheyenne National Grassland.

Wildlife include white-tailed deer, red fox, prairie grouse, many species of grassland songbirds, raptors, reptiles and amphibians.

There are a number of range developments, including fencing, water structures (such as windmills), and two-track roads.

Typical recreation includes hiking, hunting, horseback riding, nature photography, off-highway vehicle recreation, snowmobiling, and camping. Canoeing on the nearby Sheyenne River is popular. Livestock grazing is a seasonal use.

Delamere: Capability Analyses

Environment

Opportunity for Solitude and Serenity: Opportunities for solitude and serenity are available. The low rolling hills, lack of roads and high number of wetlands combine to restrict access and provide for a high level of solitude. A rail line creates the eastern border to the Delamere area. Trains run several times per day, creating some noise. In addition, a few farms are visible from lands just within the borders to Delamere. However, on open stretches, the vast nature of prairie and the relative lack of visible human developments allow the visitor to experience the grassland much as early settlers and American Indians did more than a century ago.

Natural Appearance and Integrity: Overall, this area retains a natural appearance; however, the area was homesteaded, so some signs of homesteading may still be visible, which may reduce the area's natural appearance. Ecologically, the Delamere area is not the healthiest portion of the Sheyenne National Grassland. Most of the ecological processes, including seasonal flooding, remain intact. Natural fire is rare. Closer examination reveals signs of livestock activities. Cattle graze the area from May through October. Developments in the area do suggest human encroachment. The area shows about 15 miles of exterior fence, 13 miles of interior fence, seven windmills, four dugouts, and five stock tanks. Some people consider windmills to be scenic in a rustic sense, a reminder of an earlier era. Noxious and exotic plants have encroached into the area, reducing the natural integrity of the native tallgrass ecosystem.

Challenge: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Sheyenne National Grassland.

Recreation Opportunities: Opportunities for recreation are low, but do include nature study, photography, hunting, hiking, and camping.

Special Features

Unique Characteristics and Scenic Features: The area is remote, with no maintained roads. A great many grassland birds, including neotropical migrants, can be found in the area. The greater prairie chicken and the western prairie-fringed orchid, a threatened species, are also known to occur in the Delamere area.

Opportunities for Outdoor Education: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Sheyenne National Grassland.

Manageability

Size and Shape: This 5,090-acre Delamere area is a contiguous block of National Forest System land with no inholdings under other ownership. It is more or less square in shape and about two and a half miles across east to west and about two and a half mile across north to south. Existing developments pose management challenges. Fence lines, for instance, need to be maintained on an annual basis.

Potential to Manage Boundaries: The current boundaries consist of fence lines. Fence lines offer the opportunity for clear and visible signing. They also prevent unauthorized motorized access.

Delamere: Availability Analyses

Resource Values and Potentials

Oil and Gas: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Sheyenne National Grassland.

Coal: No coal resources exist on the Sheyenne National Grassland.

Livestock Grazing: Eight permittees graze up to 5,300 AUMs annually in five allotments May through November.

Locatable Minerals: No records exist in geological literature that documents the occurrence or development of any hardrock minerals on or near the Sheyenne National Grassland.

Common Minerals: Some sand and gravel may exist in the area, but mining it would not prove economically viable.

Timber: No appreciable timber resources exist in the area.

Recreation: The area receives only limited recreational use. No developed trails or other recreational facilities exist in the area. There is a noticeable lack of trees. Sloughs make travel and access very difficult.

Wilderness designation would prohibit off-road motorized recreation and other motorized access. Walk-in hunting opportunities would increase. Handicapped and elderly access may be reduced, though not eliminated, under a Wilderness designation.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Western prairie-fringed orchid: Effects from Wilderness designation would be beneficial due to the reduction in mortality caused by motorized or mechanized vehicles and equipment, restrictions that accompany Wilderness designations. However, effects would also be adverse on the Sheyenne National Grasslands because motorized support in the suppression of leafy spurge would be reduced, which may favor the spread of leafy spurge at the expense of the western prairie-fringed orchid.
- Peregrine falcon: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.
- Bald eagle: Effects from Wilderness designation would have a beneficial effect on wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitats. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access within Wilderness areas.

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around both aerial- and ground-nesting raptor sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Sheyenne National Grassland include: the greater prairie chicken and the plains sharp-tailed grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered falling under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the table at the very end of this document.

Management Obligations, Constraints, or Encumbrances

Mineral Leases and Subsurface Rights: No mineral leases are held by private entities in the Delamere area.

Existing Contracts and Agreements: A grazing and management agreement with the Sheyenne Valley Grazing Association is in effect through 2002.

Biotic Control Measures and Fire Protection: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Sheyenne National Grassland.

Effects on Adjacent Lands: About 200 to 300 acres of leafy spurge occur in the area. Regardless of this area's designation, noxious weed control methods must take place in the area. Any increase in recreational use resulting from designation would increase the use of adjacent roads. More people in the area would impact adjacent landowners.

Delamere: Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The closest designated Wilderness is the 4,155-acre Chase Lake Wilderness inside Chase Lake National Wildlife Refuge, about 126 miles northwest of the area. Chase Lake Wilderness represents a mixed-grass prairie ecosystem, while the Delemere area represents a tallgrass prairie ecosystem.

Representation of Landforms and Ecosystems: The area is representative of the Northern tallgrass prairie, deltaic plains, and hummocky sandhills.

Biota: No species are dependent upon a Wilderness designation to remain viable in the area. A Wilderness designation may impede the control of leafy spurge, which adversely affects the western prairie-fringed orchid. Most other key species probably would benefit from a designation.

Public Interests and Concerns: The public has shown very little interest in designation or nondesignation. Local livestock permittees would be concerned about their ability to graze their cattle and about access to range developments.

Delemere: Environmental Consequences

Management Prescription Allocations by Alternative:

Alternative 2	MA 6.1	5,090 acres
Alternative 3	MA 3.66	5,090 acres
Alternative 4	MA 3.66	5,090 acres
Alternative 5	MA 1.2	5,090 acres

Designation: Wilderness

Prescription: MA 1.2 Recommended Wilderness

Alternatives: 5

Environmental Consequences: Travel would be by nonmotorized, nonmechanical. Recreation opportunities would be those associated with the primitive and nonmotorized end of the spectrum such as walking, hiking, horseback riding, and nonmotorized hunting. Opportunities for discovery of cultural, historical, and paleontological resources would exist but interpretive opportunities may be limited or foregone. Wildlife would tend to benefit from reduced human activity, but some opportunities for fish and wildlife enhancement, and ecosystem restoration would be foregone. Grazing of livestock would continue where grazing was established at the time the wilderness is designated. Valid existing rights and leases would be recognized.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Maintenance of existing range developments would be permitted. Construction of new range developments would not be allowed to detract from the wilderness character of the area. The area may be Congressionally designated as administratively unavailable.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings will be increased while at the same time reducing opportunities for motorized recreation. If the area is withdrawn from leasing, oil and gas development opportunities would be foregone.

Designation: Wilderness

Prescription: MA 3.66 Ecosystem Restoration

Alternatives: 3 and 4

Environmental Consequences: Tall grass prairie communities will have a high degree of biodiversity. Sensitive plants and animal populations are maintained or restored. Habitat is provided for the greater prairie chicken in the tall-grass prairie and habitat for the sharp-tailed grouse is provided in the choppy sand hills. Habitat for the federally listed western prairie fringed orchid is provided in the wet meadows. Invasive species and other exotic plant species are reduced. Riparian areas, including seeps and springs, are properly functioning.

Mitigation Measures: These areas are managed to restore and maintain native plant and animal species and communities and ecological processes and functions for tall-grass prairie and oak savanna Motorized access would be restricted to roads and trails. Livestock grazing would be allowed at levels commensurate with prairie restoration. Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is possibility the area would temporarily lose its roadless character during ecosystem restoration activities.

Economic and Social Effects: Both motorized and nonmotorized opportunities would be available. Opportunities for those desiring solitude and isolation would be reduced temporarily while restoration activities were in progress. Once restoration was substantially completed, opportunities for isolation and solitude would be restored to approximately the present level. Livestock grazing would likely remain the primary economic benefit from the area but would be reduced during restoration activities. The primitive to semi-primitive character of the area could be temporarily altered but would be restored over time.

Designation: Non-wilderness

Prescription: MA 6.1Rangeland with Broad Resource Emphasis

Alternatives: 2

Environmental Consequences: Motorized access would be allowed unless specific areas are designated as closed or restricted to designated roads and trails. A full spectrum of motorized recreation opportunities would be allowed. Construction of recreation facilities, roads, power lines, and other features would be allowed. Livestock grazing would continue. Valid existing rights and leases would be recognized.

Mitigation Measures: Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is a high probability, if the area is designated MA 6.1 it would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased while at the same time opportunities for nonmotorized activities reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would be reduced. All users would be permitted the same motorized access. The area would continue to provide the existing mix of economic benefits while roadless primitive and semi-primitive character could be lost permanently making future wilderness designation unlikely.

Durler: An Overview of the Affected Environment

The 12,470-acre Durler area lies about 13 miles east of Lisbon, North Dakota. Specifically, the Durler area is located, either partly or fully, in: Township 134 North, Range 54 West, Sections 11-15, 22-27 and 36, Township 133 North, Range 53 West, Sections 3 and 5-8, and Township 134 North, Range 53 West, Sections 7-8, 17-20 and 29-32. Access from Lisbon is east on State Highway 27. The Durler area lies just south of the highway.

The Durler area lies within the Prairie Parkland (Temperate) Province ecoregion of the Prairie Division as identified by Robert G. Bailey (45-46). Its topography consists of drifting swales of tallgrass prairie, the result of an ancient glacial delta, which formed this sand dune region some 10,000 to 25,000 years ago. The elevation of the area ranges from between 1,069 and 1,076 feet above sea level.

Tallgrass and mixed-grass species thrive in the area, including big bluestem, little bluestem, switchgrass, and prairie junegrass. Tree species include bur oak, green ash, and aspen. Shrub species include willow buckbrush and snowberry. The threatened western prairie-fringed orchid occurs on the national grassland, one of only a few meta-populations in the nation. Nationally, both tallgrass and oak savanna are tiny remnants of their historic occurrence. At least 42 rare or sensitive plant species (as identified by the Forest Service) exist on the national grassland. The last of just two appreciable populations of the greater prairie chicken in North Dakota are found on the Sheyenne National Grassland.

Wildlife include white-tailed deer, red fox, prairie grouse, many species of grassland songbirds, raptors, reptiles, and amphibians.

There are a number of range developments, including fencing, water structures (such as windmills), and two-track roads.

Typical recreation includes hiking, hunting, horseback riding, nature photography, off-highway vehicle recreation, snowmobiling, and camping. The North Country National Scenic Trail cuts through the area. Canoeing on the nearby Sheyenne River is popular. Livestock grazing is a seasonal use.

Durler: Capability Analyses

Environment

Opportunity for Solitude and Serenity: Opportunities for solitude and serenity are available. The low rolling hills, lack of roads and high number of wetlands combine to restrict access and provide for a high level of solitude. A rail line creates the extreme northeastern border to the Durler area. Trains run several times per day, creating some noise. Some noise associated with State Highway 27 may also be heard close to the roadway. In addition, a few farms are visible from lands just within the borders to Delamere. However, on open stretches, the vast nature of prairie and the relative lack of visible human developments allow the visitor to experience the grassland much as early settlers and American Indians did more than a century ago.

Natural Appearance and Integrity: This area does retain a natural appearance, representative of prairie terrain. The Horseshoe Hills lie in the Durler area and exhibit oak savanna, a very scenic component. Most of the ecological processes, with the possible exception of natural fire, remain intact. Signs of livestock activities exist. Cattle are encountered during the grazing season. Developments in the area do suggest human encroachment. The area shows about 23 miles of exterior fence, 22 miles of interior fence, 18 windmills, 13 dugouts, four fenced exclosures, and 10 stock tanks. Some people consider windmills to be scenic in a rustic sense, a reminder of an earlier era. Noxious and exotic plants have encroached into the area, reducing the natural integrity of the native tallgrass ecosystem.

Challenge: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Sheyenne National Grassland.

Recreation Opportunities: Opportunities for recreation are fairly low but do include nature study, photography, hunting, hiking, and camping.

Special Features

Unique Characteristics and Scenic Features: The Horseshoe Hills, draped in oak savanna, are very scenic, especially in autumn. Several archeological sites may exist, representing prehistoric and historic occupations, including homestead foundations and a battle site between rival tribes.

A potential Research Natural Area of 80 acres may be included in the Durler area, depending upon future management area classifications. The area includes unfarmed, ungrazed prairie. The 80 acres have been hayed in the past.

Opportunities for Outdoor Education: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Sheyenne National Grassland.

Manageability

Size and Shape: The 12,470-acre Durler area is more or less square in shape. The area is about five miles long north to south and five miles wide east to west. Two small private inholdings, one of 40 acres and another of 160 acres, exist in the area. Public access to the inholdings must be allowed.

Potential to Manage Boundaries: The current boundaries consist of fencelines that may require annual maintenance. The potential to manage these fencelines is high. Fencelines do offer the opportunity for clear and visible signing.

Durler: Availability Analyses

Resource Values and Potentials

Oil and Gas: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Sheyenne National Grassland.

Coal: No coal resources exist on the Sheyenne National Grassland.

Livestock Grazing: Eighteen permittees graze up to 12,175 AUMs annually on 11 allotments. Livestock are typically run from May through November.

Locatable Minerals: No records exist in geological literature that documents the occurrence or development of any hardrock minerals on or near the Sheyenne National Grassland.

Common Minerals: Some sand and gravel may exist in the area, but mining it would not prove economically viable.

Timber: No appreciable timber resources exist in the area.

Recreation: Wilderness designation would prohibit off-road motorized recreation and other motorized access. Walk-in hunting opportunities would increase. Handicapped and elderly access may be reduced, though not eliminated under a Wilderness designation.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Western prairie-fringed orchid: Effects from Wilderness designation would be beneficial due to the reduction in mortality caused by motorized or mechanized vehicles and equipment, restrictions that accompany Wilderness designations. However, effects would also be adverse on the Sheyenne National Grasslands because motorized support in the suppression of leafy spurge would be reduced, which may favor the spread of leafy spurge at the expense of the western prairie-fringed orchid.
- Peregrine falcon: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.
- Bald eagle: Effects from Wilderness designation would have a beneficial effect on wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitats. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access within Wilderness areas.

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around both aerial- and ground-nesting raptor sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Sheyenne National Grassland include: the greater prairie chicken and the plains sharp-tailed grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered falling under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the table at the very end of this document.

Management Obligations, Constraints, or Encumbrances

Mineral Leases and Subsurface Rights: No mineral leases exist in the area.

Existing Contracts and Agreements: A grazing and management agreement with the Sheyenne Valley Grazing Association is in effect through 2002. No power lines requiring special-use permits exist in the area. No other special-use permits are in force in the area.

Biotic Control Measures and Fire Protection: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Sheyenne National Grassland.

Effects on Adjacent Lands: About 2,000 to 3,000 acres of leafy spurge occurs in the area. Regardless of this area's designation, noxious weed control methods must take place in the area. Any increase in recreational use resulting from designation would increase the use of adjacent roads. More people in the area would impact adjacent landowners.

Durler: Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The closest designated Wilderness is the 4,155-acre Chase Lake Wilderness inside Chase Lake National Wildlife Refuge, about 116 miles northwest of the area. Chase Lake Wilderness represents a mixed-grass prairie ecosystem, while the Durler area represents a tallgrass prairie ecosystem.

Representation of Landforms and Ecosystems: This area is representative of the Northern tallgrass prairie, deltaic plains, hummocky sand dunes, and choppy sand dunes.

Biota: No species are dependent upon a Wilderness designation to remain viable in the area. A Wilderness designation may impede the control of leafy spurge, which adversely affects the western prairie-fringed orchid. Most other key species probably would benefit from a designation.

Public Interests and Concerns: The nearest metropolitan area, Fargo / Moorhead, with about 175,000 people, is only about an hour away by car. Some increase in visitation due to designation might be expected. Local livestock permittees would be concerned about their ability to graze their cattle and about access to range developments. A consortium of groups recently published Badlands on the Brink. The publication calls for more Wilderness areas in North Dakota. The Durler area was one of two areas the groups identified as desirable as Wilderness under the Eastern Wilderness Act.

Durler: Environmental Consequences

Management Prescription Allocations by Alternative:

Alternative 2:	MA 6.1	12,470 acres
Alternative 3:	MA 3.64	80 acres
	MA 3.66	12,390 acres
Alternative 4:	MA 2.2	80 acres
	MA 3.66	11,590 acres
	MA 5.12	800 acres
Alternative 5:	MA 1.2	12,470 acres

Designation: Wilderness

Prescription: MA 1.2 Recommended Wilderness

Alternatives: 5

Environmental Consequences: Travel would be by nonmotorized, nonmechanical. Recreation opportunities would be those associated with the primitive and nonmotorized end of the spectrum such as walking, hiking, horseback riding, and nonmotorized hunting. Opportunities for discovery of cultural, historical, and paleontological resources would exist but interpretive opportunities may be limited or foregone. Wildlife would tend to benefit from reduced human activity, but some opportunities for fish and wildlife enhancement, and ecosystem restoration

would be foregone. Grazing of livestock would continue where grazing was established at the time the wilderness is designated. Valid existing rights and leases would be recognized.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Maintenance of existing range developments would be permitted. Construction of new range developments would not be allowed to detract from the wilderness character of the area. The area may be Congressionally designated as administratively unavailable.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings will be increased while at the same time reducing opportunities for motorized recreation. If the area is withdrawn from leasing, oil and gas development opportunities would be foregone.

Designation: Non-wilderness

Prescription: MA 2.2 Research Natural Areas

Alternatives: 4

Environmental Consequences: With rare exceptions, travel is nonmotorized. Recreation opportunities would be those associated with the primitive and semi-primitive end of the spectrum such as walking and hiking. Uses that maintain or improve the ecological characteristics for which the RNA was designated would be allowed. Livestock grazing would continue as present. The area would be made unavailable for leasing until establishment of the RNA, at which time it would be withdrawn from mineral entry.

Mitigation Measures: Motorized travel is limited to administrative, law enforcement, emergency, and scientific purposes. Existing roads would be closed or obliterated unless necessary for administrative, scientific, or valid private access. Recreational use would be restricted if is hinders achievement of the desired condition for the RNA. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Construction of new range developments would not be allowed to detract from the semi-primitive character of the area.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings will be increased while at the same time reducing opportunities for motorized recreation. Those accustomed to accessing the area by motorized means might resent vehicle restrictions. If the area is withdrawn from leasing, oil and gas development opportunities would be foregone.

Designation: Non-Wilderness

Prescription: MA 3.64 Special Plant and Wildlife Habitat

Alternatives: 3

Environmental Consequences: Suitable habitat will be maintained or enhanced for the full spectrum of plant and wildlife species, guilds, and communities. Riparian areas (streams, seeps, springs, fens) are managed so they maintain their hydrologic regimes. Broadleaf deciduous trees characterize woodlands and hardwood draws. Prairie landscapes will have a diversity of warm season and cool season grasses and forbs. Plant communities of high species diversity will act as a seed source for other areas within the landscape where diversity may be reduced.

Mitigation Measures: These areas are managed to maintain and enhance specific plant and wildlife species of concern and plant and wildlife communities. Habitat enhancement is encouraged. Motorized access would be limited to administrative use. Although grazing could occur to meet management objectives, the area would normally be considered unsuitable for grazing.

Economic and Social Effects: Motorized recreation opportunities would not be available. Opportunities for those desiring solitude and isolation would be about the same as present. Opportunities for discovery and interpretation of ecological, biological, cultural, historic, and paleontological resources would be good. Livestock grazing would likely remain the primary economic benefit from the area but would be reduced from present levels. The primitive to semi-primitive character of the area would be substantially retained.

Designation: Wilderness

Prescription: MA 3.66 Ecosystem Restoration

Alternatives: 3 and 4

Environmental Consequences: Tall grass prairie communities will have a high degree of biodiversity. Sensitive plants and animal populations are maintained or restored. Habitat is provided for the greater prairie chicken in the tall-grass prairie and habitat for the sharp-tailed grouse is provided in the choppy sand hills. Habitat for the federally listed western prairie fringed orchid is provided in the wet meadows. Invasive species and other exotic plant species are reduced. Riparian areas, including seeps and springs, are properly functioning.

Mitigation Measures: These areas are managed to restore and maintain native plant and animal species and communities and ecological processes and functions for tall-grass prairie and oak savanna Motorized access would be restricted to roads and trails. Livestock grazing would be allowed at levels commensurate with prairie restoration. Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is possibility the area would temporarily lose its roadless character during ecosystem restoration activities.

Economic and Social Effects: Both motorized and nonmotorized opportunities would be available. Opportunities for those desiring solitude and isolation would be reduced temporarily while restoration activities were in progress. Once restoration was substantially completed, opportunities for isolation and solitude would be restored to approximately the present level. Livestock grazing would likely remain the primary economic benefit from the area but would be reduced during restoration activities. The primitive to semi-primitive character of the area could be temporarily altered but would be restored over time.

Designation: Non-wilderness

Prescription: MA 5.12 General Forest and Rangelands: Range Vegetation Emphasis

Alternatives: 3 and 4

Environmental Consequences: Motorized access would be allowed unless specific areas are designated as closed or restricted to designated roads and trails. A full spectrum of motorized recreation opportunities would be allowed. Construction of recreation facilities, roads, power lines, and other features would be allowed. Livestock grazing would continue. Valid existing rights and leases would be recognized.

Mitigation Measures: Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is a high probability, if the area is designated MA 5.12 it would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased while at the same time opportunities for nonmotorized activities reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would be reduced. All users would be permitted the same motorized access. The area would continue to provide the existing mix of economic benefits while roadless primitive and semi-primitive character would be lost permanently making future wilderness designation unlikely.

Designation: Non-wilderness

Prescription: MA 6.1Rangeland with Broad Resource Emphasis

Alternatives: 2

Environmental Consequences: Motorized access would be allowed unless specific areas are designated as closed or restricted to designated roads and trails. A full spectrum of motorized recreation opportunities would be allowed. Construction of recreation facilities, roads, power lines, and other features would be allowed. Livestock grazing would continue. Valid existing rights and leases would be recognized.

Mitigation Measures: Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is a high probability, if the area is designated MA 6.1 it would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased while at the same time opportunities for nonmotorized activities reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would be reduced. All users would be permitted the same motorized access. The area would continue to provide the existing mix of economic benefits while roadless primitive and semi-primitive character could be lost permanently making future wilderness designation unlikely.

McLeod: An Overview of the Affected Environment

The 9,120-acre McLeod area lies about 13 miles east of Lisbon, North Dakota. Specifically, the McLeod area is located, either partly or fully, in: Township 133 North, Range 52 West, Sections 1-5 and 8-12 and Township 134 North, Range 52 West, Sections 26-27 and 30-35. Access from Lisbon is via State Highway 27, then south along Ransom County Road 53 to the town of McLeod, four miles east along Ransom County Road 134 and south one-half mile on a township road.

The McLeod area lies within the Prairie Parkland (Temperate) Province ecoregion of the Prairie Division as identified by Robert G. Bailey (45-46). Its topography consists of drifting swales of tallgrass prairie, the result of an ancient glacial delta, which formed this sand dune region some 10,000 to 25,000 years ago. The elevation of the area ranges between 1,071 to 1,080 feet above sea level.

Tallgrass and mixed-grass species thrive in the area, including big bluestem, little bluestem, switchgrass, and prairie junegrass. Tree species include bur oak, green ash, and aspen. Shrub species include willow buckbrush and snowberry. The threatened western prairie-fringed orchid occurs on the national grassland, one of only a few meta-populations in the nation. Nationally, tallgrass remains only a tiny remnant of its historic occurrence. At least 42 rare or sensitive plant species (as identified by the Forest Service) exist on the national grassland. The last of just two appreciable populations of the greater prairie chicken in North Dakota are found on the Sheyenne National Grassland.

Wildlife include white-tailed deer, red fox, prairie grouse, many species of grassland songbirds, raptors, reptiles and amphibians.

There are a number of range developments, including fencing, water structures (such as windmills) and two-track roads.

Typical recreation includes hiking, hunting, horseback riding, snowmobiling, off-highway motorized recreation, nature photography, off-highway vehicle recreation, snowmobiling and camping. Canoeing on the nearby Sheyenne River is popular. Livestock grazing is a seasonal use.

McLeod: Capability Analyses

Environment

Opportunity for Solitude and Serenity: Opportunities for solitude are available. The rolling to flat tallgrass prairie does provide opportunities for isolation. The open nature of the landscape offers some opportunities to experience the grassland in a semi-primitive condition. Nearby developments, including a railroad and county roads, can create some background noise.

Natural Appearance and Integrity: Overall, this area retains a natural appearance; however, the area was homesteaded, so some signs of homesteading may still be visible, which may reduce the area's natural appearance. Most of the ecological processes, including seasonal flooding, remain intact. Natural fire is rare. Closer examination reveals signs of livestock activities. Along boundary areas, adjacent land is tilled and may carry little in terms of scenic value. Cattle graze the area from May through November.

Developments in the area do suggest human encroachment. The area shows about 17 miles of exterior fence, 15 miles of interior fence, seven windmills, 13 dugouts, two fenced exclosures

and six stock tanks. Some people consider windmills to be scenic in a rustic sense, a reminder of an earlier era. Noxious and exotic plants have encroached into the area, reducing the natural integrity of the native tallgrass ecosystem.

Challenge: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Sheyenne National Grassland.

Recreation Opportunities: Opportunities for recreation include nature study, photography, hunting, hiking, and camping.

Special Features

Unique Characteristics and Scenic Features: The area is a scenic grassland, with isolated stands of trees, some of them planted during the homesteading era early this century. The ecological condition of the tallgrass component in the McLeod area is of high quality.

Opportunities for Outdoor Education: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Sheyenne National Grassland.

Manageability

Size and Shape: The 9,120-acre McLeod area is more or less rectangular in shape and is a contiguous block with no private inholdings. The area is about five miles wide east to west and four miles long north to south.

Potential to Manage Boundaries: The current boundaries consist of fence lines. Fence lines offer the opportunity for clear and visible signing. They also prevent unauthorized motorized access.

McLeod: Availability Analyses

Resource Values and Potentials

Oil and Gas: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Sheyenne National Grassland.

Coal: No coal resources exist on the Sheyenne National Grassland.

Livestock Grazing: Eighteen permittees graze up to 9,300 AUMs annually on five allotments. Livestock grazing typically runs from May through November.

Locatable Minerals: No records exist in geological literature that documents the occurrence or development of any hardrock minerals on or near the Sheyenne National Grassland.

Common Minerals: Some sand and gravel may exist in the area, but mining it would not prove economically viable.

Timber: No appreciable timber resources exist in the area.

Recreation: Wilderness designation would prohibit off-road motorized recreation and other motorized access. Walk-in hunting opportunities would increase. Handicapped and elderly access may be reduced, though not eliminated under a Wilderness designation.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Western prairie-fringed orchid: Effects from Wilderness designation would be beneficial due to the reduction in mortality caused by motorized or mechanized vehicles and equipment, restrictions that accompany Wilderness designations. However, effects would also be adverse on the Sheyenne National Grasslands because motorized support in the suppression of leafy spurge would be reduced, which may favor the spread of leafy spurge at the expense of the western prairie-fringed orchid.
- Peregrine falcon: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.
- Bald eagle: Effects from Wilderness designation would have a beneficial effect on wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitats. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access within Wilderness areas.

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around both aerial- and ground-nesting raptor sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Sheyenne National Grassland include: the greater prairie chicken and the plains sharp-tailed grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered falling under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the table at the very end of this document.

Management Obligations, Constraints, or Encumbrances

Mineral Leases and Subsurface Rights: No mineral leases exist in the area.

Existing Contracts and Agreements: A grazing and management agreement with the Sheyenne Valley Grazing Association is in effect through 2002. No power lines requiring special-use permits exist in the area. No other special-use permits are in force in the area.

Biotic Control Measures and Fire Protection: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Sheyenne National Grassland.

Effects on Adjacent Lands: About 300 to 400 acres of leafy spurge occur in the area. Regardless of this area's designation, noxious weed control methods must take place in the area. Any increase in recreational use resulting from designation would increase the use of adjacent roads. More people in the area would impact adjacent landowners.

McLeod: Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The closest designated Wilderness is the 4,155-acre Chase Lake Wilderness inside Chase Lake National Wildlife Refuge, about 130 miles northwest of the area. Chase Lake Wilderness represents a mixed-grass prairie ecosystem, while the McLeod area represents a tallgrass prairie ecosystem.

Representation of Landforms and Ecosystems: This area is representative of Northern tallgrass prairie, glacial deltaic plains, and hummocky sand dunes.

Biota: No species are dependent upon a Wilderness designation to remain viable in the area. A Wilderness designation may impede the control of leafy spurge, which adversely affects the western prairie-fringed orchid. Most other key species probably would benefit from a designation.

Public Interests and Concerns: The nearest metropolitan area, Fargo / Moorhead, with about 175,000 people, is only about an hour away by car. Some increase in visitation due to designation might be expected. Local livestock permittees would be concerned about their ability to graze their cattle and about access to range developments.

McLeod: Environmental Consequences

Management Prescription Allocations by Alternative:

Alternative 2	MA 6.1	9,120 acres
Alternative 3	MA 3.66	9,120 acres
Alternative 4	MA 3.66	9,120 acres
Alternative 5	MA 1.2	9,120 acres

Designation: Wilderness

Prescription: MA 1.2 Recommended Wilderness

Alternatives: 5

Environmental Consequences: Travel would be by nonmotorized, nonmechanical. Recreation opportunities would be those associated with the primitive and nonmotorized end of the spectrum such as walking, hiking, horseback riding, and nonmotorized hunting. Opportunities for discovery of cultural, historical, and paleontological resources would exist but interpretive opportunities may be limited or foregone. Wildlife would tend to benefit from reduced human activity, but some opportunities for fish and wildlife enhancement, and ecosystem restoration would be foregone. Grazing of livestock would continue where grazing was established at the time the wilderness is designated. Valid existing rights and leases would be recognized.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Maintenance of existing range developments would be permitted. Construction of new range developments would not be allowed to detract from the wilderness character of the area. The area may be Congressionally designated as administratively unavailable.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings will be increased while at the same time reducing opportunities for motorized recreation. If the area is withdrawn from leasing, oil and gas development opportunities would be foregone.

Designation: Wilderness

Prescription: MA 3.66 Ecosystem Restoration

Alternatives: 3 and 4

Environmental Consequences: Tall grass prairie communities will have a high degree of biodiversity. Sensitive plants and animal populations are maintained or restored. Habitat is provided for the greater prairie chicken in the tall-grass prairie and habitat for the sharp-tailed grouse is provided in the choppy sand hills. Habitat for the federally listed western prairie fringed orchid is provided in the wet meadows. Invasive species and other exotic plant species are reduced. Riparian areas, including seeps and springs, are properly functioning.

Mitigation Measures: These areas are managed to restore and maintain native plant and animal species and communities and ecological processes and functions for tall-grass prairie and oak savanna Motorized access would be restricted to roads and trails. Livestock grazing would be allowed at levels commensurate with prairie restoration. Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is possibility the area would temporarily lose its roadless character during ecosystem restoration activities.

Economic and Social Effects: Both motorized and nonmotorized opportunities would be available. Opportunities for those desiring solitude and isolation would be reduced temporarily while restoration activities were in progress. Once restoration was substantially completed, opportunities for isolation and solitude would be restored to approximately the present level. Livestock grazing would likely remain the primary economic benefit from the area but would be reduced during restoration activities. The primitive to semi-primitive character of the area could be temporarily altered but would be restored over time.

Designation: Non-wilderness

Prescription: MA 6.1Rangeland with Broad Resource Emphasis

Alternatives: 2

Environmental Consequences: Motorized access would be allowed unless specific areas are designated as closed or restricted to designated roads and trails. A full spectrum of motorized recreation opportunities would be allowed. Construction of recreation facilities, roads, power lines, and other features would be allowed. Livestock grazing would continue. Valid existing rights and leases would be recognized.

Mitigation Measures: Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is a high probability, if the area is designated MA 6.1 it would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased while at the same time opportunities for nonmotorized activities reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would be reduced. All users would be permitted the same motorized access. The area would continue to provide the existing mix of economic benefits while roadless primitive and semi-primitive character could be lost permanently making future wilderness designation unlikely.

Sheyenne: An Overview of the Affected Environment

The 14,540-acre Sheyenne area lies about 20 miles east of Lisbon, North Dakota, and four miles northeast of McLeod, North Dakota. Specifically, the Sheyenne area is located, either partly or fully, in: Township 134 North, Range 52 West, Sections 5-6, Township 134 North, Range 53 West, Section 1, Township 135 North, Range 52 West, Sections 4, 7, 9-10, 15-21 and 29-32, and Township 135 North, Range 53 West, Sections 12-13, 22-27 and 34-36. Access from Lisbon is east on State Highway 27 for about 18 miles, then north on Ransom County Road 53. The Sheyenne area is to the east.

The Sheyenne area lies within the Prairie Parkland (Temperate) Province ecoregion of the Prairie Division as identified by Robert G. Bailey (45-46). Its topography consists of drifting swales of tallgrass prairie, the result of an ancient glacial delta, which formed this sand dune region some 10,000 to 25,000 years ago. The elevation of the area ranges from between 1,039 to 1,072 feet above sea level.

Tallgrass and mixed-grass species thrive in the area, including big bluestem, little bluestem, switchgrass, and prairie junegrass. Tree species include bur oak, American elm, basswood, cottonwood, and aspen. A very large proportion of this area is considered oak savanna, a very rare and threatened prairie component in North America. Shrub species include willow buckbrush, sumac, and snowberry. The threatened western prairie-fringed orchid occurs on the national grassland, one of only a few meta-populations in the nation. Nationally, both tallgrass and oak savanna are tiny remnants of their historic occurrence. At least 42 rare or sensitive plant species (as identified by the Forest Service) exist on the national grassland. The last of just two appreciable populations of the greater prairie chicken in North Dakota are found on the Sheyenne National Grassland.

Wildlife include white-tailed deer, red fox, prairie grouse, many species of grassland songbirds, raptors, reptiles, and amphibians.

There are a number of range developments, including fencing, water structures (such as windmills), and two-track roads.

Typical recreation includes hiking, hunting, horseback riding, nature photography, off-highway vehicle recreation, snowmobiling, and camping. Canoeing on the nearby Sheyenne River is popular. The North Country National Scenic Trail cuts through this area. Livestock grazing is a seasonal use.

Sheyenne: Capability Analyses

Environment

Opportunity for Solitude and Serenity: Opportunities for solitude and serenity are quite high. There is little or no background noise and limited motorized activity. Some people, however, may be encountered in the area. This rolling, vegetated, choppy-dune oak savanna offers isolation and a vast quiet environment.

Natural Appearance and Integrity: A natural appearance is evident, representative of the characteristic choppy-dune oak savanna. Most of the ecological processes are intact, including rapidly moving wildfire, although suppression is conducted as quickly as possible. Signs of livestock grazing are evident. Recreational use is also evident, including spring birdwatching, autumn hunting, and summer camping, and horseback riding. Developments in the area do suggest human encroachment. The area shows about 36 miles of exterior fence, 35 miles of interior fence, 17 windmills, 13 dugouts, five fenced exclosures and 10 stock tanks. Some people consider windmills to be scenic in a rustic sense, a reminder of an earlier era. Noxious and exotic plants have encroached into the area, reducing the natural integrity of the native tallgrass ecosystem. Some old shelterbelt plantings also may be seen in the area.

Challenge: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Sheyenne National Grassland.

Recreation Opportunities: Opportunities for recreation include nature study, photography, wildflower identification, hunting, hiking, and camping. The North Country National Recreation Trail cuts through this area and is increasingly becoming popular with the recreational public.

Special Features

Unique Characteristics and Scenic Features: Some archeological sites may exist, especially representative of prehistoric and homesteading era occupation. The oak savanna is rare nationally and can be very scenic, especially seasonally.

Opportunities for Outdoor Education: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Sheyenne National Grassland.

Manageability

Size and Shape: The 14,540-acre Sheyenne area is more or less rectangular in shape. Two 160-acre inholdings exist. The area is about six miles wide east to west and about five mile long north to south.

Potential to Manage Boundaries: Boundary management would be relatively easy, since there are only limited entry points and the area is entirely fenced on the exterior. Signing the area as a Wilderness may prove expensive and maintenance of the signing could be time-consuming, since the exterior fence is about 36 miles in length.

Sheyenne: Availability Analyses

Resource Values and Potentials

Oil and Gas: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Sheyenne National Grassland.

Coal: No coal resources exist on the Sheyenne National Grassland.

Livestock Grazing: Twelve permittees graze up to 8,000 AUMs annually in seven allotments.

Locatable Minerals: No records exist in geological literature that documents the occurrence or development of any hardrock minerals on or near the Sheyenne National Grassland.

Common Minerals: Some sand and gravel may exist in the area, but mining it would not prove economically viable.

Timber: The thinning of hardwood stands could prove economically viable at some point. Some cottonwood could be harvested for pallet mills. No sales have ever been conducted in the area; however, past interest has been expressed. Perhaps 1,000 acres of harvestable timber exists in the area.

Recreation: Wilderness designation would prohibit off-road motorized recreation and other motorized access. Walk-in hunting opportunities would increase. Handicapped and elderly access may be reduced, though not eliminated under a Wilderness designation. Overall, more recreational use could be expected, as Wilderness designation would provide the area with a more visible public profile. The designation, coupled with the North Country National Recreation Trail in the area, could increase recreational use dramatically.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Western prairie-fringed orchid: Effects from Wilderness designation would be beneficial due to the reduction in mortality caused by motorized or mechanized vehicles and equipment, restrictions that accompany Wilderness designations. However, effects would also be adverse on the Sheyenne National Grasslands because motorized support in the suppression of leafy spurge would be reduced, which may favor the spread of leafy spurge at the expense of the western prairie-fringed orchid.
- Peregrine falcon: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.
- Bald eagle: Effects from Wilderness designation would have a beneficial effect on wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitats. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access within Wilderness areas.

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around both aerial- and ground-nesting raptor sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Sheyenne National Grassland include the greater prairie chicken and the plains sharp-tailed grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered falling under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the table at the very end of this document.

Management Obligations, Constraints, or Encumbrances

Mineral Leases and Subsurface Rights: No mineral leases exist in the area.

Existing Contracts and Agreements: A grazing and management agreement with the Sheyenne Valley Grazing Association is in effect through 2002. No power lines requiring special-use permits exist in the area. No other special-use permits are in force in the area.

Biotic Control Measures and Fire Protection: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Sheyenne National Grassland.

Effects on Adjacent Lands: About 4,000 to 5,000 acres of leafy spurge occur in the area. Regardless of this area's designation, noxious weed control methods must take place in the area. The potential always exists for fast-moving wildfire in the area. Any increase in recreational use resulting from designation would increase the use of adjacent roads. More people in the area would impact adjacent landowners.

Sheyenne: Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The closest designated Wilderness is the 4,155-acre Chase Lake Wilderness inside Chase Lake National Wildlife Refuge, about 125 miles northwest of the area. Chase Lake Wilderness represents a mixed-grass prairie, while the Sheyenne area represents tallgrass prairie.

Representation of Landforms and Ecosystems: This area represents the Northern tallgrass prairie, with hummocky and choppy sandhills, a small area of river terraces, and a small area of deltaic plains.

Biota: No species are dependent upon a Wilderness designation to remain viable in the area. A Wilderness designation may impede the control of leafy spurge, which adversely affects the western prairie-fringed orchid. Most other key species probably would benefit from a designation.

Public Interests and Concerns: The nearest metropolitan area, Fargo/Moorhead, with about 175,000 people, is only about an hour away by car. Some increase in visitation due to designation might be expected. Local livestock permittees would be concerned about their

ability to graze their cattle and about access to range developments. A consortium of groups recently published Badlands on the Brink. The publication calls for more Wilderness areas in North Dakota. The Sheyenne area was one of two areas the groups identified as desirable as Wilderness under the Eastern Wilderness Act.

Two proposed Research Natural Areas (RNAs) of between 500 to 600 acres exist in the area. These proposals are for scenic oak savanna.

A considerable number of people and organizations have called on the Forest Service to designate a grassland Wilderness somewhere on the Northern Great Plains. Currently, the Forest Service provides for no grassland Wilderness areas anywhere within the National Forest System.

Sheyenne: Environmental Consequences

Management Prescription Allocations by Alternative:

Alternative 2:	MA 6.1	14,540 acres
Alternative 3:	MA 1.31	4,560 acres
	MA 2.2	370 acres
	MA 3.64	40 acres
	MA 3.66	9,570 acres
Alternative 4:	MA 2.2	370 acres
	MA 3.66	7,630 acres
	MA 4.32	140 acres
	MA 5.12	6,400 acres
Alternative 5:	MA 1.2	14,540 acres

Designation: Wilderness

Prescription: MA 1.2 Recommended Wilderness

Alternatives: 5

Environmental Consequences: Travel would be by nonmotorized, nonmechanical. Recreation opportunities would be those associated with the primitive and nonmotorized end of the spectrum such as walking, hiking, horseback riding, and nonmotorized hunting. Opportunities for discovery of cultural, historical, and paleontological resources would exist but interpretive opportunities may be limited or foregone. Wildlife would tend to benefit from reduced human activity, but some opportunities for fish and wildlife enhancement, and ecosystem restoration would be foregone. Grazing of livestock would continue where grazing was established at the time the wilderness is designated. Valid existing rights and leases would be recognized.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Maintenance of existing range developments would be permitted. Construction of new range developments would not be allowed to detract from the wilderness character of the area. The area may be Congressionally designated as administratively unavailable.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings will be increased while at the same time reducing opportunities for motorized recreation. If the area is withdrawn from leasing, oil and gas development opportunities would be foregone.

Designation: Non-wilderness

Prescription: MA 1.31 Backcountry Recreation Nonmotorized

Alternatives: 3

Environmental Consequences: With rare exceptions, travel is nonmotorized. Recreation opportunities would be those associated with the primitive and nonmotorized end of the spectrum such as walking, hiking, horseback riding, and nonmotorized hunting. Overall, wildlife would tend to benefit from reduced human activity. Opportunities for discovery of cultural, historical, and paleontological resources would exist but interpretive opportunities would be limited or forgone. Livestock grazing would continue as present. Valid existing rights would be recognized.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Construction of new range developments would not be allowed to detract from the semi-primitive character of the area.

Economic and Social Effects: Opportunities for nonmotorized activities would be increased while at the same time reducing opportunities for motorized activities. Those accustomed to accessing the area by vehicle might resent vehicle restrictions. The area would provide a mix of economic benefits.

Designation: Non-wilderness

Prescription: MA 2.2 Research Natural Areas

Alternatives: 3 and 4

Environmental Consequences: With rare exceptions, travel is nonmotorized. Recreation opportunities would be those associated with the primitive and semi-primitive end of the spectrum such as walking and hiking. Uses that maintain or improve the ecological characteristics for which the RNA was designated would be allowed. Livestock grazing would continue as present. The area would be made unavailable for leasing until establishment of the RNA, at which time it would be withdrawn from mineral entry.

Mitigation Measures: Motorized travel is limited to administrative, law enforcement, emergency, and scientific purposes. Existing roads would be closed or obliterated unless necessary for administrative, scientific, or valid private access. Recreational use would be restricted if is hinders achievement of the desired condition for the RNA. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Construction of new range developments would not be allowed to detract from the semi-primitive character of the area.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings will be increased while at the same time reducing opportunities for motorized recreation. Those accustomed to accessing the area by motorized means might resent vehicle restrictions. If the area is withdrawn from leasing, oil and gas development opportunities would be foregone.

Designation: Non-Wilderness

Prescription: MA 3.64 Special Plant and Wildlife Habitat

Alternatives: 3

Environmental Consequences: Suitable habitat will be maintained or enhanced for the full spectrum of plant and wildlife species, guilds, and communities. Riparian areas (streams, seeps, springs, fens) are managed so they maintain their hydrologic regimes. Broadleaf deciduous trees characterize woodlands and hardwood draws. Prairie landscapes will have a diversity of warm season and cool season grasses and forbs. Plant communities of high species diversity will act as a seed source for other areas within the landscape where diversity may be reduced.

Mitigation Measures: These areas are managed to maintain and enhance specific plant and wildlife species of concern and plant and wildlife communities. Habitat enhancement is encouraged. Motorized access would be limited to administrative use. Although grazing could occur to meet management objectives, the area would normally be considered unsuitable for grazing.

Economic and Social Effects: Motorized recreation opportunities would not be available. Opportunities for those desiring solitude and isolation would be about the same as present. Opportunities for discovery and interpretation of ecological, biological, cultural, historic, and paleontological resources would be good. Livestock grazing would likely remain the primary economic benefit from the area but would be reduced from present levels. The primitive to semi-primitive character of the area would be substantially retained.

Designation: Wilderness

Prescription: MA 3.66 Ecosystem Restoration

Alternatives: 3 and 4

Environmental Consequences: Tall grass prairie communities will have a high degree of biodiversity. Sensitive plants and animal populations are maintained or restored. Habitat is provided for the greater prairie chicken in the tall-grass prairie and habitat for the sharp-tailed grouse is provided in the choppy sand hills. Habitat for the federally listed western prairie fringed orchid is provided in the wet meadows. Invasive species and other exotic plant species are reduced. Riparian areas, including seeps and springs, are properly functioning.

Mitigation Measures: These areas are managed to restore and maintain native plant and animal species and communities and ecological processes and functions for tall-grass prairie and oak savanna Motorized access would be restricted to roads and trails. Livestock grazing would be allowed at levels commensurate with prairie restoration. Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is possibility the area would temporarily lose its roadless character during ecosystem restoration activities.

Economic and Social Effects: Both motorized and nonmotorized opportunities would be available. Opportunities for those desiring solitude and isolation would be reduced temporarily while restoration activities were in progress. Once restoration was substantially completed, opportunities for isolation and solitude would be restored to approximately the present level. Livestock grazing would likely remain the primary economic benefit from the area but would be reduced during restoration activities. The primitive to semi-primitive character of the area could be temporarily altered but would be restored over time.

Designation: Wilderness

Prescription: MA 4.32 Dispersed Recreation

Alternatives: 3 and 4

Environmental Consequences: Generally, the area appears natural over large areas with small-scale modifications that blend with the areas natural features. Biological communities complement the recreational values. The potential for contact with other users is moderate to high. The opportunity to participate in desired recreational activities is more important than isolation and solitude. Motorized access would be allowed unless specific areas are designated as closed or restricted roads and trails. A full spectrum of motorized recreation activities would be allowed. Livestock grazing would continue. Valid existing rights and leases would be recognized.

Mitigation Measures: These areas are managed for recreational opportunities and scenic qualities adjacent to high use developed recreation sites and bodies of water. Construction of roads, OHV trails, power lines, recreation facilities, and other features would be permitted based on their impact on recreational opportunities in the area. Mineral leasing and development are permitted.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings may be decreased over time. The area would continue to provide the existing mix of economic benefits while roadless primitive and semi-primitive character could be lost permanently making future wilderness designation unlikely.

Designation: Non-wilderness

Prescription: MA 5.12 General Forest and Rangelands: Range Vegetation Emphasis

Alternatives: 3 and 4

Environmental Consequences: Motorized access would be allowed unless specific areas are designated as closed or restricted to designated roads and trails. A full spectrum of motorized recreation opportunities would be allowed. Construction of recreation facilities, roads, power lines, and other features would be allowed. Livestock grazing would continue. Valid existing rights and leases would be recognized.

Mitigation Measures: Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is a high probability, if the area is designated MA 5.12 it would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased while at the same time opportunities for nonmotorized activities reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would be reduced. All users would be permitted the same motorized access. The area would

continue to provide the existing mix of economic benefits while roadless primitive and semi-primitive character would be lost permanently making future wilderness designation unlikely.

Designation: Non-wilderness

Prescription: MA 6.1 Rangeland with Broad Resource Emphasis

Alternatives: 5

Environmental Consequences: Motorized access would be allowed unless specific areas are designated as closed or restricted to designated roads and trails. A full spectrum of motorized recreation opportunities would be allowed. Construction of recreation facilities, roads, power lines, and other features would be allowed. Livestock grazing would continue. Valid existing rights and leases would be recognized.

Mitigation Measures: Although, mitigation measures would be applied to meet grassland-wide plan standards and guidelines, there is a high probability, if the area is designated MA 6.1 it would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased while at the same time opportunities for nonmotorized activities reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would be reduced. All users would be permitted the same motorized access. The area would continue to provide the existing mix of economic benefits while roadless primitive and semi-primitive character could be lost permanently making future wilderness designation unlikely.

Venlo: An Overview of the Affected Environment

The 5,320-acre Venlo area lies about 11 miles east of Lisbon, North Dakota, and four miles northwest of McLeod, North Dakota. Specifically, the Venlo area is located, either partly or fully, in: Township 135 North, Range 54 West, Section 25-26 and 36, Township 135 North, Range 53 West, Section 28-33, and Township 134 North, Range 53 West, Sections 4-6. Access from Lisbon is 15 miles east via State Highway 27. The area lies north of the highway.

The Venlo area lies within the Prairie Parkland (Temperate) Province ecoregion of the Prairie Division as identified by Robert G. Bailey (45-46). Its topography consists of drifting swales of tallgrass prairie, the result of an ancient glacial delta, which formed this sand dune region some 10,000 to 25,000 years ago. The elevation of the area ranges from between 1,061 and 1,072 feet above sea level.

Tallgrass and mixed-grass species thrive in the area, including big bluestem, little bluestem, switchgrass, and prairie junegrass. Tree species include bur oak and aspen. Shrub species include willow buckbrush. The threatened western prairie-fringed orchid occurs on the national grassland, one of only a few meta-populations in the nation. Nationally, both tallgrass and oak savanna are tiny remnants of their historic occurrence. At least 42 rare or sensitive plant species (as identified by the Forest Service) exist on the national grassland. The last of just two appreciable populations of the greater prairie chicken in North Dakota are found on the Sheyenne National Grassland.

Wildlife include white-tailed deer, red fox, prairie grouse, many species of grassland songbirds, raptors, reptiles, and amphibians.

There are a number of range developments, including fencing, water structures (such as windmills), and two-track roads.

Typical recreation includes hiking, hunting, horseback riding, snowmobiling, nature photography, and camping. Canoeing on the nearby Sheyenne River is popular. The North Country National Scenic Trail cuts through the area. Livestock grazing is a seasonal use.

Venlo: Capability Analyses

Environment

Opportunity for Solitude and Serenity: Opportunities for solitude and serenity are relatively low. The adjacent highway and railroad line create background noise. Farmsteads may be visible from the outer edges of the area. Some isolation can be found in the sand-dune landscape.

Natural Appearance and Integrity: A natural appearance is evident, representative of the characteristic sand-dune grassland pattern. Most of the ecological processes are intact, including rapidly moving wildfire, although suppression is conducted as quickly as possible. Signs of livestock grazing are evident. Some recreational use is also evident, including spring birdwatching and autumn hunting. Plantings of green ash, cottonwood, and conifer trees can be scenic but are artificial and can detract from the native appearance. The hummocky topography sprinkled with sloughs is natural and can be scenic. Developments do suggest human encroachment. The area shows about 14 miles of exterior fence, 17 miles of interior fence, seven windmills, five dugouts, two fenced exclosures, and six stock tanks. Some people consider windmills to be scenic in a rustic sense, a reminder of an earlier era. Noxious and exotic plants have encroached into the area, reducing the natural integrity of the native tallgrass ecosystem.

Challenge: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Sheyenne National Grassland.

Recreation Opportunities: Opportunities for recreation include nature study, photography, hunting, hiking, and camping. The North Country National Recreation Trail cuts through the Venlo area.

Special Features

Unique Characteristics and Scenic Features: Some archeological sites may exist in the area, especially representative of prehistoric and homesteading era occupation. The area is fairly scenic, though not remarkable. The sand-dune landscape of swales and lowlands may hold some interest for some people.

Opportunities for Outdoor Education: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Sheyenne National Grassland.

Manageability

Size and Shape: The 5,320-acre Venlo area is more or less triangular in shape. One inholding of about 160 acres exists in the area. The Venlo area is about four miles wide east to west and three miles long north to south.

Potential to Manage Boundaries: Boundary management under a Wilderness designation would be relatively easy. The exterior fence line that surrounds the area could be signed quite easily, though some expense would be associated with such signing. Maintenance would be moderately time-consuming.

Venlo: Availability Analyses

Resource Values and Potentials

Oil and Gas: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Sheyenne National Grassland.

Coal: No coal resources exist on the Sheyenne National Grassland.

Livestock Grazing: Four permittees graze up to 3,500 AUMs annually in four allotments. Grazing typically ranges from May through November.

Locatable Minerals: No records exist in geological literature that documents the occurrence or development of any hardrock minerals on or near the Sheyenne National Grassland.

Common Minerals: Some sand and gravel may exist in the area, but mining it would not prove economically viable.

Timber: No merchantable timber exists in the area.

Recreation: Wilderness designation would prohibit off-road motorized recreation and other motorized access. Walk-in hunting opportunities would increase. Handicapped and elderly access may be reduced, though not eliminated under a Wilderness designation.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Western prairie-fringed orchid: Effects from Wilderness designation would be beneficial due to the reduction in mortality caused by motorized or mechanized vehicles and equipment, restrictions that accompany Wilderness designations. However, effects would also be adverse on the Sheyenne National Grasslands because motorized support in the suppression of leafy spurge would be reduced, which may favor the spread of leafy spurge at the expense of the western prairie-fringed orchid.
- Peregrine falcon: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.
- Bald eagle: Effects from Wilderness designation would have a beneficial effect on wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitats. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access within Wilderness areas.

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around both aerial- and ground-nesting raptor sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Sheyenne National Grassland include: the greater prairie chicken and the plains sharp-tailed grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered falling under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the table at the very end of this document.

Management Obligations, Constraints, or Encumbrances

Existing Contracts and Agreements: A grazing and management agreement with the Sheyenne Valley Grazing Association is in effect through 2002. No power lines requiring special-use permits exist in the area. No other special-use permits are in force in the area.

Biotic Control Measures and Fire Protection: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Sheyenne National Grassland.

Effects on Adjacent Lands: About 1,500 acres of leafy spurge occur in the area. Regardless of this area's designation, noxious weed control methods must take place in the area. The potential always exists for fast-moving wildfire in the area. Any increase in recreational use resulting from designation would increase the use of adjacent roads. More people in the area would impact adjacent landowners.

Venlo: Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The closest designated Wilderness is the 4,155-acre Chase Lake Wilderness inside Chase Lake National Wildlife Refuge, about 123 miles northwest of the area. Chase Lake Wilderness represents a mixed-grass prairie, while the Sheyenne area represents tallgrass prairie.

Representation of Landforms and Ecosystems: This area represents the Northern tallgrass prairie and hummocky sandhills.

Biota: No species are dependent upon a Wilderness designation to remain viable in the area. A Wilderness designation may impede the control of leafy spurge, which adversely affects the western prairie-fringed orchid. Most other key species probably would benefit from a designation.

Public Interests and Concerns: The nearest metropolitan area, Fargo/Moorhead, with about 175,000 people, is only about an hour away by car. Some increase in visitation due to designation might be expected. Local livestock permittees would be concerned about their ability to graze their cattle and about access to range developments.

A considerable number of people and organizations have called on the Forest Service to designate a grassland Wilderness somewhere on the Northern Great Plains. Currently, the Forest Service provides for no grassland Wilderness areas anywhere within the National Forest System.

Venlo: Environmental Consequences

Management Prescription Allocations by Alternative:

Alternative 2:	MA 6.1	5,320 acres
Alternative 3:	MA 3.66	5,320 acres
Alternative 4:	MA 3.66	4,880 acres
	MA 4.32	20 acres
	MA 5.12	420 acres
Alternative 5:	MA 1.2	5,320 acres

Designation: Wilderness

Prescription: MA 1.2 Recommended Wilderness

Alternatives: 5

Environmental Consequences: Travel would be by nonmotorized, nonmechanical. Recreation opportunities would be those associated with the primitive and nonmotorized end of the spectrum such as walking, hiking, horseback riding, and nonmotorized hunting. Opportunities for discovery of cultural, historical, and paleontological resources would exist but interpretive opportunities may be limited or foregone. Wildlife would tend to benefit from reduced human activity, but some opportunities for fish and wildlife enhancement, and ecosystem restoration would be foregone. Grazing of livestock would continue where grazing was established at the time the wilderness is designated. Valid existing rights and leases would be recognized.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Maintenance of existing range developments would be permitted. Construction of new range developments would not be allowed to detract from the wilderness character of the area. The area may be Congressionally designated as administratively unavailable.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings will be increased while at the same time reducing opportunities for motorized recreation. If the area is withdrawn from leasing, oil and gas development opportunities would be foregone.

Designation: Wilderness

Prescription: MA 3.66 Ecosystem Restoration

Alternatives: 3 and 4

Environmental Consequences: Tall grass prairie communities will have a high degree of biodiversity. Sensitive plants and animal populations are maintained or restored. Habitat is provided for the greater prairie chicken in the tall-grass prairie and habitat for the sharp-tailed grouse is provided in the choppy sand hills. Habitat for the federally listed western prairie fringed orchid is provided in the wet meadows. Invasive species and other exotic plant species are reduced. Riparian areas, including seeps and springs, are properly functioning.

Mitigation Measures: These areas are managed to restore and maintain native plant and animal species and communities and ecological processes and functions for tall-grass prairie and oak savanna Motorized access would be restricted to roads and trails. Livestock grazing would be allowed at levels commensurate with prairie restoration. Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is possibility the area would temporarily lose its roadless character during ecosystem restoration activities.

Economic and Social Effects: Both motorized and nonmotorized opportunities would be available. Opportunities for those desiring solitude and isolation would be reduced temporarily while restoration activities were in progress. Once restoration was substantially completed, opportunities for isolation and solitude would be restored to approximately the present level. Livestock grazing would likely remain the primary economic benefit from the area but would be reduced during restoration activities. The primitive to semi-primitive character of the area could be temporarily altered but would be restored over time.

Designation: Wilderness

Prescription: MA 4.32 Dispersed Recreation

Alternatives: 3 and 4

Environmental Consequences: Generally, the area appears natural over large areas with small-scale modifications that blend with the areas natural features. Biological communities complement the recreational values. The potential for contact with other users is moderate to high. The opportunity to participate in desired recreational activities is more important than isolation and solitude. Motorized access would be allowed unless specific areas are designated as closed or restricted roads and trails. A full spectrum of motorized recreation activities would be allowed. Livestock grazing would continue. Valid existing rights and leases would be recognized.

Mitigation Measures: These areas are managed for recreational opportunities and scenic qualities adjacent to high use developed recreation sites and bodies of water. Construction of roads, OHV trails, power lines, recreation facilities and other features would be permitted based on their impact on recreational opportunities in the area. Mineral leasing and development are permitted.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings may be decreased over time. The area would continue to provide the existing mix of economic benefits while roadless primitive and semi-primitive character could be lost permanently making future wilderness designation unlikely.

Designation: Non-wilderness

Prescription: MA 5.12 General Forest and Rangelands: Range Vegetation Emphasis

Alternatives: 3 and 4

Environmental Consequences: Motorized access would be allowed unless specific areas are designated as closed or restricted to designated roads and trails. A full spectrum of motorized recreation opportunities would be allowed. Construction of recreation facilities, roads, power lines, and other features would be allowed. Livestock grazing would continue. Valid existing rights and leases would be recognized.

Mitigation Measures: Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is a high probability, if the area is designated MA 5.12 it would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased while at the same time opportunities for nonmotorized activities reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would be reduced. All users would be permitted the same motorized access. The area would continue to provide the existing mix of economic benefits while roadless primitive and semi-primitive character would be lost permanently making future wilderness designation unlikely.

Designation: Non-wilderness

Prescription: MA 6.1Rangeland with Broad Resource Emphasis

Alternatives: 5

Environmental Consequences: Motorized access would be allowed unless specific areas are designated as closed or restricted to designated roads and trails. A full spectrum of motorized recreation opportunities would be allowed. Construction of recreation facilities, roads, power lines, and other features would be allowed. Livestock grazing would continue. Valid existing rights and leases would be recognized.

Mitigation Measures: Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is a high probability, if the area is designated MA 6.1 it would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased while at the same time opportunities for nonmotorized activities reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would be reduced. All users would be permitted the same motorized access. The area would continue to provide the existing mix of economic benefits while roadless primitive and semi-primitive character could be lost permanently making future wilderness designation unlikely.

Criteria Common to All Roadless Areas on this Administrative Unit

Capability Criteria

Challenge: Summer temperatures can exceed 100° Fahrenheit in an area of few easily located and drinkable water sources. Winter temperatures can drop to more than -40° Fahrenheit with wind-chill factors well in excess of -100° Fahrenheit. During winter, blowing snow can create white-out conditions, and can lead to death for those get lost. The open terrain can be deceptive and may disorient the visitor's ability to mark his or her directions. No developed trails exist. Seasonal flooding creates water hazards and may test a visitor's skill in adapting to this natural phenomenon. A great many insects are found around the many wetlands and sloughs and can be irritating.

Opportunities for Outdoor Education: A visitor should find plenty of features to stimulate curiosity: glacial-lake sand dunes, grassland ecosystems, grassland flora and fauna, sandy blowouts, shifting weather patterns and cloud types, and clear nights with excellent views of stars. Skills in maneuvering an open terrain, using a compass, taking precautions for insect bites, heat stroke (and frostbite or freezing to death in the winter), setting up a primitive campsite, and outdoor cooking may all test and develop a visitor's understanding of the outdoors.

Availability Criteria

Oil and Gas: No exploratory drilling has ever been conducted on or near the Sheyenne National Grassland. The closest known drilling occurred about 20 miles to the west, but it led to no discoveries. The Reasonably Foreseeable Development Scenario for the Sheyenne National Grassland projects one exploratory well in the next 10 to 15 years, but no discovery or development.

Biotic Control Measures and Fire Protection: Chemical, biological and mechanical control methods are used to stem the expansion of undesirable plant species, such as leafy spurge. Wildfire suppression would be addressed in Wilderness management plans that would be developed if any of the roadless areas are designated by Congress as Wilderness.

Roadless Areas on Thunder Basin National Grassland

Douglas Ranger District

Cow Creek: An Overview of the Affected Environment

The 17, 500-acre Cow Creek area is located about 38 miles northeast of Douglas, Wyoming, and 13 miles east of Bill, Wyoming. Specifically, Cow Creek is located, either fully or partly, in: T. 37 N., R. 67 W., Section 4, T. 37 N., R. 68 W., Sections 2 and 3, T. 38 N., R. 67 W., Sections 5, 6, 17-19 and 29-30, and T. 39 N., R. 67 W., Section 32 and T. 38 N., R. 68 W., Sections 1, 2, 7-15 and 17-35. Access to Cow Creek is: from Bill, take Dull Center Road (Converse County Road 38) 10 miles east, then take Forest Development Road 959 (Converse County Road 45) another three miles east.

The Cow Creek area lies within the Great Plains-Palouse Dry Steppe Province ecoregion of the Temperate Steppe Division as identified by Robert G. Bailey (71). This area lies within an unglaciated portion of the Missouri Basin, and is characterized by rolling to undulating hills, rocky escarpments and buttes, and is dissected by mostly easterly flowing drainages. Scoria buttes in this area are near the southern-most extent of scoria buttes in Wyoming. Geologically, this area is unique. A resistant sandstone cap has protected softer strata of shale, sandstone, claystone and siltstone from eroding. Elevation is around 4,500 to 5,000 feet above sea level.

This area is a mixed-grass prairie, blended with sagebrush, cottonwood, greasewood, ponderosa pine, and Rocky Mountain juniper. Ponderosa pine is patchy and scattered about the lower slopes of buttes and atop mesas. Wildlife includes prairie dogs, pronghorn antelope, occasional elk, mule and white-tailed deer, grassland birds, an abundance of raptors (such as bald and golden eagles), reptiles, and amphibians.

Current recreation includes hiking, viewing scenery and wildlife, dispersed camping, horseback riding, prairie dog shooting, hunting, and off-highway motorized recreation.

Livestock grazing and big game hunting are the two predominate uses in the area.

Cow Creek: Capability Analyses

Environment

Opportunity for Solitude and Serenity: Opportunities for solitude and serenity are very high. The broken terrain and buttes and bluff topography allow people to isolate themselves and disappear from view. Current use is relatively low. The population of people living in the area is very low.

Natural Appearance and Integrity: The area is characterized by gently sloping country as well as rugged, isolated country, both of which display incised drainages. Overall, it is relatively unmarked by the signs of people. Most of the ecological processes, including seasonal flash flooding, remain intact. Signs of livestock grazing are evident. Cattle frequent the area intermittently throughout the year. Grazing is conducted on a rotational basis. The central sections of Cow Creek display cottonwood in the drainages. Elsewhere, sagebrush is quite abundant. The vegetative integrity is quite high, although some exotic and noxious plants can be found. Fence densities are low. Over time, significant losses in perennial stream flows have occurred. Fifteen water impoundments, three water wells, three windmills, and two-track roads can be found. Oil and gas activity can be seen adjacent to the area. FDR 958 enters just into the area on the east and south. This native-surfaced road is crowned and ditched. It would have to be obliterated or reconstructed to trail standards under a Wilderness designation.

Challenge: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Thunder Basin National Grassland.

Recreation Opportunities: Opportunities exist for hiking across an isolated grassland area. Currently, hunting pressure in the fall, especially for big game, is high. Under a Wilderness designation, hunting would be permitted on a walk-in basis only. Any motorized activities, including off-highway motorized recreation, would be prohibited, except for those authorized under grazing permits for grazing management needs. Designation may also increase the potential for outfitting into the area, including hiking, hunting, and horseback riding.

Special Features

Unique Characteristics and Scenic Features: This area rates as one of the highest scenic areas on the Thunder Basin National Grassland. Some spectacular views of the surrounding plains and Miller Hills are available from the top of the area's mesas. The terrain within the area is often rugged and visually attractive and includes color-banded buttes. Stands of ponderosa pine and scattered cottonwoods along drainages add to the grassland setting. Cottonwoods are scattered along such creeks and draws as Deer Creek, Bobcat Creek, Coal Draw, and Piney Creek. These sites can be very scenic, especially in the autumn. Cottonwood regeneration is sparse, however, possibly due to past livestock grazing and cottonwood regeneration cycles.

Fossils found in Fort Union Formation and Lance Formation deposits represent the Paleocene (65 to 45 million years ago) and Late Cretaceous (80 to 65 million years ago) periods.

Opportunities for Outdoor Education: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Thunder Basin National Grassland.

Manageability

Size and Shape: The 17,500-acre Cow Creek area is more or less rectangular in shape. Two inholdings are located within the area. One inholding of about 320 acres is in private hands while the other inholding of about 640 acres is state school land. Cow Creek is generally about seven miles wide east to west and generally about four to five miles long north to south. The area is buffered on the north and west by contiguous Forest System lands. Private lands lie to the east and south. The boundary on the north, west, and south would be 100 feet within the existing Forest Development Roads that circumvent the area. Existing developments pose only minor management challenges.

Potential to Manage Boundaries: Management potential is high. Trailheads could be developed at a couple of access points. The potential to expand interpretation and environmental education opportunities is also high. Major access points could easily be signed. Under a Wilderness designation, however, illegal motorized trespass may be difficult to prevent, especially because of the rolling nature of the area. Maintenance of windmills via motorized units may have to be authorized until opportunities arise during which the windmills can be replaced with water sources that lessen the imprint of people.

On most of both the eastern and southern ends, private land abuts the Cow Creek area, which may create management concerns resulting from land use on the private lands. Management within the area itself should pose no significant management challenges. The buttes and rugged terrain of the area would likely make management of this area under a Wilderness designation rather easy. Some surveying and posting of boundaries would be necessary under a Wilderness designation. A Wilderness management plan would have to be developed to address such topics as trails, signing, interpretation, and motorized authorizations for grazing permittees.

Cow Creek: Availability Analyses

Resource Values and Potentials

Oil and Gas: Oil and gas production is occurring adjacent to the area. Part of the area is currently under no-surface occupancy stipulations. Past exploration has occurred; however, no production is occurring at present. Oil and gas potential for the area is rated as high. Leased areas in the western part of the area, which do not have no surface occupancy stipulations, could result in road and well development requests. Such developments would be of a short-term nature and restoration of the road and well pads would be required following production.

Coal: This area is outside of moderate to high potential for coal development as defined by Bureau of Land Management specialists.

Livestock Grazing: Livestock grazing has been the dominant use of the area since the late 1800s. Livestock grazing would continue under a Wilderness designation but would be continued as a compatible land use with Wilderness. Adjustments in allotment management plans would be made to meet Wilderness objectives. Portions of four allotments exist within the area.

Locatable Minerals: Uranium is the primary locatable mineral found in the area. Past exploration for uranium has taken place; however, no claims are active in the area now.

Common Minerals: The potential for common minerals is very low. Isolated gravel pits have historically been located in road cuts. The commercial marketability of these minerals in the area is very low.

Timber: Some ponderosa pine and Rocky Mountain juniper can be found on some of the slopes of area bluffs. Cottonwood can be found along some streams and draws. No suitable timber lands are found in the area.

Recreation: Currently, motorized big-game hunting dominates recreational use in the area. Wilderness designation would likely reduce big-game harvest levels, especially for pronghorn, at least in the short term. Long-term harvest levels may level out as hunters disperse elsewhere on the national grassland. Walk-in hunting would likely increase. Other recreation could increase, including hiking and nature study. Wilderness designation would give the area a higher public profile, which could increase visitation to the area.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Ute ladies-tresses: Effects from Wilderness designation would be beneficial due to a reduction in mortality or damage caused by motorized and mechanical vehicles and equipment.
- Peregrine falcon: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.

Plant and Animal Species,cont.

- Bald eagle: Effects from Wilderness designation would have a beneficial effect on the nesting success and wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.
- Mountain plover: A Wilderness designation would likely reduce prairie dog shooting, thereby increasing the expansion of prairie dog towns which, in turn, enhances mountain plover habitat. Designation would reduce motorized activities that can disturb mountain plovers and destroy their nests.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitats. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access within Wilderness areas.

Black-tailed prairie dogs and species closely associated with prairie dog towns and colonies: Prairie dogs and prairie dog-associated species would largely benefit from Wilderness designations, primarily because the poisoning of prairie dog towns, accomplished mainly with motorized support, would be greatly reduced. In addition, fewer prairie dog shooters would frequent prairie dog towns in Wilderness areas due to restrictions on motorized access. However, prairie dogs and associated species may be adversely affected by a Wilderness designation due to the reduction anticipated in predator control, which would result from motorized restrictions. Finally, the mountain plover, which favors areas affected by fire, may be adversely affected due to reduced motorized support in conducting prescribed fires.

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around both aerial- and ground-nesting raptor sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Thunder Basin National Grassland include: the black-tailed prairie dog, plains sharp-tailed grouse and the sage grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered falling under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the table at the very end of this document.

Management Obligations, Constraints, or Encumbrances

Mineral Leases and Subsurface Rights: No private subsurface minerals ownership exists in the area.

Existing Contracts and Agreements: This area is permitted under a grazing agreement with the Thunder Basin Grazing Association. The Thunder Basin Grazing Association issues permits to four members who operate ranches that adjoin the area.

Biotic Control Measures and Fire Protection: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Thunder Basin National Grassland.

Effects on Adjacent Lands: Strategies to identify public/private interface boundaries and to educate the public about landownership patterns may be needed. Some control of noxious or exotic plants is currently done in the area and may need to be conducted under a Wilderness designation.

Under a Wilderness designation, vehicles would be used, but only in extreme situations, such as for fire suppression or as specifically authorized in grazing permits and operating plans. A new fire management plan would have to be written should the area be designated.

Cow Creek: Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The following are the closest designated Wilderness areas:

- Soldier Creek Wilderness (7,810 acres) in the Pine Ridge of Nebraska about 85 miles to the southeast. Represents a wheatgrass-needlegrass-ponderosa pine ecosystem.
- Black Elk Wilderness (9,824 acres) in the Black Hills about 115 miles to the northeast. Represents a ponderosa pine ecosystem.
- Cloud Peak Wilderness (189,039 acres) about 125 miles to the northwest in the Big Horn Mountains. Represents an alpine ecosystem.

Representation of Landforms and Ecosystems: This area represents a fairly complete mixed-grass prairie ecosystem from the lower-elevation grassland and sagebrush flats and cottonwood-lined drainages to the pine and juniper around the bluffs and buttes.

Biota: No species are dependent upon a Wilderness designation to remain viable in the area. Most key species probably would benefit, however, from a designation.

Public Interests and Concerns: The area is very sparsely populated. Douglas, with a population of about 6,000 and about 45 miles to the southwest, is the closest area of any significant population. More people may visit the Cow Creek area under a Wilderness designation. Opposition to designation may be anticipated from the local livestock industry. Proponents may include the Sierra Club and other Wilderness and environmental advocacy groups as well as local tourism and chamber of commerce associations.

Cow Creek: Environmental Consequences

Management Prescription Allocations by Alternative:

	Forest Service Inventoried Roadless Acres		Public Proposed Wilderness Acres
Alternative 2:	MA 5.12	10,960 acres	6,540 acres
Alternative 3:	MA 2.1	8,980 acres	5,200 acres
	MA 3.65	1,980 acres	1,350 acres
Alternative 4:	MA 1.2	10,960 acres	6,540 acres
Alternative 5:	MA 1.2	8,980 acres	5,610 acres
	MA 6.1	1,980 acres	930 acres

Designation: Wilderness

Prescription: MA 1.2 Recommended for Wilderness

Alternatives: 3, 4, and 5

Environmental Consequences: Vegetation composition and structure are controlled by natural processes, such as fire, insects, disease, and grazing. There is some evidence of past human use, such as fences, trails, water developments, and primitive roads, but these would diminish through time. Isolation and solitude would characterize the area. Recreation activities would be those not requiring motorized equipment in a primitive setting such as hiking, walking, horseback riding, and nonmotorized hunting. There would be an opportunity for discovery of ecological, biological, cultural, historic, and paleontological resources. Disturbance to wildlife by human activity would be minimized. Oil and gas facilities could be present.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. New developments including livestock fences and water developments would not be allowed to detract from the primitive character of the area. The area has high oil and gas potential and is leased. Part of the area is leased with stipulations prohibiting surface occupancy but the leases in the western portion allow surface oil and gas developments. Valid outstanding mineral rights would be honored.

Economic and Social Effects Opportunities for solitude, lower human encounters, and nonmotorized settings will be maintained or increased, while at the same time opportunities for motorized recreation would be forgone. Those presently using the area for motorized activities, recreation, and hunting would no longer be able to do so. Opportunities for those desiring walk-in hunting would increase. Some interpretive opportunities would be forgone. Livestock grazing would likely remain the primary economic benefit from the area. The primitive to semi-primitive character of the area would be retained unless outstanding minerals were developed. If outstanding mineral rights were developed, the primitive to semi-primitive character of the development area could be altered making future wilderness designation unlikely. New leases requiring no surface occupancy would make oil and gas development more difficult and expensive. If the area is withdrawn from leasing oil and gas development would be forgone

Designation: Non-wilderness

Prescription: MA 2.1, Special Interest Areas

Alternatives: 3

Environmental Consequences: Vegetation, terrestrial and aquatic habitats would usually but not always appear natural. There would be some evidence of vegetative manipulation. Past human use, such as fences, trails, water developments, and primitive roads, would be evident. The natural appearance is broken in portions by rectangular, hand planted, conifer forest blocks of trees. Opportunities for isolation and solitude in a motorized setting would be available. At various times wildlife would be disturbed by human activities. There would be an opportunity for discovery and interpretation of ecological, biological, cultural, historic, and paleontological resources. Livestock and livestock facilities would be apparent.

Mitigation Measures: Motorized travel would be restricted to designated routes to protect the special values of the area. Livestock grazing and recreation use would be restricted if it hinders achievement of the desired condition for the SIA. Roads not necessary for administrative, scientific, or valid private access would be closed or obliterated. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act

Economic and Social Effects: Opportunities for recreation, interpretation, and educational activities would be increased. The need to provide good public access for recreation, interpretation, and educational opportunities would increase. If better access were provided, the challenge to protect the special features of the area would increase. Opportunities for those desiring solitude and isolation would still exist but would be less than in a nonmotorized designation. Those desiring motorized opportunities would be limited and off-road vehicle opportunities would be forgone. Those accustomed to accessing the area by vehicle would continue to have limited access. Livestock grazing would likely remain the primary economic benefit from the area. The primitive to semi-primitive character of the area would be substantially retained.

Designation: Non-wilderness

Prescription: MA 3.65, Rangelands with Diverse Natural- appearing Landscapes

Alternatives: 3

Environmental Consequences: Vegetation, terrestrial, and aquatic habitats would usually, but not always, appear natural. There would be some evidence of vegetative manipulation to maintain and restore high levels of plant and animal diversity, and ecological processes and function. Past human use, such as fences, trails, water developments, and primitive roads, would be evident but would decrease over time. Opportunities for isolation and solitude in a motorized setting would be available. There would be an opportunity for discovery and interpretation of ecological, biological, cultural, historic, and paleontological resources. Livestock grazing would occur periodically to meet management objectives. Oil and gas facilities could be present.

Mitigation Measures: The area would be managed for long-term increase in pasture size and for no net gain of fences, water developments, and roads. The area has high oil and gas potential and is leased. Part of the area is leased with stipulations prohibiting surface occupancy but the leases in the western portion allow surface oil and gas developments. Valid outstanding mineral rights would be honored and new leasing would be allowed.

Economic and Social Effects: The area would continue to provide approximately the same mix of economic and social benefits as present. Both motorized and nonmotorized opportunities would be available. Livestock grazing would continue with limited restrictions on improvements. Livestock grazing would likely remain the primary economic benefit from the area. The primitive to semi-primitive character of the area likely would be retained unless minerals were developed. If mineral development occurs, the primitive to semi-primitive character of the development area could be altered making future wilderness designation unlikely.

Designation: Non-wilderness

Prescription: MA 5.12

Alternatives: 3

Environmental Consequences: The evidence of motorized roads and trails would continue to be present. Livestock and livestock facilities would be evident. Open meadows, grasslands, shrublands, and areas of woody vegetation would dominate the area. Vegetation treatments would be apparent. The vegetation would consist of open, park-like stands and a variety of successional stages. Opportunities for isolation and solitude in a motorized setting would be available. Oil and gas facilities could be present.

Mitigation Measures: A full spectrum of motorized opportunities would be allowed unless specific areas are designated as closed or travel restricted to designated roads and trails. Construction of livestock and recreation facilities, roads, power lines, fences, water developments, mineral development, and other features would be allowed. The area would be managed for a balance of sustainable physical, biological, and scenic values associated with woody vegetation and open grassland. Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is possibility the area would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased gradually, while at the same time, opportunities for nonmotorized activities would be reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would gradually be reduced. All users would be permitted motorized access. Livestock grazing and oil and gas exploration and development would likely remain the primary economic activities. The area would continue to provide the existing mix of economic benefits while roadless primitive to semi-primitive character would be lost through time and perhaps permanently lost making future wilderness designation unlikely.

Designation: Non-wilderness

Prescription: MA 6.1 Rangeland with Broad Resource Emphasis

Alternative: 5

Environmental Consequences: The evidence of motorized roads and trails would continue to be present. Livestock and livestock facilities would be apparent. Open meadows, grasslands, shrublands, and areas of woody vegetation would dominate the area. Vegetation treatments would be apparent. The vegetation would consist of open, park-like stands and a variety of successional stages. Opportunities for isolation and solitude in a motorized setting would be available. Oil and gas facilities could be present.

Mitigation Measures: A full spectrum of motorized opportunities would be allowed unless specific areas are designated as closed or travel restricted to designated roads and trails. Construction of livestock and recreation facilities, roads, power lines, fences, water developments, mineral developments, and other features would be allowed. The area would be managed for a diversity of plants, animals, and ecological functions and processes, while providing livestock forage and other amenity values. Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is possibility the area would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased gradually while at the same time opportunities for nonmotorized activities would be reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would gradually be reduced. All users would be permitted motorized access. Livestock grazing and mineral development would remain the primary economic activities. The area would continue to provide the existing mix of economic benefits while roadless primitive to semi-primitive character could be lost through time and perhaps permanently lost making future wilderness designation unlikely.

Downs (Public Proposed): An Overview of the Affected Environment

The 6,510-acre Downs area is located about 31 miles northeast of Douglas, Wyoming, and about nine miles southeast of Bill, Wyoming. Specifically, the Downs area is located, either partly or fully, in: T. 37 N., R. 68 W., Sections 5, 7-10, 14-15, 17-21, 23 and 28. Access to the area from Douglas is via State Highway 59 for 35 miles north to Bill, then east on Converse County Road 38 for three miles to Forest Development Road 958, then for five miles east on Forest Development Road 958, to a private road for three miles south. Currently, no public rights-of-way exist into the Downs area.

The Downs area lies within the Great Plains-Palouse Dry Steppe Province ecoregion of the Temperate Steppe Division as identified by Robert G. Bailey (71). This area lies within an unglaciated portion of the Missouri Basin, and is characterized by open country of rolling to undulating hills, rocky escarpments and buttes, dissected with incised drainages flowing mostly to the east and south. The Downs area is an outstanding area of badlands formed in the Lebo Shale Member of the Fort Union Formation. Its canyons and rugged badlands are unique to the Thunder Basin National Grassland. The elevation of the area is about 4,800 feet above sea level.

This area is a mixed-grass prairie, blended with sagebrush, cactus, and some greasewood. The landscape has a high degree of patchiness due to the substrate. Many shrubland communities occur in the area. Outstanding among these are patches of the birdsfoot sagebrush community. This uncommon community type grows only on specialized clay and shale exposures. Wildlife includes prairie dogs, pronghorn antelope, mule and white-tailed deer, grassland birds, raptors, reptiles, and amphibians.

Livestock and hunting are the two most frequent activities; however, public access for hunting opportunities is very limited.

Downs: Capability Analyses

Environment

Opportunity for Solitude and Serenity: Opportunities for solitude and serenity are very high. The area is remote, with a rolling topography. Currently, public access is very limited. Should public access be acquired, opportunities for solitude and serenity would remain high, based on the remote nature of this area.

Natural Appearance: Some stock dams and some capped oil and gas wells are visible. A couple miles of native-surfaced road exist; however, the area contains only a minimal amount of two-track travelways. Two interior fences exist in the area. Overall, this area does appear natural, with relatively few indications of human presence. Fourteen ponds are found in the area. This area has to be considered a high-quality grassland. The vegetative integrity is high. However, some changes have occurred over time, including the limited establishment of some exotic plants and noxious weeds.

Challenge: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Thunder Basin National Grassland.

Recreation Opportunities: Although opportunities exist for such activities as hunting and hiking across an isolated grassland area, the lack of public access greatly reduces the actual recreational use of the area. Some rock hounding opportunities exist in the area, especially for the personal collection of crystallized gypsum. Under a Wilderness designation, hunting would be permitted on a walk-in basis only. Any motorized activities, including off-highway motorized recreation, would be prohibited; however, motorized use may be authorized to livestock permittees in order that they can manage their grazing interests. Designation may also increase the potential for outfitting into the area, including hiking, hunting, and horseback riding.

Special Features

Unique Characteristics and Scenic Features: Viewsheds include scenic grasslands on a rolling terrain. The Cow Creek Buttes can be seen to the northeast, and the Laramie Mountains can be viewed to the south. Crystallized gypsum exists in the area and is unique. Fossils found in Fort Union Formation deposits represent the Paleocene (65 to 45 million years ago) period.

Opportunities for Outdoor Education: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Thunder Basin National Grassland.

Manageability

Size and Shape: The 6,510-acre Downs area is more or less rectangular. It is about four miles wide east to west and three miles long north to south. One inholding (state school land) of 160 acres exists within the area.

Potential to Manage Boundaries: The potential to fully manage this area hinges upon gaining public rights-of-way into the area. Currently, a private landowner controls access. The potential to manage the area and its boundaries would be high given public access. Exterior boundaries would have to be surveyed and signed to identify the Downs area as a Wilderness area. The two interior fences would require minimal annual maintenance. A Wilderness management plan would have to be developed to address such topics as trails, signing, interpretation, and motorized access by grazing permittees.

Downs: Availability Analyses

Resource Values and Potentials

Oil and Gas: Oil and gas potential for the area is rated as moderate.

Coal: This area is outside of moderate to high potential for coal development as defined by Bureau of Land Management specialists.

Livestock Grazing: Livestock grazing has been the dominant use of the area since the late 1800s. Livestock grazing would continue under a Wilderness designation but would be continued as a compatible land use with Wilderness. Adjustments in allotment management plans would be made to meet Wilderness objectives. Portions of two allotments exist in the area.

Locatable Minerals: A significant amount of uranium exists in the Downs area; however, the potential for development is low.

Common Minerals: Some scoria is found in the area, but the potential for commercial development is very low.

Timber: No suitable timber resources exist in the area.

Recreation: Recreational activities would likely increase should public access into the Downs area be acquired. Under Wilderness, walk-in hunting would likely increase, as would hiking and nature study.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Ute ladies-tresses: Effects from Wilderness designation would be beneficial due to the reduction in mortality caused by motorized or mechanized vehicles and equipment, restrictions that accompany Wilderness designations.
- Peregrine falcon: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.
- Bald eagle: Effects from Wilderness designation would have a beneficial effect on the nesting success and wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.
- Mountain plover: A Wilderness designation would likely reduce prairie dog shooting, thereby increasing the expansion of prairie dog towns which, in turn, enhances mountain plover habitat. Designation would reduce motorized activities that can disturb mountain plovers and destroy their nests.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitats. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access within Wilderness areas.

Black-tailed prairie dogs and species closely associated with prairie dog towns and colonies: Prairie dogs and prairie dog-associated species would largely benefit from Wilderness designations, primarily because the poisoning of prairie dog towns, accomplished mainly with motorized support, would be greatly reduced. In addition, fewer prairie dog shooters would frequent prairie dog towns in Wilderness areas due to restrictions on motorized access. However, prairie dogs and associated species may be adversely affected by a Wilderness designation due to the reduction anticipated in predator control, which would result from motorized restrictions. Finally, the mountain plover, which favors areas affected by fire, may be adversely affected due to reduced motorized support in conducting prescribed fires.

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around both aerial- and ground-nesting raptor sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Thunder Basin National Grassland include: the black-tailed prairie dog, plains sharp-tailed grouse and the sage grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered falling under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the table at the very end of this document.

Management Obligations, Constraints, or Encumbrances

Mineral Leases and Subsurface Rights: No private subsurface minerals ownership exists in the area.

Existing Contracts and Agreements: The Thunder Basin Grazing Association holds an agreement for livestock grazing in the Downs area. Two association members are issued permits to grazing livestock in the area.

Biotic Control Measures and Fire Protection: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Thunder Basin National Grassland.

Effects on Adjacent Lands: The Downs area is completely surrounded by private land. Should public access be gained into the area, and should the Downs area become a designated Wilderness, the potential for visitors to trespass onto private lands would increase. Adequate signing of the boundary, however, could reduce this potential.

Downs: Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The following are the closest designated Wilderness areas:

- Soldier Creek Wilderness (7,810 acres) in the Pine Ridge of Nebraska about 70 miles to the southeast. Represents a wheatgrass-needlegrass-ponderosa pine ecosystem.
- Black Elk Wilderness (9,824 acres) in the Black Hills about 125 miles to the northeast. Represents a ponderosa pine ecosystem.
- Cloud Peak Wilderness (189,039 acres) about 135 miles to the northwest in the Big Horn Mountains. Represents an alpine ecosystem.

Representation of Landforms and Ecosystems: The Downs area is representative of a mixed-grass prairie. It represents a mostly rolling grassland terrain that is highly dissected by gullies and draws.

Biota: No species are dependent upon a Wilderness designation to remain viable in the area. Most key species probably would benefit, however, from a designation.

Public Interests and Concerns: The area is very sparsely populated. Douglas, with a population of about 6,000 and about 43 miles to the southwest, is the closest area of any significant population. More people may visit the Downs area under a Wilderness designation; however, additional visitation may only occur if public access into the area is secured. Opposition to designation may be anticipated from the local livestock industry. Proponents may include the Sierra Club and other Wilderness advocacy and environmental groups and local tourism and chamber of commerce associations.

Downs: Environmental Consequences

Management Prescription Allocations by Alternative:

Alternative 2:	MA 5.12	6,510 acres
Alternative 3:	MA 1.31	6,510 acres
Alternative 4:	MA 1.2	6,510 acres
Alternative 5:	MA 1.31	6,510 acres

Designation: Wilderness

Prescription: MA 1.2 Recommended for Wilderness

Alternatives: 4

Environmental Consequences: Vegetation composition and structure are controlled by natural processes, such as fire, insects, disease, and grazing. There is some evidence of past human use, such as fences, trails, water developments, and primitive roads, but these would diminish through time. Isolation and solitude would characterize the area. Recreation activities would be those not requiring motorized equipment in a primitive setting such as hiking, walking, horseback riding, and nonmotorized hunting. There would be an opportunity for discovery of ecological, biological, cultural, historic, and paleontological resources. Disturbance to wildlife by human activity would be minimized. Oil and gas facilities could be present.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. New developments including livestock fences and water developments would not be allowed to detract from the primitive to semi-primitive character of the area. The area has high oil and gas potential and is leased. Part of the area is leased with stipulations prohibiting surface occupancy but the leases in the western portion allow surface oil and gas developments. Valid outstanding mineral rights would be honored.

Economic and Social Effects Opportunities for solitude, lower human encounters, and nonmotorized settings will be maintained or increased while at the same time opportunities for motorized recreation would be forgone. Those presently using the area for motorized activities, recreation and hunting would no longer be able to do so. Opportunities for those desiring walk in hunting would increase. Some interpretive opportunities would be forgone. Livestock grazing would likely remain the primary economic benefit from the area. The primitive to semi-primitive character of the area would be retained unless outstanding minerals were developed. If outstanding mineral rights were developed, the primitive to semi-primitive character of the development area could be altered making future wilderness designation unlikely. New leases requiring no surface occupancy would make oil and gas development more difficult and expensive. If the area is withdrawn from leasing oil and gas development would be forgone.

Designation: Non-wilderness

Prescription: MA 1.31 Backcountry Recreation Nonmotorized

Alternatives: 3 and 5

Environmental Consequences: Vegetation composition and structure are controlled by natural processes, such as fire, insects, disease, and grazing. There is some evidence of past human use, such as fences, trails, water developments, and primitive roads, but these would diminish through time. Isolation and solitude would characterize the area. Recreation activities would be those not requiring motorized equipment in a primitive setting such as hiking, walking, horseback riding, and nonmotorized hunting. There would be an opportunity for discovery of ecological, biological, cultural, historic, and paleontological resources. Disturbance to wildlife by human activity would be minimized. Oil and gas facilities could be present.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. New developments including livestock fences and water developments would not be allowed to detract from the semi-primitive character of the area. The area has high oil and gas potential and is leased. Part of the area is leased with stipulations prohibiting surface occupancy, but the leases in the western portion allow surface oil and gas developments. Valid outstanding mineral rights would be honored.

Economic and Social Effects Opportunities for solitude, lower human encounters, and nonmotorized settings will be maintained or increased while at the same time opportunities for motorized recreation would be forgone. Those presently using the area for motorized activities, recreation and hunting would no longer be able to do so. Opportunities for those desiring walk in hunting would increase. Some interpretive opportunities would be forgone. Livestock

grazing would likely remain the primary economic benefit from the area. The semi-primitive character of the area would be retained unless outstanding minerals were developed. If outstanding mineral rights were developed, the semi-primitive character of the development area could be altered making future wilderness designation unlikely. New leases requiring no surface occupancy would make oil and gas development more difficult and expensive. If the area were withdrawn from leasing, oil and gas development would be forgone.

Designation: Non-wilderness

Prescription: MA 5.12

Alternatives: 2

Environmental Consequences: The evidence of motorized roads and trails would continue to be present. Livestock and livestock facilities would be evident. Open meadows, grasslands, shrublands, and areas of woody vegetation would dominate the area. Vegetation treatments would be apparent. The vegetation would consist of open, park-like stands and a variety of successional stages. Opportunities for isolation and solitude in a motorized setting would be available. Oil and gas facilities could be present.

Mitigation Measures: A full spectrum of motorized opportunities would be allowed unless specific areas are designated as closed or travel restricted to designated roads and trails. Construction of livestock and recreation facilities, roads, power lines, fences, water developments, mineral development, and other features would be allowed. The area would be managed for a balance of sustainable physical, biological, and scenic values associated with woody vegetation and open grassland. Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is possibility the area would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased gradually while, at the same time opportunities for nonmotorized activities would be reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would gradually be reduced. All users would be permitted motorized access. Livestock grazing and oil and gas exploration and development would likely remain the primary economic activities. The area would continue to provide the existing mix of economic benefits while roadless primitive to semi-primitive character would be lost through time and perhaps permanently lost making future wilderness designation unlikely.

Duck Creek (Public Proposed): An Overview of the Affected Environment

The 12,330-acre Duck Creek area is located about 30 miles northeast of Gillette, Wyoming, and about five miles northeast of Weston, Wyoming. Specifically, Duck Creek is located, either partly or fully, in: T. 55 N., R. 70 W., Sections 12-13 and 24, and T. 55 N., R. 69 W., Sections 7, 13-15, 17-26 and 28-33, and T. 55 N., R. 68 W., Section 19, and T. 54 N., R. 69 W., Section 4-5. Access into the area from Gillette is via State Highway 59 for 31 miles north, then nine miles east on Campbell County Road 49, then one mile north on Forest Development Road 903.

The Duck Creek area lies within the Great Plains-Palouse Dry Steppe Province ecoregion of the Temperate Steppe Division as identified by Robert G. Bailey (71). This area lies within an unglaciated portion of the Missouri Basin and is characterized by grassy lowlands, woody draws, rolling hills, rocky shale and limestone escarpments, and mesas. The elevation of the area is about 4,600 feet above sea level.

This area is representative of a mixed-grass prairie ecosystem at the lower elevations, rising to pine-covered mesas. Vegetation includes little bluestem grasslands, patches of sagebrush steppe, several kinds of shrublands, including greasewood, ponderosa pine woodlands, and Rocky Mountain juniper. Wildlife includes prairie dogs, pronghorn antelope, mule and white-tailed deer, sage grouse, grassland birds, raptors, reptiles, and amphibians.

Livestock grazing and hunting are the two most frequent activities in the area.

Duck Creek: Capability Analyses

Environment

Opportunity for Solitude and Serenity: Opportunities for solitude and serenity are high. Visitors can get tucked away in the rolling terrain or can isolate themselves atop the ridges and mesas. The sparse population of the area and infrequent visitation into Duck Creek provide a remote and undisturbed experience.

Natural Appearance: The landscape in this area appears quite natural, although a fair amount of off-highway motorized recreation occurs, creating several two-track trails. Thirty-four ponds and 14 water points, including windmills, are found in the area. One water pipeline with four water tanks exist in the area, as do several power lines and some oil and gas pipeline. The vegetative integrity in this area is excellent, although some exotic plants and noxious weeds have established themselves.

Challenge: Please refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Thunder Basin National Grassland.

Recreation Opportunities: Opportunities exist for hiking across an isolated grassland area. Currently, hunting pressure in the fall, especially for big game, is relatively high. Under a Wilderness designation, hunting would be permitted on a walk-in basis only. Any motorized activities, including off-highway motorized recreation, would be prohibited; however, livestock permittees may be authorized motorized access in order to allow them to maintain their grazing interests. Designation may also increase the potential for outfitting into the area, including hiking, hunting, and horseback riding.

Special Features

Unique Characteristics and Scenic Features: The pine-covered slopes, ridges and mesas and lowland grasslands are very scenic. Outstanding opportunities for vista views of Devils Tower, about 40 miles to the east and the Missouri Buttes are available. The healthy populations of sage grouse are important.

Fossils found in Fort Union, Lance and Pierre Shale Formation deposits represent the Paleocene, (65 to 45 million years ago) and Late Cretaceous (100 to 65 million years ago) periods.

Opportunities for Outdoor Education: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Thunder Basin National Grassland.

Manageability

Size and Shape: The 12,330-acre Duck Creek area consists more or less of a rectangular chunk of public land set aside a smaller square section. The larger western section is about four miles long north to south and three miles wide east to west. The smaller eastern section is about two miles long north to south and two miles wide east to west. A half-mile wide corridor connects the two sections. No inholdings occur in the area.

Potential to Manage Boundaries: A moderate potential to manage the boundaries exists. Surveys and signing would be completed should the area be designated as a Wilderness. The relatively high number of two-tracks in the area and the substantial amount of private lands immediately surrounding the area would be management challenges.

Duck Creek: Availability Analyses

Resource Values and Potentials

Oil and Gas: Oil and gas potential for the area is rated as high.

Coal: This area is outside of moderate to high potential for coal development as defined by Bureau of Land Management specialists.

Livestock Grazing: Livestock grazing has been the dominant use of the area since the late 1800s. Livestock grazing would continue under a Wilderness designation but would be continued as a compatible land use with Wilderness. Adjustments in allotment management plans would be made to meet Wilderness objectives. Portions of six allotments are located in the area.

Locatable Minerals: No known deposits of locatable minerals are known to exist within the area. No exploration or development is currently occurring in the area.

Common Minerals: No significant amounts of common minerals are known to exist in the area and no current development is occurring.

Timber: No suitable timber base exists in the area; however, a potential for some timber harvests may exist in the Duck Creek area but only as a result of other resource objectives, such as wildlife habitat improvement projects.

Recreation: Recreational activities would likely increase should public access into the Duck Creek area be acquired. Under Wilderness, walk-in hunting would likely increase, as would hiking and nature study. The current recreational off-highway use would be prohibited.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Ute ladies-tresses: Effects from Wilderness designation would be beneficial due to the reduction in mortality caused by motorized or mechanized vehicles and equipment, restrictions that accompany Wilderness designations.
- Peregrine falcon: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.

Plant and Animal Species, cont.

- Bald eagle: Effects from Wilderness designation would have a beneficial effect on the nesting success and wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.
- Mountain plover: A Wilderness designation would likely reduce prairie dog shooting, thereby increasing the expansion of prairie dog towns which, in turn, enhances mountain plover habitat. Designation would reduce motorized activities that can disturb mountain plovers and destroy their nests.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitats. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access within Wilderness areas.

Black-tailed prairie dogs and species closely associated with prairie dog towns and colonies: Prairie dogs and prairie dog-associated species would largely benefit from Wilderness designations, primarily because the poisoning of prairie dog towns, accomplished mainly with motorized support, would be greatly reduced. In addition, fewer prairie dog shooters would frequent prairie dog towns in Wilderness areas due to restrictions on motorized access. However, prairie dogs and associated species may be adversely affected by a Wilderness designation due to the reduction anticipated in predator control, which would result from motorized restrictions. Finally, the mountain plover, which favors areas affected by fire, may be adversely affected due to reduced motorized support in conducting prescribed fires.

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around both aerial- and ground-nesting raptor sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Thunder Basin National Grassland include: the black-tailed prairie dog, plains sharp-tailed grouse and the sage grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered falling under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the table at the very end of this document.

Management Obligations, Constraints, or Encumbrances

Mineral Leases and Subsurface Rights: No private subsurface minerals ownership exists in the area.

Existing Contracts and Agreements: The Spring Creek Grazing Association holds the permit to graze livestock in the area.

Biotic Control Measures and Fire Protection: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Thunder Basin National Grassland.

Effects on Adjacent Lands: The Duck Creek area is almost completely surrounded by private land. Should Duck Creek become a designated Wilderness, the potential for visitors to trespass onto private lands from the Duck Creek area would increase. Adequate signing of the boundary, however, could reduce this potential.

Duck Creek: Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The following are the closest designated Wilderness areas:

- Soldier Creek Wilderness (7,810 acres) in the Pine Ridge of Nebraska about 150 miles to the southeast. Represents a wheatgrass-needlegrass-ponderosa pine ecosystem.
- Black Elk Wilderness (9,824 acres) in the Black Hills about 120 miles to the southeast. Represents a ponderosa pine ecosystem.
- Cloud Peak Wilderness (189,039 acres) about 100 miles to the west in the Big Horn Mountains. Represents an alpine ecosystem.

Representation of Landforms and Ecosystems: The Duck Creek area is representative of a mixed-grass prairie ecosystem blended with sage, and pine-covered mesas of shale and limestone escarpments.

Biota: No species are dependent upon a Wilderness designation to remain viable in the area. Most key species probably would benefit, however, from a designation.

Public Interests and Concerns: The general area is sparsely populated. Gillette, with a population of about 20,000 and about 32 miles to the southwest, is the closest area of any significant population. More people may visit the area under a Wilderness designation. Opposition to designation may be anticipated from the local livestock industry, minerals interests and area motorized recreation associations. Proponents may include the Sierra Club, Wilderness advocacy and other environmental groups and local tourism and chamber of commerce associations.

Duck Creek: Environmental Consequences

Management Prescription Allocations by Alternative:

Alternative 2:	MA 5.12	12,330 acres
Alternative 3:	MA 3.65	12,330 acres
Alternative 4:	MA 1.2	12,330 acres
Alternative 5:	MA 6.1	12,330 acres

Designation: Wilderness

Prescription: MA 1.2 Recommended for Wilderness

Alternatives: 4

Environmental Consequences: Vegetation composition and structure are controlled by natural processes, such as fire, insects, disease, and grazing. There is some evidence of past human use, such as fences, trails, water developments, and primitive roads, but these would diminish through time. Isolation and solitude would characterize the area. Recreation activities would be those not requiring motorized equipment in a primitive setting such as hiking, walking, horseback riding, and nonmotorized hunting. There would be an opportunity for discovery of ecological, biological, cultural, historic, and paleontological resources. Disturbance to wildlife by human activity would be minimized. Oil and gas facilities could be present.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. New developments including livestock fences and water developments would not be allowed to detract from the primitive character of the area. The area has high oil and gas potential and is leased. Part of the area is leased with stipulations prohibiting surface occupancy but the leases in the western portion allow surface oil and gas developments. Valid outstanding mineral rights would be honored.

Economic and Social Effects Opportunities for solitude, lower human encounters, and nonmotorized settings will be maintained or increased while at the same time opportunities for motorized recreation would be forgone. Those presently using the area for motorized activities, recreation and hunting would no longer be able to do so. Opportunities for those desiring walk in hunting would increase. Some interpretive opportunities would be forgone. Livestock grazing would likely remain the primary economic benefit from the area. The primitive to semi-primitive character of the area would be retained unless outstanding minerals were developed. If outstanding mineral rights were developed, the primitive to semi-primitive character of the development area could be altered making future wilderness designation unlikely. New leases requiring no surface occupancy would make oil and gas development more difficult and expensive. If the area is withdrawn from leasing, oil and gas development would be forgone.

Designation: Non-wilderness

Prescription: MA 3.65, Rangelands with Diverse Natural- appearing Landscapes

Alternatives: 3

Environmental Consequences: Vegetation, terrestrial and aquatic habitats would usually but not always appear natural. There would be some evidence of vegetative manipulation to maintain and restore high levels of plant and animal diversity, and ecological processes and function. Past human use, such as fences, trails, water developments, and primitive roads, would be evident but would decrease over time. Opportunities for isolation and solitude in a motorized setting would be available. There would be an opportunity for discovery and interpretation of ecological, biological, cultural, historic, and paleontological resources. Livestock grazing would occur periodically to meet management objectives Oil and gas facilities could be present.

Mitigation Measures: The area would be managed for long term increase in pasture size and for no net gain of fences, water developments and roads. The area has high oil and gas potential and is leased. Part of the area is leased with stipulations prohibiting surface occupancy but the leases in the western portion allow surface oil and gas developments. Valid outstanding mineral rights would be honored and new leasing would be allowed.

Economic and Social Effects: The area would continue to provide approximately the same mix of economic and social benefits as present. Both motorized and nonmotorized opportunities would be available. Livestock grazing would continue with limited restrictions on improvements. Livestock grazing would likely remain the primary economic benefit from the area. The primitive to semi-primitive character of the area likely would be retained unless minerals were developed. If mineral development occurs, the primitive to semi-primitive character of the development area could be altered making future wilderness designation unlikely.

Designation: Non-wilderness

Prescription: MA 5.12

Alternatives: 2

Environmental Consequences: The evidence of motorized roads and trails would continue to be present. Livestock and livestock facilities would be evident. Open meadows, grasslands, shrublands, and areas of woody vegetation would dominate the area. Vegetation treatments would be apparent. The vegetation would consist of open, park-like stands and a variety of successional stages. Opportunities for isolation and solitude in a motorized setting would be available. Oil and gas facilities could be present.

Mitigation Measures: A full spectrum of motorized opportunities would be allowed unless specific areas are designated as closed or travel restricted to designated roads and trails. Construction of livestock and recreation facilities, roads, power lines, fences, water developments, mineral development, and other features would be allowed. The area would be managed for a balance of sustainable physical, biological, and scenic values associated with woody vegetation and open grassland. Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is possibility the area would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased gradually while, at the same time opportunities for nonmotorized activities would be reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would gradually be reduced. All users would be permitted motorized access. Livestock grazing and oil and gas exploration and development would likely remain the primary economic activities. The area would continue to provide the existing mix of economic benefits while roadless primitive to semi-primitive character would be lost through time and perhaps permanently lost making future wilderness designation unlikely.

Designation: Non-wilderness

Prescription: MA 6.1 Rangeland with Broad Resource Emphasis

Alternative: 5

Environmental Consequences: The evidence of motorized roads and trails would continue to be present. Livestock and livestock facilities would be apparent. Open meadows, grasslands, shrublands, and areas of woody vegetation would dominate the area. Vegetation treatments would be apparent. The vegetation would consist of open, park-like stands and a variety of successional stages. Opportunities for isolation and solitude in a motorized setting would be available. Oil and gas facilities could be present.

Mitigation Measures: A full spectrum of motorized opportunities would be allowed unless specific areas are designated as closed or travel restricted to designated roads and trails. Construction of livestock and recreation facilities, roads, power lines, fences, water developments, mineral developments and other features would be allowed. The area would be managed for a diversity of plants, animals, and ecological functions and processes, while providing livestock forage and other amenity values. Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is possibility the area would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased gradually, while at the same time, opportunities for nonmotorized activities would be reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would gradually be reduced. All users would be permitted motorized access. Livestock grazing and mineral development would remain the primary economic activities. The area would continue to provide the existing mix of economic benefits while roadless primitive to semi-primitive character could be lost through time and perhaps permanently lost making future wilderness designation unlikely.

H A Divide: An Overview of the Affected Environment

The 5,060-acre H A Divide is located about 37 miles southeast of Gillette, Wyoming, and about 16 miles east of Wright, Wyoming. Specifically, H A Divide is located, either partly or fully, in: T. 43 N., R. 68 W., Sections 18-20, and T. 43 N., R. 69 W., Sections 1-2, 8-14, 17, 22 and 24. Access from Gillette is south via State Highway 59 for 49 miles, then east 21 miles on State Highway 450, then north three miles on Forest Development Road 930.

The H A Divide area lies within the Great Plains-Palouse Dry Steppe Province ecoregion of the Temperate Steppe Division as identified by Robert G. Bailey (71). This area lies within an unglaciated portion of the Missouri Basin. H A Divide is characterized by one large mesa, with color-banded buttes tapering away from the mesa. Side slopes on the mesa and area buttes display shale and limestone escarpments. The elevation of the area is around 4,500 feet above sea level.

The top of the mesa shows ponderosa pine and Rocky Mountain juniper. Side slopes are partially barren. In general, H A Divide is a mixed-grass prairie, blended with sagebrush, limited cottonwood, some greasewood, ponderosa pine and Rocky Mountain juniper. Wildlife includes prairie dogs, pronghorn antelope, mule and white-tailed deer, grassland birds, raptors (including the bald eagle and peregrine falcon), reptiles, and amphibians.

Livestock grazing and hunting are two frequent activities in the area.

H A Divide: Capability Analyses

Environment

Opportunity for Solitude and Serenity: H A Divide provides moderate opportunities for solitude and serenity. Oil and gas developments outside of the area are clearly visible from the top of the mesa, as are coal mining activities, such as Black Thunder Coal Mine, the largest strip mine in North America. No interior fences are found in the area, although several medium-standard roads jut into H A Divide.

Natural Appearance and Integrity: H A Divide is moderately natural in appearance, a consequence of the adjacent minerals activities visible from the area. Most of the ecological processes, including seasonal flash flooding, remain intact. Signs of livestock grazing are evident. Cattle can be found in the area intermittently throughout the year. The vegetative integrity of the area is high. The biggest impact upon the vegetation is livestock grazing. Two-track roads, windmills, and stock tanks exist. Ponderosa pine may be expanding due to fire suppression. Six ponds and three water points are found in the area.

Challenge: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Thunder Basin National Grassland.

Recreation Opportunities: Hiking is available year-round. H A Divide is a destination for those engaged in off-road motorized recreation. Others drive into the area to gain vista points at the top of the mesa where the surrounding grassland can be viewed. Hunting occurs in the fall. Some camping probably takes place.

Special Features

Unique Characteristics and Scenic Features: The large mesa may be the most unique characteristic in Ha Divide. The ponderosa pine and scenic vistas provide excellent opportunities to view the surrounding countryside. Fossils found in Fort Union deposits represent the Paleocene (65 to 45 million years ago) period.

Opportunities for Outdoor Education: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Thunder Basin National Grassland.

Manageability

Size and Shape: The 5,060-acre H A Divide area is very irregular in shape. Generally, H A Divide is linear, with three prongs jutting into adjacent landownership. The area is about five miles wide east to west and two miles long north to south. One private inholding of about 180 acres exists in the area.

Potential to Manage Boundaries: The irregular shape and lengthy boundaries provide only a low potential to successfully manage the area's boundaries. Boundaries would have to be surveyed and posted. The current high use of the area for off-road motorized recreation would pose a law enforcement challenge should the area be designated as a Wilderness.

H A Divide: Availability Analyses

Resource Values and Potentials

Oil and Gas: Two buried pipelines exist in the area. Oil and gas potential for the area is rated as high.

Coal: This area is outside of moderate to high potential for coal development as defined by Bureau of Land Management specialists.

Livestock Grazing: Livestock grazing has been the dominant use of the area since the late 1800s. Livestock grazing would continue under a Wilderness designation, but would be continued as a compatible land use with Wilderness. Adjustments in allotment management plans would be made to meet Wilderness objectives. One allotment exists in the area.

Locatable Minerals: No known locatable minerals exist in the area.

Common Minerals: Scoria exists in the area, but does not offer many commercial opportunities at the present time.

Timber: The area provides no suitable timber acres; however, a potential for some harvest of ponderosa pine may exist in support of wildlife habitat projects.

Recreation: Nonmotorized recreation might increase should the area be designated as a Wilderness; however, motorized recreation would decrease since motorized recreation would be prohibited. Under Wilderness, walk-in hunting would likely increase, as would hiking and nature study.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Ute ladies-tresses: Effects from Wilderness designation would be beneficial due to the reduction in mortality caused by motorized or mechanized vehicles and equipment, restrictions that accompany Wilderness designations.
- Peregrine falcon: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.
- Bald eagle: Effects from Wilderness designation would have a beneficial effect on the nesting success and wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.
- Mountain plover: A Wilderness designation would likely reduce prairie dog shooting, thereby increasing the expansion of prairie dog towns which, in turn, enhances mountain plover habitat. Designation would reduce motorized activities that can disturb mountain plovers and destroy their nests.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitats. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access within Wilderness areas.

Black-tailed prairie dogs and species closely associated with prairie dog towns and colonies: Prairie dogs and prairie dog-associated species would largely benefit from Wilderness designations, primarily because the poisoning of prairie dog towns, accomplished mainly with motorized support, would be greatly reduced. In addition, fewer prairie dog shooters would frequent prairie dog towns in Wilderness areas due to restrictions on motorized access. However, prairie dogs and associated species may be adversely affected by a Wilderness designation due to the reduction anticipated in predator control, which would result from motorized restrictions. Finally, the mountain plover, which favors areas affected by fire, may be adversely affected due to reduced motorized support in conducting prescribed fires.

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around both aerial- and ground-nesting raptor sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Thunder Basin National Grassland include: the black-tailed prairie dog, plains sharp-tailed grouse and the sage grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered falling under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the table at the very end of this document.

Management Obligations, Constraints, or Encumbrances

Mineral Leases and Subsurface Rights: No private subsurface minerals ownership exists in the area.

Existing Contracts and Agreements: The Thunder Basin Grazing Association holds the grazing agreement to the area. The Thunder Basin Grazing Association issues a grazing permit to one member who utilizes the area.

Biotic Control Measures and Fire Protection: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Thunder Basin National Grassland.

Effects on Adjacent Lands: H A Divide is partially surrounded by private land. Should H A Divide become a designated Wilderness, the potential for visitors to trespass onto private lands from H A Divide will increase. Adequate signing of the boundary, however, could reduce this potential.

H A Divide: Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The following are the closest designated Wilderness areas:

- Soldier Creek Wilderness (7,810 acres) in the Pine Ridge of Nebraska about 110 miles to the southeast. Represents a wheatgrass-needlegrass-ponderosa pine ecosystem.
- Black Elk Wilderness (9,824 acres) in the Black Hills about 90 miles to the east. Represents a ponderosa pine ecosystem.
- Cloud Peak Wilderness (189,039 acres) about 100 miles to the northwest in the Big Horn Mountains. Represents an alpine ecosystem.

Representation of Ecosystems and Landforms: The area is represented by a pine-covered mesa, with mixed-grass prairie and badlands topography.

Biota: No species are dependent upon a Wilderness designation to remain viable in the area. Most key species probably would benefit from a designation.

Public Interests and Concerns: The general area is sparsely populated. Wright, Wyoming, with a population of about 2,000, is about 20 miles west of the area. Gillette, with a population of about 20,000, is about 37 miles to the northwest. More people may visit the area under a Wilderness designation. Opposition to designation may be anticipated from the local livestock industry and area motorized recreation associations. Proponents may include the Sierra Club and local tourism and chamber of commerce associations.

H A Divide: Environmental Consequences

Management Prescription Allocations by Alternative:

Alternative 2:	MA 5.12	5,060 acres
Alternative 3:	MA 3.65	5,060 acres
Alternative 4:	MA 1.2	5,060 acres
Alternative 5:	MA 6.1	5,060 acres

Designation: Wilderness

Prescription: MA 1.2 Recommended for Wilderness

Alternatives: 4

Environmental Consequences: Vegetation composition and structure are controlled by natural processes, such as fire, insects, disease, and grazing. There is some evidence of past human use, such as fences, trails, water developments, and primitive roads, but these would diminish through time. Isolation and solitude would characterize the area. Recreation activities would be those not requiring motorized equipment in a primitive setting such as hiking, walking, horseback riding, and nonmotorized hunting. There would be an opportunity for discovery of ecological, biological, cultural, historic, and paleontological resources. Disturbance to wildlife by human activity would be minimized. Oil and gas facilities could be present.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. New developments including livestock fences and water developments would not be allowed to detract from the primitive character of the area. The area has high oil and gas potential and is leased. Part of the area is leased with stipulations prohibiting surface occupancy, but the leases in the western portion allow surface oil and gas developments. Valid outstanding mineral rights would be honored.

Economic and Social Effects Opportunities for solitude, lower human encounters, and nonmotorized settings will be maintained or increased while at the same time opportunities for motorized recreation would be forgone. Those presently using the area for motorized activities, recreation and hunting would no longer be able to do so. Opportunities for those desiring walk in hunting would increase. Some interpretive opportunities would be forgone. Livestock grazing would likely remain the primary economic benefit from the area. The primitive to semi-primitive character of the area would be retained unless outstanding minerals were developed. If outstanding mineral rights were developed, the primitive to semi-primitive character of the development area could be altered making future wilderness designation unlikely. New leases requiring no surface occupancy would make oil and gas development more difficult and expensive. If the area is withdrawn from leasing, oil and gas development would be forgone.

Designation: Non-wilderness

Prescription: MA 3.65, Rangelands with Diverse Natural- appearing Landscapes

Alternatives: 3

Environmental Consequences: Vegetation, terrestrial and aquatic habitats would usually but not always appear natural. There would be some evidence of vegetative manipulation to maintain and restore high levels of plant and animal diversity, and ecological processes and function. Past human use, such as fences, trails, water developments, and primitive roads, would be evident but would decrease over time. Opportunities for isolation and solitude in a motorized setting would be available. There would be an opportunity for discovery and interpretation of ecological, biological, cultural, historic, and paleontological resources. Livestock grazing would occur periodically to meet management objectives Oil and gas facilities could be present.

Mitigation Measures: The area would be managed for long term increase in pasture size and for no net gain of fences, water developments and roads. The area has high oil and gas potential and is leased. Part of the area is leased with stipulations prohibiting surface occupancy but the leases in the western portion allow surface oil and gas developments. Valid outstanding mineral rights would be honored and new leasing would be allowed.

Economic and Social Effects: The area would continue to provide approximately the same mix of economic and social benefits as present. Both motorized and nonmotorized opportunities would be available. Livestock grazing would continue with limited restrictions on improvements. Livestock grazing would likely remain the primary economic benefit from the area. The primitive to semi-primitive character of the area likely would be retained unless minerals were developed. If mineral development occurs, the primitive to semi-primitive character of the development area could be altered making future wilderness designation unlikely.

Designation: Non-wilderness

Prescription: MA 5.12

Alternatives: 2

Environmental Consequences: The evidence of motorized roads and trails would continue to be present. Livestock and livestock facilities would be evident. Open meadows, grasslands, shrublands, and areas of woody vegetation would dominate the area. Vegetation treatments would be apparent. The vegetation would consist of open, park-like stands and a variety of successional stages. Opportunities for isolation and solitude in a motorized setting would be available. Oil and gas facilities could be present.

Mitigation Measures: A full spectrum of motorized opportunities would be allowed unless specific areas are designated as closed or travel restricted to designated roads and trails. Construction of livestock and recreation facilities, roads, power lines, fences, water developments, mineral development, and other features would be allowed. The area would be managed for a balance of sustainable physical, biological, and scenic values associated with woody vegetation and open grassland. Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is possibility the area would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased gradually while, at the same time opportunities for nonmotorized activities would be reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would gradually be reduced. All users would be permitted motorized access. Livestock grazing and oil and gas exploration and development would likely remain the primary economic activities. The area would continue to provide the existing mix of economic benefits while roadless primitive to semi-primitive character would be lost through time and perhaps permanently lost making future wilderness designation unlikely.

Designation: Non-wilderness

Prescription: MA 6.1 Rangeland with Broad Resource Emphasis

Alternative: 5

Environmental Consequences: The evidence of motorized roads and trails would continue to be present. Livestock and livestock facilities would be apparent. Open meadows, grasslands, shrublands, and areas of woody vegetation would dominate the area. Vegetation treatments would be apparent. The vegetation would consist of open, park-like stands and a variety of successional stages. Opportunities for isolation and solitude in a motorized setting would be available. Oil and gas facilities could be present.

Mitigation Measures: A full spectrum of motorized opportunities would be allowed unless specific areas are designated as closed or travel restricted to designated roads and trails. Construction of livestock and recreation facilities, roads, power lines, fences, water developments, mineral developments and other features would be allowed. The area would be managed for a diversity of plants, animals, and ecological functions and processes, while providing livestock forage and other amenity values. Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is possibility the area would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased gradually while at the same time opportunities for nonmotorized activities would be reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would gradually be reduced. All users would be permitted motorized access. Livestock grazing and mineral development would remain the primary economic activities. The area would continue to provide the existing mix of economic benefits while roadless primitive to semi-primitive character could be lost through time and perhaps permanently lost making future wilderness designation unlikely.

Miller Hills (Public Proposed): An Overview of the Affected Environment

The 10,370-acre Miller Hills is located about 50 miles northeast of Douglas, Wyoming, and about 19 miles northeast of Bill, Wyoming. Specifically, the Miller Hills is found, either partly or fully, in: T. 39 N., R. 67 W., Sections 4-9, 17 and 19, and T. 39 N., R. 68 W., Sections 1-4, 9-15, and 23-24. Access from Douglas is north on State Highway 59 for 37 miles to Bill, then east on Forest Development Road 38 for 10 miles, then east on Converse County Road 45 for eight miles, then north on a private road for two miles. There is no motorized public access into the Miller Hills, although people can hike into the area from National Forest System lands to the west.

The Miller Hills area lies within the Great Plains-Palouse Dry Steppe Province ecoregion of the Temperate Steppe Division as identified by Robert G. Bailey (71). This area lies within an unglaciated portion of the Missouri Basin and is characterized by rolling hills and badlands rising into shale and sandstone escarpments and flat-topped mesas. The Miller Hills, with its scoria buttes and remnant sandstone, are an island of woodland communities. The elevation of the area is around 4,800 feet above sea level.

This area is a mixed-grass prairie, blended with sagebrush, cottonwood, greasewood, ponderosa pine, and Rocky Mountain juniper. Shrublands are found in the canyons on the north side of the Miller Hills around the base of the elevated plateau. The woodlands provide important habitat for bald eagle winter roosts. Wildlife includes prairie dogs, pronghorn antelope, mule and white-tailed deer, grassland birds, raptors, reptiles, and amphibians.

Miller Hills: Capability Analyses

Environment

Opportunity for Solitude and Serenity: The Miller Hills provide very high opportunities for solitude and serenity, because of the area's rugged terrain, remote location, and lack of public access into the area.

Natural Appearance and Integrity: The area is moderately natural in appearance due to the fairly obvious intrusion of people over the years. Numerous windmills, ponds, and stock tanks are located in the area. Some historical dry-land farming occurred just north of the Miller Hills. An extensive network of two-track roads exists in the area, as do five interior fencelines. The vegetative integrity is quite high, although some exotic and noxious plants can be found. Twenty-one ponds and nine water points are located in the area.

Challenge: Please refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Thunder Basin National Grassland.

Recreation Opportunities: Hunting comprises the majority of recreation in the area; however, all recreational activities are limited presently due to the lack of public access to the Miller Hills. Should public access be gained in the future, a whole host of recreational activities could be had, including hiking, nature study, camping, and birdwatching.

Special Features

Unique Characteristics and Scenic Features: Although the Miller Hills area doesn't provide spectacular scenery, the area does offer nice scenery, including rather barren prairie badlands, some rugged topography, and some scattered timber, including ponderosa pine and Rocky Mountain juniper. Important habitat for bald eagle winter roost sites is located in the Miller Hills. Fossils found in Fort Union Formation deposits represent the Paleocene (65 to 45 million years ago) period.

Opportunities for Outdoor Education: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Thunder Basin National Grassland.

Manageability

Size and Shape: The 10,370-acre Miller Hills area is more or less rectangular in shape, with one private inholding of about 40 acres. The Miller Hills area is about five miles wide east to west and three miles long north to south.

Potential to Manage Boundaries: The potential to fully manage this area hinges largely upon gaining public rights-of-way into the area. Currently, private landowners control motorized access. The potential to manage the area and its boundaries would be high given improved public access. Exterior boundaries would have to be surveyed and signed to identify the Miller Hills as a Wilderness area. The five interior fences would require minimal annual maintenance. A Wilderness management plan would have to be written to address such topics as trails, signing, interpretation, and the authorization for grazing permittees to use motorized means to access their grazing interests.

Miller Hills: Availability Analyses

Resource Values and Potentials

Oil and Gas: Oil and gas potential for the area is rated as high.

Coal: This area is outside of moderate to high potential for coal development as defined by Bureau of Land Management specialists.

Livestock Grazing: Livestock grazing has been the dominant use of the area since the late 1800s. Livestock grazing would continue under a Wilderness designation, but would be continued as a compatible land use with Wilderness. Adjustments in allotment management plans would be made to meet Wilderness objectives. Portions of four allotments exist in the area.

Locatable Minerals: Some uranium deposits are known to exist in the area.

Common Minerals: Some scoria exists in the area, but development of this common mineral is not considered economically feasible.

Timber: No suitable commercial timber exists in the area.

Recreation: Nonmotorized recreation might increase should the area be designated as a Wilderness; however, motorized recreation would be prohibited. Grazing permittees may be allowed to use motorized means to access their grazing interests. Under Wilderness, walk-in hunting would likely increase, as would hiking and nature study.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Ute ladies-tresses: Effects from Wilderness designation would be beneficial due to the reduction in mortality caused by motorized or mechanized vehicles and equipment, restrictions that accompany Wilderness designations.
- Peregrine falcon: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.
- Bald eagle: Effects from Wilderness designation would have a beneficial effect on the nesting success and wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.
- Black-footed ferret: Black-footed ferrets do not currently occupy the area but it is suitable reintroduction habitat. Effects from Wilderness designation would be both beneficial and adverse. Beneficial effects result from the reduced human disturbances and reduced potential mortality due to motorized vehicles. In addition, ferrets would benefit from the significant reduction in prairie dog shooters, who would lose motorized access to prairie dog towns in a Wilderness area. Adverse effects result from restrictions on the motorized support to aid in ferret reintroduction projects. Ferrets may be targeted for reintroduction projects in the future in several areas on the Northern Great Plains, including this area.
- Mountain plover: A Wilderness designation would likely reduce prairie dog shooting, thereby increasing the expansion of prairie dog towns which, in turn, enhances mountain plover habitat. Designation would reduce motorized activities that can disturb mountain plovers and destroy their nests.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitats. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access.

Black-tailed prairie dogs and species closely associated with prairie dog towns and colonies: Prairie dogs and prairie dog-associated species would largely benefit from Wilderness designations, primarily because the poisoning of prairie dog towns, accomplished mainly with motorized support, would be greatly reduced. In addition, fewer prairie dog shooters would frequent prairie dog towns in Wilderness areas due to restrictions on motorized access. However, prairie dogs and associated species may be adversely affected by a Wilderness designation due to the reduction anticipated in predator control, which would result from motorized restrictions. Finally, the mountain plover, which favors areas affected by fire, may be adversely affected due to reduced motorized support in conducting prescribed fires.

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around both aerial- and ground-nesting raptor sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Thunder Basin National Grassland include: the black-tailed prairie dog, plains sharp-tailed grouse and the sage grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered falling under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the table at the very end of this document.

Management Obligations, Constraints, or Encumbrances

Mineral Leases and Subsurface Rights: No private subsurface minerals ownership exists in the area.

Existing Contracts and Agreements: The Thunder Basin Grazing Association holds the livestock grazing agreement to the area. Grazing permits have been issued to four association members who graze livestock in the area.

Biotic Control Measures and Fire Protection: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Thunder Basin National Grassland.

Effects on Adjacent Lands: Miller Hills is partially surrounded by private land. Should Miller Hills become a designated Wilderness, the potential for visitors to trespass onto private lands from Miller Hills would probably increase. Adequate signing of the boundary, however, could reduce this potential.

Miller Hills: Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The following are the closest designated Wilderness areas:

- Soldier Creek Wilderness (7,810 acres) in the Pine Ridge of Nebraska about 85 miles to the southeast. Represents a wheatgrass-needlegrass-ponderosa pine ecosystem.
- Black Elk Wilderness (9,824 acres) in the Black Hills about 90 miles to the east. Represents a ponderosa pine ecosystem.
- Cloud Peak Wilderness (189,039 acres) about 130 miles to the northwest in the Big Horn Mountains. Represents an alpine ecosystem.

Representation of Landforms and Ecosystems: The area consists of mixed-grass badlands prairie and mesa escarpment.

Biota: No species are dependent upon a Wilderness designation to remain viable in the area. A Wilderness designation may impede any future reintroductions of the black-footed ferret into the area. Most other key species probably would benefit from a designation.

Public Interests and Concerns: The general area is sparsely populated. Douglas, with a population of about 6,000 and about 53 miles to the southwest, is the closest area of any significant population. More people may visit the area under a Wilderness designation. Opposition to designation may be anticipated from the local livestock industry and area motorized recreation associations. Proponents may include the Sierra Club and local tourism and chamber of commerce associations.

Miller Hills: Environmental Consequences

Management Prescription Allocations by Alternative:

Alternative 2:	MA 5.12	10,370 acres
Alternative 3:	MA 3.65	10,370 acres
Alternative 4:	MA 1.2	10,370 acres
Alternative 5:	MA 6.1	10,370 acres

Designation: Wilderness

Prescription: MA 1.2 Recommended for Wilderness

Alternatives: 4

Environmental Consequences: Vegetation composition and structure are controlled by natural processes, such as fire, insects, disease, and grazing. There is some evidence of past human use, such as fences, trails, water developments, and primitive roads, but these would diminish through time. Isolation and solitude would characterize the area. Recreation activities would be those not requiring motorized equipment in a primitive setting such as hiking, walking, horseback riding, and nonmotorized hunting. There would be an opportunity for discovery of ecological, biological, cultural, historic, and paleontological resources. Disturbance to wildlife by human activity would be minimized. Oil and gas facilities could be present.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. New developments including livestock fences and water developments would not be allowed to detract from the primitive character of the area. The area has high oil and gas potential and is leased. Part of the area is leased with stipulations prohibiting surface occupancy but the leases in the western portion allow surface oil and gas developments. Valid outstanding mineral rights would be honored.

Economic and Social Effects Opportunities for solitude, lower human encounters, and nonmotorized settings will be maintained or increased while at the same time opportunities for motorized recreation would be forgone. Those presently using the area for motorized activities, recreation and hunting would no longer be able to do so. Opportunities for those desiring walk in hunting would increase. Some interpretive opportunities would be forgone. Livestock grazing would likely remain the primary economic benefit from the area. The primitive to semi-primitive character of the area would be retained unless outstanding minerals were developed. If outstanding mineral rights were developed, the primitive to semi-primitive character of the development area could be altered making future wilderness designation unlikely. New leases requiring no surface occupancy would make oil and gas development more difficult and expensive. If the area is withdrawn from leasing, oil and gas development would be forgone.

Designation: Non-wilderness

Prescription: MA 3.65, Rangelands with Diverse Natural- appearing Landscapes

Alternatives: 3

Environmental Consequences: Vegetation, terrestrial and aquatic habitats would usually but not always appear natural. There would be some evidence of vegetative manipulation to maintain and restore high levels of plant and animal diversity, and ecological processes and function. Past human use, such as fences, trails, water developments, and primitive roads, would be evident but would decrease over time. Opportunities for isolation and solitude in a motorized setting would be available. There would be an opportunity for discovery and interpretation of ecological, biological, cultural, historic, and paleontological resources. Livestock grazing would occur periodically to meet management objectives Oil and gas facilities could be present.

Mitigation Measures: The area would be managed for long-term increase in pasture size and for no net gain of fences, water developments and roads. The area has high oil and gas potential and is leased. Part of the area is leased with stipulations prohibiting surface occupancy but the leases in the western portion allow surface oil and gas developments. Valid outstanding mineral rights would be honored and new leasing would be allowed.

Economic and Social Effects: The area would continue to provide approximately the same mix of economic and social benefits as present. Both motorized and nonmotorized opportunities would be available. Livestock grazing would continue with limited restrictions on improvements. Livestock grazing would likely remain the primary economic benefit from the area. The primitive to semi-primitive character of the area likely would be retained unless minerals were developed. If mineral development occurs, the primitive to semi-primitive character of the development area could be altered making future wilderness designation unlikely.

Designation: Non-wilderness

Prescription: MA 5.12

Alternatives: 2

Environmental Consequences: The evidence of motorized roads and trails would continue to be present. Livestock and livestock facilities would be evident. Open meadows, grasslands, shrub lands and areas of woody vegetation would dominate the area. Vegetation treatments would be apparent. The vegetation would consist of open, park-like stands and a variety of successional stages. Opportunities for isolation and solitude in a motorized setting would be available. Oil and gas facilities could be present.

Mitigation Measures: A full spectrum of motorized opportunities would be allowed unless specific areas are designated as closed or travel restricted to designated roads and trails. Construction of livestock and recreation facilities, roads, power lines, fences, water developments, mineral development, and other features would be allowed. The area would be managed for a balance of sustainable physical, biological, and scenic values associated with woody vegetation and open grassland. Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is possibility the area would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased gradually while, at the same time opportunities for nonmotorized activities would be reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would gradually be reduced. All users would be permitted motorized access. Livestock grazing and oil and gas exploration and development would likely remain the primary economic activities. The area would continue to provide the existing mix of economic benefits while roadless primitive to semi-primitive character would be lost through time and perhaps permanently lost making future wilderness designation unlikely.

Designation: Non-wilderness

Prescription: MA 6.1 Rangeland with Broad Resource Emphasis

Alternative: 5

Environmental Consequences: The evidence of motorized roads and trails would continue to be present. Livestock and livestock facilities would be apparent. Open meadows, grasslands, shrublands, and areas of woody vegetation would dominate the area. Vegetation treatments would be apparent. The vegetation would consist of open, park-like stands and a variety of successional stages. Opportunities for isolation and solitude in a motorized setting would be available. Oil and gas facilities could be present.

Mitigation Measures: A full spectrum of motorized opportunities would be allowed unless specific areas are designated as closed or travel restricted to designated roads and trails. Construction of livestock and recreation facilities, roads, power lines, fences, water developments, mineral developments and other features would be allowed. The area would be managed for a diversity of plants, animals, and ecological functions and processes, while providing livestock forage and other amenity values. Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is possibility the area would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased gradually while at the same time opportunities for nonmotorized activities would be reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would gradually be reduced. All users would be permitted motorized access. Livestock grazing and mineral development would remain the primary economic activities. The area would continue to provide the existing mix of economic benefits while roadless primitive to semi-primitive character could be lost through time and perhaps permanently lost making future wilderness designation unlikely.

Red Hills: An Overview of the Affected Environment

The 6,840-acre Red Hills area is located about 42 miles north of Douglas, Wyoming, and about 10 miles north of Bill, Wyoming. Specifically, the Red Hills area is found, either partly or fully, in: T. 40 N., R. 70 W., Sections 11-15, 20-29 and 32-35. Access from Douglas is north via State Highway 59 for 48 miles, then five miles east on Forest Development Road 942. The area is directly east of Forest Development Road 942.

The Red Hills area lies within the Great Plains-Palouse Dry Steppe Province ecoregion of the Temperate Steppe Division as identified by Robert G. Bailey (71). This area lies within an unglaciated portion of the Missouri Basin and is characterized by rolling sage- and grass-covered hills, red scoria escarpments and buttes, dissected by mostly easterly flowing drainages. The area's elevation is between about 4,800 feet and 5,000 feet above sea level. The Red Hills area is a visible landmark on the grassland.

This area is a mixed-grass prairie, blended with sagebrush, cottonwood, greasewood, ponderosa pine, and Rocky Mountain juniper. Wildlife includes prairie dogs, pronghorn antelope, mule and white-tailed deer, grassland birds, raptors, reptiles, and amphibians.

Red Hills: Capability Analyses

Environment

Opportunity for Solitude and Serenity: The Red Hills area offers very high opportunities for solitude and serenity, particularly because of the rugged terrain and remote nature of its location. The lack of two-track roads into the area and the highly incised drainages offer the visitor the opportunity to disappear into the topography.

Natural Appearance and Integrity: This area is highly natural in appearance. Some stock ponds, occasional windmills and two-tracks exist, but they do not overly intrude upon the landscape. No interior fences exist in the area. The vegetative integrity of the area is high, although some changes have occurred over time, including the establishment of some exotic plants and noxious weeds. The biggest impact upon the vegetation is livestock grazing. Seven ponds and two water points are located in the area.

Challenge: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Thunder Basin National Grassland.

Recreation Opportunities: Opportunities for recreation in the Red Hills are high, including hunting, hiking, some camping, viewing scenery and wildlife, nature study, and off-road motorized recreation.

Special Features

Unique Characteristics and Scenic Features: The Red Hills area, so named for the many reddened scoria slopes found in the area, is very scenic. The area is rich in plant and animal diversity, including frequent use by elk. The surrounding countryside can be viewed from many of the higher bluffs. Fossils found in Fort Union Formation deposits represent the Paleocene (65 to 45 million years ago) period.

Opportunities for Outdoor Education: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Thunder Basin National Grassland.

Manageability

Size and Shape: The 6,840-acre Red Hills area is more or less oblong in shape. One private inholding of about 480 acres exists. The Red Hills area is about four miles wide east to west and four miles long north to south.

Potential to Manage Boundaries: The area's boundaries would be fairly easy to sign since much of the boundary follows roads or natural topographic features. Surveys and posting would be required under a Wilderness designation. Since no interior fences exist, no maintenance would be required. A Wilderness management plan would have to be written.

Red Hills: Availability Analyses

Resource Values and Potentials

Oil and Gas: Oil and gas potential for the area is rated as high.

Coal: This area is outside of moderate to high potential for coal development as defined by Bureau of Land Management specialists.

Livestock Grazing: Livestock grazing has been the dominant use of the area since the late 1800s. Livestock grazing would continue under a Wilderness designation but would be continued as a compatible land use with Wilderness. Adjustments in allotment management plans would be made to meet Wilderness objectives. A portion of one allotment exists in the area.

Locatable Minerals: Uranium is known to exist in the area.

Common Minerals: A great deal of scoria exists in the area, but its potential to be developed for commercial purposes is low.

Timber: The Red Hills area is not suitable for timber harvesting.

Recreation: Nonmotorized recreation might increase should the area be designated as a Wilderness, but motorized recreation would be prohibited. Under Wilderness, walk-in hunting would likely increase, as would hiking and nature study.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Ute ladies-tresses: Effects from Wilderness designation would be beneficial due to the reduction in mortality caused by motorized or mechanized vehicles and equipment, restrictions that accompany Wilderness designations.

Plant and Animal Species, cont.

- Peregrine falcon: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.
- Bald eagle: Effects from Wilderness designation would have a beneficial effect on the nesting success and wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.
- Black-footed ferret: The area is currently potential black-footed ferret reintroduction habitat. Effects from Wilderness designation would be both beneficial and adverse. Beneficial effects result from the reduced human disturbances and reduced potential mortality due to motorized vehicles. In addition, ferrets would benefit from the significant reduction in prairie dog shooters, who would lose motorized access to prairie dog towns in a Wilderness area. Adverse effects result from restrictions on the motorized support to aid in ferret reintroduction projects. Ferrets may be targeted for reintroduction projects in the future in several areas on the Northern Great Plains, including this area.
- Mountain plover: A Wilderness designation would likely reduce prairie dog shooting, thereby increasing the expansion of prairie dog towns which, in turn, enhances mountain plover habitat. Designation would reduce motorized activities that can disturb mountain plovers and destroy their nests.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitats. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access within Wilderness areas.

Black-tailed prairie dogs and species closely associated with prairie dog towns and colonies: Prairie dogs and prairie dog-associated species would largely benefit from Wilderness designations, primarily because the poisoning of prairie dog towns, accomplished mainly with motorized support, would be greatly reduced. In addition, fewer prairie dog shooters would frequent prairie dog towns in Wilderness areas due to restrictions on motorized access. However, prairie dogs and associated species may be adversely affected by a Wilderness designation due to the reduction anticipated in predator control, which would result from motorized restrictions. Finally, the mountain plover, which favors areas affected by fire, may be adversely affected due to reduced motorized support in conducting prescribed fires.

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around both aerial- and ground-nesting raptor sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Thunder Basin National Grassland include: the black-tailed prairie dog, plains sharp-tailed grouse and the sage grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered falling under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the table at the very end of this document.

Management Obligations, Constraints, or Encumbrances

Mineral Leases and Subsurface Rights: No private subsurface minerals ownership exists in the area.

Existing Contracts and Agreements: Cannon Livestock Corporation holds the grazing permit to the area.

Biotic Control Measures and Fire Protection: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Thunder Basin National Grassland.

Effects on Adjacent Lands: The Red Hills area is partially surrounded by private land. Should the Red Hills area become a designated Wilderness, the potential for visitors to trespass onto private lands from the Red Hills area would increase. Adequate signing of the boundary, however, could reduce this potential.

Red Hills: Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The following are the closest designated Wilderness areas:

- Soldier Creek Wilderness (7,810 acres) in the Pine Ridge of Nebraska about 105 miles to the southeast. Represents a wheatgrass-needlegrass-ponderosa pine ecosystem.
- Black Elk Wilderness (9,824 acres) in the Black Hills about 115 miles to the east. Represents a ponderosa pine ecosystem.
- Cloud Peak Wilderness (189,039 acres) about 85 miles to the northwest in the Big Horn Mountains. Represents an alpine ecosystem.

Representation of Landforms and Ecosystems: The area consists of mixed-grass badlands prairie.

Biota: No species are dependent upon a Wilderness designation to remain viable in the area. A Wilderness designation may impede any future reintroductions of the black-footed ferret into the area. Most other key species probably would benefit from a designation.

Public Interests and Concerns: The general area is sparsely populated. Douglas, with a population of about 6,000 and about 60 miles to the south, is the closest area of any significant population. More people may visit the area under a Wilderness designation. Opposition to designation may be anticipated from the local livestock industry, the minerals industry and area motorized recreation associations. Proponents may include the Sierra Club and local tourism and chamber of commerce associations.

Red Hills: Environmental Consequences

Management Prescription Allocations by Alternative:

Alternative 2:	MA 5.12	6,840 acres
Alternative 3:	MA 3.65	6,840 acres
Alternative 4:	MA 1.2	6,840 acres
Alternative 5:	MA 6.1	6,840 acres

Designation: Wilderness

Prescription: MA 1.2 Recommended for Wilderness

Alternatives: 4

Environmental Consequences: Vegetation composition and structure are controlled by natural processes, such as fire, insects, disease, and grazing. There is some evidence of past human use, such as fences, trails, water developments, and primitive roads, but these would diminish through time. Isolation and solitude would characterize the area. Recreation activities would be those not requiring motorized equipment in a primitive setting such as hiking, walking, horseback riding, and nonmotorized hunting. There would be an opportunity for discovery of ecological, biological, cultural, historic, and paleontological resources. Disturbance to wildlife by human activity would be minimized. Oil and gas facilities could be present.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. New developments including livestock fences and water developments would not be allowed to detract from the primitive character of the area. The area has high oil and gas potential and is leased. Part of the area is leased with stipulations prohibiting surface occupancy, but the leases in the western portion allow surface oil and gas developments. Valid outstanding mineral rights would be honored.

Economic and Social Effects Opportunities for solitude, lower human encounters, and nonmotorized settings will be maintained or increased while at the same time opportunities for motorized recreation would be forgone. Those presently using the area for motorized activities, recreation and hunting would no longer be able to do so. Opportunities for those desiring walk in hunting would increase. Some interpretive opportunities would be forgone. Livestock grazing would likely remain the primary economic benefit from the area. The primitive to semi-primitive character of the area would be retained unless outstanding minerals were developed. If outstanding mineral rights were developed, the primitive to semi-primitive character of the development area could be altered making future wilderness designation unlikely. New leases requiring no surface occupancy would make oil and gas development more difficult and expensive. If the area is withdrawn from leasing, oil and gas development would be forgone.

Designation: Non-wilderness

Prescription: MA 3.65, Rangelands with Diverse Natural- appearing Landscapes

Alternatives: 3

Environmental Consequences: Vegetation, terrestrial and aquatic habitats would usually but not always appear natural. There would be some evidence of vegetative manipulation to maintain and restore high levels of plant and animal diversity, and ecological processes and function. Past human use, such as fences, trails, water developments, and primitive roads, would be evident but would decrease over time. Opportunities for isolation and solitude in a motorized setting would be available. There would be an opportunity for discovery and interpretation of ecological, biological, cultural, historic, and paleontological resources. Livestock grazing would occur periodically to meet management objectives Oil and gas facilities could be present.

Mitigation Measures: The area would be managed for long term increase in pasture size and for no net gain of fences, water developments and roads. The area has high oil and gas potential and is leased. Part of the area is leased with stipulations prohibiting surface occupancy but the leases in the western portion allow surface oil and gas developments. Valid outstanding mineral rights would be honored and new leasing would be allowed.

Economic and Social Effects: The area would continue to provide approximately the same mix of economic and social benefits as present. Both motorized and nonmotorized opportunities would be available. Livestock grazing would continue with limited restrictions on improvements. Livestock grazing would likely remain the primary economic benefit from the area. The primitive to semi-primitive character of the area likely would be retained unless minerals were developed. If mineral development occurs, the primitive to semi-primitive character of the development area could be altered making future wilderness designation unlikely.

Designation: Non-wilderness

Prescription: MA 5.12

Alternatives: 2

Environmental Consequences: The evidence of motorized roads and trails would continue to be present. Livestock and livestock facilities would be evident. Open meadows, grasslands, shrublands, and areas of woody vegetation would dominate the area. Vegetation treatments would be apparent. The vegetation would consist of open, park-like stands and a variety of successional stages. Opportunities for isolation and solitude in a motorized setting would be available. Oil and gas facilities could be present.

Mitigation Measures: A full spectrum of motorized opportunities would be allowed unless specific areas are designated as closed or travel restricted to designated roads and trails. Construction of livestock and recreation facilities, roads, power lines, fences, water developments, mineral development, and other features would be allowed. The area would be managed for a balance of sustainable physical, biological, and scenic values associated with woody vegetation and open grassland. Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is possibility the area would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased gradually while, at the same time opportunities for nonmotorized activities would be reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would gradually be reduced. All users would be permitted motorized access. Livestock grazing and oil and gas exploration and development would likely remain the primary economic activities. The area would continue to provide the existing mix of economic benefits while roadless primitive to semi-primitive character would be lost through time and perhaps permanently lost making future wilderness designation unlikely.

Designation: Non-wilderness

Prescription: MA 6.1 Rangeland with Broad Resource Emphasis

Alternative: 5

Environmental Consequences: The evidence of motorized roads and trails would continue to be present. Livestock and livestock facilities would be apparent. Open meadows, grasslands, shrublands, and areas of woody vegetation would dominate the area. Vegetation treatments would be apparent. The vegetation would consist of open, park-like stands and a variety of successional stages. Opportunities for isolation and solitude in a motorized setting would be available. Oil and gas facilities could be present.

Mitigation Measures: A full spectrum of motorized opportunities would be allowed unless specific areas are designated as closed or travel restricted to designated roads and trails. Construction of livestock and recreation facilities, roads, power lines, fences, water developments, mineral developments and other features would be allowed. The area would be managed for a diversity of plants, animals, and ecological functions and processes, while providing livestock forage and other amenity values. Although, mitigation measures would be applied to meet Grassland-wide Plan standards and guidelines, there is possibility the area would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased gradually while at the same time opportunities for nonmotorized activities would be reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would gradually be reduced. All users would be permitted motorized access. Livestock grazing and mineral development would remain the primary economic activities. The area would continue to provide the existing mix of economic benefits while roadless primitive to semi-primitive character could be lost through time and perhaps permanently lost making future wilderness designation unlikely.

Criteria Common to All Roadless Areas on this Administrative Unit

Capability Criteria

Challenge: Challenges center around survival in a harsh and dry environment. Perennial water sources are sparse, although they can be found in Bobcat and Deer Creek Drainages of the Cow Creek area only. Water from developments used for livestock is not suitable for human consumption. Summer temperatures can exceed 100° Fahrenheit. Winter temperatures can drop to more than -30° Fahrenheit, with wind-chill factors well in excess of -85° Fahrenheit. Both the broken and open terrain can be deceptive and may disorient visitors' abilities to mark their directions. No developed recreation trails exist. Prairie rattlesnakes may be encountered

and can be dangerous. In the warmer months, mosquitoes and deer flies can be significant pests. Brown recluse spiders are found (rarely) throughout the grassland and can deliver a dangerous bite. Seasonal flash flooding may test a visitor's skill in adapting to this natural phenomenon and can create water hazards and slick gumbo conditions.

Opportunities for Outdoor Education: A visitor should find plenty of features to stimulate curiosity: grassland ecosystems, grassland flora and fauna, shifting weather patterns and cloud types, and clear night skies with unimpeded views of the stars. Skills in maneuvering a rugged terrain, using a compass, taking precautions for snake and spider bites, heat stroke, frostbite, setting up a primitive campsite, and outdoor cooking may all test and develop a visitor's understanding of the outdoors. However, no interpretive resources, such as brochures or interpretive signing, exist in these areas.

Availability Criteria

Biotic Control Measures and Fire Protection: Chemical, biological and mechanical control methods may be used in these areas to stem the expansion of undesirable plant species. Wildfire suppression would be addressed in Wilderness management plans that would be developed if any of the roadless areas are designated by Congress as Wilderness.

Roadless Areas on the Nebraska National Forest

Bessey Ranger District - Samuel R. McKelvie National Forest

Steer Creek East (Public Proposed): An Overview of the Affected Environment

The 60,790-acre Steer Creek East area is located about 20 miles southwest of Valentine, Nebraska, and 10 miles south of Nenzel, Nebraska. Specifically, Steer Creek East in located, either partly or fully, in Township 32 North, Range 32 West, Section 1-36, and Township 31 North, Range 32 West, Sections 1-4 and 10-12, and Township 32 North, Range 32 West, Sections 1-36, and Township 31 North, Range 31 West, Section 1-18 and 22-24, and Township 32 North, Range 30 West, Sections 7, 18-19 and 30-31, and Township 31 North, Range 30 West, Sections 5-8 and 17-20. Access is via U.S. Highway 20 to Nenzel, then south along State Highway 16F.

This area lies within the Great Plains Steppe Province ecoregion of the Temperate Steppe Division as identified by Robert G. Bailey (71). The Sand Hills of Nebraska, where the area is located, is the largest area of grass-covered sand dunes in the Western Hemisphere. This area was formed by blowing sand and reached its present size during the last 8,000 years. Elevation rises to about 3,200 feet above sea level and the topography consists of low rolling hills, ridges and grass-covered dunes.

This area is a unique mixture of plant communities known as Sand Hills prairie, with such species as sand bluestem, prairie sandreed, little bluestem, switchgrass, Indiangrass, needle-and-thread, western wheatgrass and prairie junegrass. A variety of introduced grasses occur, too, including Kentucky bluegrass, timothy, redtop and red clover. In part as a result of successful fire suppression, red cedar is encroaching upon the prairie, presenting some management challenges. Some hand-planted stands and windrows containing ponderosa pine,

Eastern red cedar, jack pine, Austrian pine and Scotch pine occur in the area. Habitat for the endangered blow-out penstemon and the threatened western prairie fringed orchid is found in Steer Creek East.

Wildlife include prairie chicken, sharp-tailed grouse, mule and white-tailed deer, coyote and other furbearers, grassland songbirds, waterfowl, raptors, amphibians and reptiles, including the box turtle.

Forest Development Road 602 provides access into the area. Although this road is identified as a forest development road, it is only minimally maintained and travelers are advised to operate only four-wheel-drive vehicles on it.

Typical recreation includes hunting and off-highway motorized use. Livestock grazing also occurs in the area, typically May 15 to November 1.

Current fire management requires immediate, initial-attack suppression due to the proximity of adjacent private land.

Steer Creek East: Capability Analyses

Environment

Opportunity for Solitude and Serenity: Opportunities for solitude and serenity are very high. There is little to no background noise, limited motorized activity, and very few people to be encountered in these areas. The rolling, vegetated sand-dune grassland offers isolation and a vast quiet environment.

Natural Appearance and Integrity: A natural appearance is evident, representative of the characteristic, sand-dune grassland pattern. Most of the ecological processes are intact, including frequent, rapidly moving wildfire, although suppression is conducted as quickly as possible. Signs of livestock grazing are clearly evident. Some recreational use is also evident, including spring birdwatching and hunting in the fall. The natural appearance is broken in isolated portions by square or rectangular hand-planted conifer forest blocks and lines of trees in well-defined, straight rows. Livestock developments include 145 windmills and stock tanks, one pipeline, and 160 miles of fencing. Hand-planted conifer plantations and windrows are not natural and do intrude upon this sand-dune landscape.

Challenge: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Bessey Ranger District (Samuel R. McKelvie National Forest).

Recreation Opportunities: Typical recreation includes hiking, primitive camping, hunting, photography and horseback riding. Sight-seeing through the hand-planted forest and elsewhere is available.

Special Features

Unique Characteristics and Scenic Features: Some archeological sites may exist, especially representative of prehistoric occupation. The area provides a singular, scenic sand-dune landscape of swales and grassy hills. Hand-planted tree plantations on a grassland landscape are unique.

Opportunities for Outdoor Education: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Bessey Ranger District (Samuel R. McKelvie National Forest).

Manageability

Size and Shape: The 60,790-acre Steer Creek East area is a contiguous block of National Forest System land with no inholdings. It is about 13 miles wide east to west and about eight miles long north to south.

Potential to Manage Boundaries: The vast size of the area makes monitoring of the boundaries difficult, especially on the northern and eastern boundaries to Steer Creek East, where adjacent private land abuts the area. The western and southern boundaries to Steer Creek East are easier to monitor since these boundaries are formed by paved travelways. Signing would be expensive and would have to be extensive. Maintenance of such signing would be difficult because of the sand dune terrain forming the boundaries is easily breached, and because the length of boundary would make monitoring illegal access difficult.

Steer Creek East: Availability Analyses

Resource Values and Potentials

Oil and Gas: Historically two wildcat wells were drilled on the Samuel R. McKelvie National Forest, but both proved dry. Warm-water resources are known to exist.

Coal: No coal resources exist on the Samuel R. McKelvie National Forest.

Livestock Grazing: Eleven permittees operate on 12 allotments for an average, annual, permitted AUM count of 20,450 in the Steer Creek East roadless area.

Locatable Minerals: No known deposits of locatable minerals exist in this area.

Common Minerals: Known sand and gravel resources exist in the northern portions of this area near the Snake River.

Timber: A hand-planted plantation forest of ponderosa pine, Scotch pine, Austrian pine, jack pine and Eastern red cedar is scattered over approximately 2,150 acres within Steer Creek East. Although some of the timber in the area may be of merchantable size, no sales have ever been conducted in the area. Finding a market for the timber remains the primary obstacle. Some post and pole products are available, consisting of Eastern red cedar and the thinning of conifer stands. Firewood for local use is available through permits.

Recreation: Nonmotorized hunting would be enhanced through a Wilderness designation. Off-road motorized recreation would be prohibited. Handicapped and elderly access may be reduced as a result of Wilderness designation.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Blowout penstemon: Effects from Wilderness designation would be beneficial due to the reduction in mortality caused by motorized or mechanized vehicles and equipment, restrictions that accompany Wilderness designations.
- Western prairie-fringed orchid: Effects from Wilderness designation would be beneficial due to the reduction in mortality caused by motorized or mechanized vehicles and equipment, restrictions that accompany Wilderness designations.

Plant and Animal Species, cont.

- Peregrine falcon; American burying beetle: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.
- Bald eagle: Effects from Wilderness designation would have a beneficial effect on the nesting success and wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitats. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access within Wilderness areas.

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around both aerial- and ground-nesting raptor sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Samuel R. McKelvie National Forest include: the greater prairie chicken and the plains sharp-tailed grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered falling under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the table at the very end of this document.

Management Obligations, Constraints, or Encumbrances

Mineral Leases and Subsurface Rights: No appreciable subsurface minerals exist in the area and no leased acres exist in the area.

Existing Contracts and Agreements: Eleven direct grazing permits are in force in this area. No livestock associations operate in the area.

Biotic Control Measures and Fire Protection: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Bessey Ranger District (Samuel R. McKelvie National Forest).

Effects on Adjacent Lands: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Bessey Ranger District (Samuel R. McKelvie National Forest).

Steer Creek East: Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The closest designated Wilderness is the 4,635-acre Fort Niobrara Wilderness about 25 miles to the northeast in the Fort Niobrara National Wildlife Refuge. The next nearest designated Wilderness is the 7,794-acre Soldier Creek Wilderness about 175 miles to the west on the Pine Ridge Ranger District of the Nebraska National Forest.

The Fort Niobrara Wilderness represents a mixed-grass and tallgrass prairie ecosystem, while the Soldier Creek Wilderness represents a ponderosa pine ecosystem.

Representation of Landforms and Ecosystems: This area represents the Sand Hills prairie on the largest vegetated sand-dune region in the Western Hemisphere.

Biota: No species are dependent upon a Wilderness designation to remain viable in the area. Most key species probably would benefit, however, from a designation.

Public Interests and Concerns: This area is very sparsely populated. The nearest town of any size is Valentine, Nebraska, about 20 miles to the northeast. Valentine's population is about 2,800. Designating the area as Wilderness might attract people from urban areas farther east, including Lincoln and Omaha, Nebraska.

A considerable number of people and organizations have called on the Forest Service to designate a grassland Wilderness somewhere on the Northern Great Plains. Currently, the Forest Service provides for no grassland Wilderness areas anywhere within the National Forest System.

Steer Creek East: Environmental Consequences

Management Prescription Allocations by Alternative:

Alternative 2:	MA 3.64	520 acres
	MA 5.12	2,170 acres
	MA 6.1	58,100 acres
Alternative 3:	MA 2.1	2,170 acres
	MA 2.2	2,500 acres
	MA 3.64	3,210 acres
	MA 6.1	52,910 acres
Alternative 4:	MA 1.2	58,290 acres
	MA 3.64	70 acres
	MA 3.66	2,170 acres
	MA 6.1	260 acres
Alternative 5:	MA 1.31	52,650 acres
	MA 2.1	2,170 acres
	MA 3.64	5,710 acres
	MA 6.1	260 acres

Designation: Wilderness

Prescription: MA 1.2 Recommended for Wilderness

Alternatives: 4

Environmental Consequences: Vegetation composition and structure are controlled by natural processes, such as fire, insects, disease, and grazing. There is some evidence of past human use, such as fences, trails, water developments, and primitive roads, but these would diminish through time. The natural appearance is broken in portions by rectangular, hand planted, conifer forest blocks of trees. Isolation and solitude would characterize the area. Recreation activities would be those not requiring motorized equipment in a primitive setting such as hiking, walking, horseback riding, and nonmotorized hunting. There would be an opportunity for discovery of ecological, biological, cultural, historic, and paleontological resources. Disturbance to wildlife by human activity would be minimized.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. New developments including livestock fences and water developments would not be allowed to detract from the wilderness character of the area.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings will be maintained or increased while at the same time opportunities for motorized recreation would be forgone. Those presently using the area for motorized activities, recreation and hunting would no longer be able to do so. Opportunities for those desiring walk in hunting would increase. Some interpretive opportunities would be forgone. Mineral potential in the area is low and mineral development is unlikely under any management scenario. Livestock grazing would likely remain the primary economic benefit from the area. The primitive to semi-primitive character of the area would be maintained.

Designation: Non-wilderness

Prescription: MA 1.31 Backcountry Recreation Nonmotorized

Alternatives: 5

Environmental Consequences: Vegetation composition and structure are controlled by natural processes, such as fire, insects, disease, and grazing. There is some evidence of past human use, such as fences, trails, water developments, and primitive roads, but these would diminish through time. Isolation and solitude would characterize the area. The natural appearance is broken in portions by rectangular, hand planted, conifer forest blocks of trees. Recreation activities would be those not requiring motorized equipment in a primitive setting such as hiking, walking, horseback riding, and nonmotorized hunting. There would be an opportunity for discovery of ecological, biological, cultural, historic, and paleontological resources. Disturbance to wildlife by human activity would be minimized.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. New developments including livestock fences and water developments would not be allowed to detract from the primitive to semi-primitive character of the area.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings will be maintained or increased while at the same time opportunities for motorized recreation would be forgone. Those presently using the area for motorized activities, recreation and hunting would no longer be able to do so. Opportunities for those desiring walk in hunting would increase. Some interpretive opportunities would be forgone. Mineral potential in the area is low and mineral development is unlikely under any management scenario. Livestock grazing would likely remain the primary economic benefit from the area. The primitive to semi-primitive character of the area would be maintained.

Designation: Non-wilderness

Prescription: MA 2.1, Special Interest Areas

Alternatives: 3 and 5

Environmental Consequences: Vegetation, terrestrial and aquatic habitats would usually but not always appear natural. There would be some evidence of vegetative manipulation. Past human use, such as fences, trails, water developments, and primitive roads, would be evident. The natural appearance is broken in portions by rectangular, hand planted, conifer forest blocks of trees. Opportunities for isolation and solitude in a motorized setting would be available. At various times wildlife would be disturbed by human activities. There would be an opportunity for discovery and interpretation of ecological, biological, cultural, historic, and paleontological resources. Livestock and livestock facilities would be apparent.

Mitigation Measures: Motorized travel would be restricted to designated routes to protect the special values of the area. Livestock grazing and recreation use would be restricted if it hinders achievement of the desired condition for the SIA. Roads not necessary for administrative, scientific, or valid private access would be closed or obliterated. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act

Economic and Social Effects: Opportunities for recreation, interpretation, and educational activities would be increased. The need to provide good public access for recreation, interpretation, and educational opportunities would increase. If better access were provided the challenge to protect the special features of the area would increase. Opportunities for those desiring solitude and isolation would still exist but would be less than in a nonmotorized designation. Those desiring motorized opportunities would be limited and off-road vehicle opportunities would be forgone. Those accustomed to accessing the area by vehicle would continue to have limited access. Livestock grazing would likely remain the primary economic benefit from the area. The primitive to semi-primitive character of the area would be substantially retained.

Designation: Non-wilderness

Prescription: MA 2.2, Research Natural Areas

Alternatives: 3

Environmental Consequences: Vegetation composition and structure are controlled by natural processes, such as fire, insects, disease, and grazing. There is some evidence of past human use, such as fences, trails, water developments, and primitive roads, but these would diminish through time. The natural appearance is broken in portions by rectangular, hand planted, conifer forest blocks of trees. Isolation and solitude would characterize the area. Recreation activities would be those not requiring motorized equipment in a primitive setting such as hiking, walking, horseback riding, and nonmotorized hunting. There would be an opportunity for discovery of ecological, biological, cultural, historic, and paleontological resources. Disturbance to wildlife by human activity would be minimized.

Mitigation Measures: Motorized access would be restricted except for authorized administrative, law enforcement, emergency, and scientific purposes. Construction of roads and trails would not be allowed except to correct resource damage. Livestock grazing and recreation use would be restricted if it hinders achievement of the desired condition for the RNA. New developments including livestock fences and water developments would not be allowed to detract from the primitive to semi-primitive character of the area. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings will be maintained or increased while at the same time opportunities for motorized recreation would be forgone. Those presently using the area for motorized activities, recreation and hunting would no longer be able to do so. Opportunities for those desiring walk in hunting would increase. Some interpretive opportunities would be forgone. Mineral potential in the area is low and mineral development is unlikely under any management scenario. Livestock grazing would likely remain the primary economic benefit from the area. The primitive to semi-primitive character of the area would be substantially retained.

Designation: Non-wilderness

Prescription: MA 3.64, Special Plant and Wildlife Habitat

Alternatives: 2, 3, 4, and 5

Environmental Consequences: Vegetation, terrestrial and aquatic habitats would usually but not always appear natural. There would be some evidence of vegetative manipulation to maintain high levels of habitat effectiveness. Past human use, such as fences, trails, water developments, and primitive roads, would be evident. The natural appearance is broken in portions by rectangular, hand planted, conifer forest blocks of trees. Opportunities for isolation and solitude in a motorized setting would be available. There would be an opportunity for discovery and interpretation of ecological, biological, cultural, historic, and paleontological resources. Livestock grazing would occur periodically to meet management objectives.

Mitigation Measures: The area would be managed for no decrease in pasture size and for no net gain of fences, water developments, and roads. Motorized access would be allowed but limited to roads and trails. Although grazing could occur to meet management objectives, the area would normally be considered unsuitable for grazing.

Economic and Social Effects: Both motorized and nonmotorized opportunities would be available. Opportunities for those desiring solitude and isolation would be about the same as present. Those accustomed to accessing the area by vehicle would have limited access. Opportunities for discovery and interpretation of ecological, biological, cultural, historic, and paleontological resources would be good. Livestock grazing would likely remain the primary economic benefit from the area but would be reduced from present levels.. The primitive to semi-primitive character of the area would be substantially retained.

Designation: Non-wilderness

Prescription: MA 3.66, Ecosystem Restoration

Alternatives: 4 and 5

Environmental Consequences: The evidence of motorized roads and trails would continue to be present. Livestock and livestock facilities would be evident. The area would be dominated by open meadows, grasslands, shrublands, and areas of hardwood vegetation along drainages. Vegetation treatments to restore the native prairie ecosystem would be apparent. Exotic plant species such as the non-native conifer tree stands would be removed. The vegetation would consist of native prairie and a variety of successional stages. Opportunities for isolation and solitude in a motorized setting would be available.

Mitigation Measures: The area would be managed for no decrease in pasture size and for no net gain of fences, water developments, and roads. Motorized access would be restricted to roads and trails. Livestock grazing would be allowed at levels commensurate with prairie restoration. Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is possibility the area would temporarily lose its roadless character during ecosystem restoration activities.

Economic and Social Effects: Both motorized and nonmotorized opportunities would be available. Opportunities for those desiring solitude and isolation would be reduced temporarily while restoration activities were in progress. Once restoration was substantially completed, opportunities for isolation and solitude would be restored to approximately the present level. Those accustomed to accessing the area by vehicle would continue to have limited access. Livestock grazing would likely remain the primary economic benefit from the area but would be reduced during restoration activities. The primitive to semi-primitive character of the area would be temporarily altered but would be restored over time.

Designation: Non-wilderness

Prescription: MA 5.12

Alternatives: 2

Environmental Consequences: The evidence of motorized roads and trails would continue to be present. Livestock and livestock facilities would be evident. The area would be dominated by open meadows, grasslands, shrublands, and areas of woody vegetation. The natural appearance is broken in portions by rectangular, hand planted, conifer forest blocks of trees. Vegetation treatments would be apparent. The vegetation would consist of open, park-like stands and a variety of successional stages. Opportunities for isolation and solitude in a motorized setting would be available.

Mitigation Measures: A full spectrum of motorized opportunities would be allowed unless specific areas are designated as closed or travel restricted to designated roads and trails. Construction of livestock and recreation facilities, roads, power lines, fences, water developments, and other features would be allowed. The area would be managed for a balance of sustainable physical, biological, and scenic values associated with woody vegetation and open grassland. Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is possibility the area would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased gradually while, at the same time opportunities for nonmotorized activities would be reduced and perhaps forgone. Opportunities for solitude, lower human encounters, and nonmotorized settings would gradually be reduced. All users would be permitted motorized access. Livestock grazing would likely remain the primary economic benefit. The area would continue to provide the existing mix of economic benefits while roadless primitive to semi-primitive character would be altered through time and perhaps permanently altered, making future wilderness designation unlikely.

Designation: Non-wilderness

Prescription: MA 6.1 Rangeland with Broad Resource Emphasis

Alternative: 2, 3, 4, and 5

Environmental Consequences: The evidence of motorized roads and trails would continue to be present. Livestock and livestock facilities would be apparent. The area would be dominated by open meadows, grasslands, shrublands, and areas of woody vegetation. Vegetation treatments would be apparent. The natural appearance is broken in portions by rectangular, hand planted, conifer forest blocks of trees. The vegetation would consist of open, park-like stands and a variety of successional stages. Opportunities for isolation and solitude in a motorized setting would be available.

Mitigation Measures: A full spectrum of motorized opportunities would be allowed unless specific areas are designated as closed or travel restricted to designated roads and trails. Construction of livestock and recreation facilities, roads, power lines, fences, water developments, and other features would be allowed. The area would be managed for a diversity of plants, animals, and ecological functions and processes, while providing livestock forage and other amenity values. Although, mitigation measures would be applied to meet

Grassland-wide Plan standards and guidelines, there is possibility the area would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased gradually while at the same time opportunities for nonmotorized activities would be reduced and perhaps forgone. Opportunities for solitude, lower human encounters, and nonmotorized settings would gradually be reduced. All users would be permitted motorized access. Livestock grazing would remain the primary economic benefit. The area would continue to provide the existing mix of economic benefits while roadless primitive to semi-primitive character could be altered through time and perhaps permanently altered, making future wilderness designation unlikely.

Steer Creek West (Public Proposed): An Overview of the Affected Environment

The 26,210-acre Steer Creek West area is located about 30 miles southwest of Valentine, Nebraska, and 10 miles south of Nenzel, Nebraska. Specifically, the Steer Creek West area is located, either partly or fully, in Township 32 North, Range 32 West, Sections 6-7, 18-19 and 30-31, and Township 32 North, Range 33 West, Section 1-2, 4-30 and 33-36, and Township 32 North Range 34 West, Sections 1-2, 11-14 and 23-24. Access is via U.S. Highway 20 to Nenzel, then south along State Highway 16F.

This area lies within the Great Plains Steppe Province ecoregion of the Temperate Steppe Division as identified by Robert G. Bailey (71). The Sand Hills of Nebraska, where the area is located, is the largest area of grass-covered sand dunes in the Western Hemisphere. This area was formed by blowing sand and reached its present size during the last 8,000 years. Elevation rises to about 3,200 feet above sea level and the topography consists of low rolling hills, ridges and grass-covered dunes.

This area is a unique mixture of plant communities known as Sand Hills prairie, with such species as sand bluestem, prairie sandreed, little bluestem, switchgrass, Indiangrass, needle-and-thread, western wheatgrass, and prairie junegrass. A variety of introduced grasses occur, including Kentucky bluegrass, timothy, redtop, and red clover. In part due to successful fire suppression, red cedar is encroaching upon the prairie, presenting some management challenges. As well, habitat for the endangered blow-out penstemon and the threatened Western prairie fringed orchid is found in Steer Creek West.

Wildlife include prairie chicken, sharp-tailed grouse, mule and white-tailed deer, coyote, grassland songbirds, waterfowl, raptors, amphibians, and reptiles, including the box turtle.

Typical recreation includes hunting and off-highway motorized use. Livestock grazing also occurs, generally from May 15 to November 1.

Current fire management requires immediate, initial-attack suppression due to the proximity of adjacent private land.

Steer Creek West: Capability Analyses

Environment

Opportunity for Solitude and Serenity: Opportunities for solitude and serenity are very high. There is little to no background noise, limited motorized activity, and very few people to be encountered in these areas. The rolling, vegetated sand-dune grassland offers isolation and a vast quiet environment.

Natural Appearance and Integrity: A natural appearance is evident, representative of the characteristic, sand-dune grassland pattern. Most of the ecological processes are intact, including frequent, rapidly moving wildfire, although suppression is conducted as quickly as possible. Signs of livestock grazing are evident. Some recreational use is also evident, including spring birdwatching and hunting in the fall. Livestock developments include 52 windmills and stock tanks and 62 miles of fencing.

Challenge: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Bessey Ranger District (Samuel R. McKelvie National Forest).

Recreation Opportunities: Typical recreation can include hiking, primitive camping, hunting, photography, and horseback riding. Sight-seeing, including through areas of hand-planted forests, is available.

Special Features

Unique Characteristics and Scenic Features: Some archeological sites may exist, especially representative of prehistoric occupation. The area provides a singular, scenic sand-dune landscape of swales and grassy hills.

Opportunities for Outdoor Education: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Bessey Ranger District (Samuel R. McKelvie National Forest).

Manageability

Size and Shape: The 26,210-acre Steer Creek West area is a contiguous block of National Forest System land. No inholdings exist. It is about eight miles wide east to west and about six miles long north to south.

Potential to Manage Boundaries: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Bessey Ranger District (Samuel R. McKelvie National Forest).

Steer Creek West: Availability Analyses

Resource Values and Potentials

Oil and Gas: Historically two wildcat wells were drilled on the McKelvie National Forest, but both proved dry. Warm-water resources are known to exist.

Coal: No coal resources exist on the McKelvie National Forest.

Livestock Grazing: Eight permittees operate on eight allotments for an average, annual, permitted AUM count of 16,800 in the Steer Creek West area.

Locatable Minerals: No known locatable minerals exist in this area.

Common Minerals: No known minerals exist in this area.

Timber: No merchantable timber exists in Steer Creek West. Some post and pole products are available, consisting of Eastern red cedar and the thinning of conifer stands. Firewood for local use is available through permits.

Recreation: Nonmotorized hunting would be enhanced through a Wilderness designation. Off-road motorized recreation would be prohibited. Handicapped and elderly access may be reduced by Wilderness designation.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Blowout penstemon: Effects from Wilderness designation would be beneficial due to the reduction in mortality caused by motorized or mechanized vehicles and equipment, restrictions that accompany Wilderness designations.
- Western prairie-fringed orchid: Effects from Wilderness designation would be beneficial due to the reduction in mortality caused by motorized or mechanized vehicles and equipment, restrictions that accompany Wilderness designations.
- Peregrine falcon: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.
- Bald eagle: Effects from Wilderness designation would have a beneficial effect on the nesting success and wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitats. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access within Wilderness areas.

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around both aerial- and ground-nesting raptor sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Samuel R. McKelvie National Forest include: the greater prairie chicken and the plains sharp-tailed grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered falling under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the table at the very end of this document.

Management Obligations, Constraints, or Encumbrances

Mineral Leases and Subsurface Rights: No appreciable subsurface minerals exist in the area and no leased acres exist in the area.

Existing Contracts and Agreements: Eight direct grazing permits are in force in this area. No agreements exist with any livestock associations, since no livestock associations operate in the area.

Biotic Control Measures and Fire Protection: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Bessey Ranger District (Samuel R. McKelvie National Forest).

Effects on Adjacent Lands: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Bessey Ranger District (Samuel R. McKelvie National Forest).

Steer Creek West: Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The following are the closest designated Wilderness areas:

- Fort Niobrara Wilderness (4,635 acres) about 40 miles to the northeast in the Fort Niobrara National Wildlife Refuge. Represents a mixed-grass and tallgrass prairie ecosystem.
- Soldier Creek Wilderness (7,794 acres) about 170 miles to the west on the Pine Ridge Ranger District of the Nebraska National Forest. Represents a ponderosa pine ecosystem.

Representation of Landforms and Ecosystems: This area represents the Sand Hills prairie on the largest vegetated sand-dune region in the Western Hemisphere.

Biota: No species are dependent upon a Wilderness designation to remain viable in the area. Most key species probably would benefit, however, from a designation.

Public Interests and Concerns: This area is very sparsely populated. The nearest town of any size is Valentine, Nebraska, about 25 miles to the northeast. Valentine's population is about 2,800. Designating the area as Wilderness might attract people from urban areas farther east, including Lincoln and Omaha, Nebraska.

A considerable number of people and organizations have called on the Forest Service to designate a grassland Wilderness somewhere on the Northern Great Plains. Currently, the Forest Service provides for no grassland Wilderness areas anywhere within the National Forest System.

Steer Creek West: Environmental Consequences

Management Prescription Allocations by Alternative:

Alternative 2:	MA 3.64	270 acres
	MA 6.1	25,940 acres
Alternative 3:	MA 3.64	270 acres
	MA 6.1	25,940 acres
Alternative 4:	MA 1.2	26,120acres
	MA 6.1	90 acres
Alternative 5:	MA 1.31	25,850 acres
	MA 3.64	270 acres
	MA 6.1	90 acres

Designation: Wilderness

Prescription: MA 1.2 Recommended for Wilderness

Alternatives: 4

Environmental Consequences: Vegetation composition and structure are controlled by natural processes, such as fire, insects, disease, and grazing. There is some evidence of past human use, such as fences, trails, water developments, and primitive roads, but these would diminish through time. The natural appearance is broken in portions by rectangular, hand planted, conifer forest blocks of trees. Isolation and solitude would characterize the area. Recreation activities would be those not requiring motorized equipment in a primitive setting such as hiking, walking, horseback riding, and nonmotorized hunting. There would be an opportunity for discovery of ecological, biological, cultural, historic, and paleontological resources. Disturbance to wildlife by human activity would be minimized.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. New developments including livestock fences and water developments would not be allowed to detract from the wilderness character of the area.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings will be maintained or increased while at the same time opportunities for motorized recreation would be forgone. Those presently using the area for motorized activities, recreation and hunting would no longer be able to do so. Opportunities for those desiring walk in hunting would increase. Some interpretive opportunities would be forgone. Mineral potential in the area is low and mineral development is unlikely under any management scenario. Livestock grazing would likely remain the primary economic benefit from the area. The primitive to semi-primitive character of the area would be maintained.

Designation: Non-wilderness

Prescription: MA 1.31 Backcountry Recreation Nonmotorized

Alternatives: 5

Environmental Consequences: Vegetation composition and structure are controlled by natural processes, such as fire, insects, disease, and grazing. There is some evidence of past human use, such as fences, trails, water developments, and primitive roads, but these would diminish through time. The natural appearance is broken in portions by rectangular, hand planted, conifer forest blocks of trees. Isolation and solitude would characterize the area. Recreation activities would be those not requiring motorized equipment in a primitive setting such as hiking, walking, horseback riding, and nonmotorized hunting. There would be an opportunity for discovery of ecological, biological, cultural, historic, and paleontological resources. Disturbance to wildlife by human activity would be minimized.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. New developments including livestock fences and water developments would not be allowed to detract from the primitive to semi-primitive character of the area.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings will be maintained or increased while at the same time opportunities for motorized recreation would be forgone. Those presently using the area for motorized activities, recreation and hunting would no longer be able to do so. Opportunities for those desiring walk in hunting would increase. Some interpretive opportunities would be forgone. Mineral potential in the area is low and mineral development is unlikely under any management scenario. Livestock grazing would likely remain the primary economic benefit from the area. The primitive to semi-primitive character of the area would be maintained.

Designation: Non-wilderness

Prescription: MA 3.64, Special Plant and Wildlife Habitat

Alternatives: 2, 3, and 5

Environmental Consequences: Vegetation, terrestrial and aquatic habitats would usually but not always appear natural. There would be some evidence of vegetative manipulation to maintain high levels of habitat effectiveness. Past human use, such as fences, trails, water developments, and primitive roads, would be evident. The natural appearance is broken in portions by rectangular, hand planted, conifer forest blocks of trees**.** Opportunities for isolation and solitude in a motorized setting would be available. There would be an opportunity for discovery and interpretation of ecological, biological, cultural, historic, and paleontological resources. Livestock grazing would occur periodically to meet management objectives.

Mitigation Measures: The area would be managed for no decrease in pasture size and for no net gain of fences, water developments, and roads. Motorized access would be allowed but limited to roads and trails. Although grazing could occur to meet management objectives, the area would normally be considered unsuitable for grazing.

Economic and Social Effects: Both motorized and nonmotorized opportunities would be available. Opportunities for those desiring solitude and isolation would be about the same as present. Those accustomed to accessing the area by vehicle would have limited access. Opportunities for discovery and interpretation of ecological, biological, cultural, historic, and paleontological resources would be good. Livestock grazing would likely remain the primary economic benefit from the area but would be reduced from present levels. The primitive to semi-primitive character of the area would be substantially retained.

Designation: Non-wilderness

Prescription: MA 6.1 Rangeland with Broad Resource Emphasis

Alternative: 2, 3, 4, and 5

Environmental Consequences: The evidence of motorized roads and trails would continue to be present. Livestock and livestock facilities would be apparent. Open meadows, grasslands, shrublands, and areas of woody vegetation would dominate the area. Vegetation treatments would be apparent. The natural appearance is broken in portions by rectangular, hand planted, conifer forest blocks of trees. The vegetation would consist of open, park-like stands and a variety of successional stages. Opportunities for isolation and solitude in a motorized setting would be available.

Mitigation Measures: A full spectrum of motorized opportunities would be allowed unless specific areas are designated as closed or travel restricted to designated roads and trails. Construction of livestock and recreation facilities, roads, power lines, fences, water developments, and other features would be allowed. The area would be managed for a diversity of plants, animals, and ecological functions and processes, while providing livestock forage and other amenity values. Although, mitigation measures would be applied to meet Grassland-wide Plan standards and guidelines, there is possibility the area would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased gradually while at the same time opportunities for nonmotorized activities would be reduced and perhaps forgone. Opportunities for solitude, lower human encounters, and nonmotorized settings would gradually be reduced. All users would be permitted motorized access. Livestock grazing would remain the primary economic benefit. The area would continue to provide the existing mix of economic benefits while roadless primitive to semi-primitive character could be altered through time and perhaps permanently altered, making future wilderness designation unlikely.

Dismal River (Public Proposed): An Overview of the Affected Environment

The 12,980-acre Dismal River area is located about 15 miles southwest of Halsey, Nebraska. Specifically, Dismal River is located, either partly or fully in Township 31 North, Range 27 West, Sections 4-10 and 14-23. Access is by way of Nebraska Highway 2 to Halsey, then west to the forest entrance, west on State spur 86B and southwest on Forest Development Road 203.

This area lies within the Great Plains Steppe Province ecoregion of the Temperate Steppe Division as identified by Robert G. Bailey (71). The Sand Hills of Nebraska, where the area is located, is the largest area of grass-covered sand dunes in the Western Hemisphere. This area was formed by blowing sand and reached its present size during the last 8,000 years. Elevation rises to about 3,200 feet above sea level and the topography consists of low rolling hills, ridges, and grass-covered dunes.

This area is a unique mixture of plant communities known as Sand Hills prairie, with such species as sand bluestem, prairie sandreed, little bluestem, switchgrass, Indiangrass, needle-and-thread, western wheatgrass, and prairie junegrass. A variety of introduced grasses occur, including Kentucky bluegrass, timothy, redtop, and red clover. In part as a result of successful fire suppression, red cedar is encroaching upon the prairie, presenting some management challenges. Habitat for the endangered blow-out penstemon, including a proposed reintroduction site for the penstemon, is found in Dismal River.

Wildlife include prairie chicken, sharp-tailed grouse, mule and white-tailed deer, coyote and other furbearers, grassland songbirds, waterfowl, raptors, amphibians, and reptiles, including the box turtle.

Forest Development Road 228 provides access into the area. Although this road is identified as a forest development road, it is only minimally maintained and travelers are advised to operate only four-wheel-drive vehicles on it.

Typical recreation includes hunting and off-highway motorized use. Livestock grazing also occurs in the area, typically May 15 to October 1.

Current fire management requires immediate, initial-attack suppression due to the proximity of adjacent private land.

Dismal River: Capability Analyses

Environment

Opportunity for Solitude and Serenity: Opportunities for solitude and serenity are very high. There is little to no background noise, limited motorized activity, and very few people to be encountered in these areas. The rolling, vegetated sand-dune grassland offers isolation and a vast quiet environment.

Natural Appearance and Integrity: A natural appearance is evident, representative of the characteristic, sand-dune grassland pattern. Most of the ecological processes are intact, including frequent, rapidly moving wildfire, although suppression is conducted as quickly as possible. Signs of livestock grazing are evident. Some recreational use is also evident, including spring birdwatching and hunting in the fall and Off-highway vehicle use throughout the year. Livestock developments include 18windmills and stock tanks and 22 miles of fencing.

Challenge: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Bessey Ranger District (Nebraska National Forest).

Recreation Opportunities: Typical recreation includes hiking, primitive camping, hunting, photography and horseback riding. Sight-seeing through prairie is available.

Special Features

Unique Characteristics and Scenic Features: Some archeological sites may exist, especially representative of prehistoric occupation. The area provides a singular, scenic sand-dune landscape of swales and grassy hills

Opportunities for Outdoor Education: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Bessey Ranger District (Nebraska National Forest).

Manageability

Size and Shape: The 12,980-acre Dismal River area is a contiguous block of National Forest System land with no inholdings. It is about 5 miles wide east to west and about 4 miles long north to south on the west end tapering down to about 11/2 miles wide on the east end.

Potential to Manage Boundaries: Boundary management may prove difficult, in part because of a very small Forest Service staff in the area. The vast size of the area makes monitoring of the boundaries difficult, especially on the southern boundary to Dismal River, where adjacent private land abuts the area. Northern and eastern boundaries to Dismal River are easier to monitor since these boundaries are formed by paved travelways. Signing would be expensive and would have to be extensive. Maintenance of such signing would be quite time-consuming. The sand-dune terrain forming the boundaries is easily breached and the sheer length of the boundary and lack of staff would make monitoring of illegal access nearly impossible.

Dismal River: Availability Analyses

Resource Values and Potentials

Oil and Gas: Historically two wildcat wells were drilled on the Nebraska National Forest, but both proved dry. Warm-water resources are known to exist.

Coal: No coal resources exist on the Nebraska National Forest.

Livestock Grazing: Four permittees operate on four allotments, for an average, annual, permitted AUM count of 4,000 in the Dismal River roadless area.

Locatable Minerals: No known deposits of locatable minerals exist in this area.

Common Minerals: Known sand and gravel resources exist in the southern portions of this area near the Dismal River.

Timber: There is some natural occurring eastern red cedar in the area with denser stands appearing near the southern portion close to the Dismal River.

Recreation: Nonmotorized hunting would be enhanced through a Wilderness designation. Off-road motorized recreation would be prohibited. Handicapped and elderly access may be reduced by Wilderness designation.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Blowout penstemon: Effects from Wilderness designation would be beneficial due to the reduction in mortality caused by motorized or mechanized vehicles and equipment, restrictions that accompany Wilderness designations.
- Western prairie-fringed orchid: There would be no effects from Wilderness designation because there is no existing habitat within the area.
- Peregrine falcon; American burying beetle: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.
- Bald eagle: Effects from Wilderness designation would have a beneficial effect on the nesting success and wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitats. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access within Wilderness areas.

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around both aerial- and ground-nesting raptor sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Nebraska National Forest include: the greater prairie chicken and the plains sharp-tailed grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered falling under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the table at the very end of this document.

Management Obligations, Constraints, or Encumbrances

Mineral Leases and Subsurface Rights: No appreciable subsurface minerals exist in the area and no leased acres exist in the area.

Existing Contracts and Agreements: Four direct grazing permits are in force in this area. No agreements exist with any livestock associations, since no livestock associations operate in the area.

Biotic Control Measures and Fire Protection: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Bessey Ranger District (Nebraska National Forest).

Effects on Adjacent Lands: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Bessey Ranger District (Nebraska National Forest).

Dismal River: Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The following are the closest designated Wilderness areas:

- Fort Niobrara Wilderness (4,635 acres) about 75 miles to the north in the Fort Niobrara National Wildlife Refuge. Represents a mixed-grass and tallgrass prairie ecosystem.
- Soldier Creek Wilderness (7,794 acres) about 215 miles to the west on the Pine Ridge Ranger District of the Nebraska National Forest. Represents a ponderosa pine ecosystem.

Representation of Landforms and Ecosystems: This area represents the Sand Hills prairie on the largest vegetated sand-dune region in the Western Hemisphere.

Biota: No species are dependent upon a Wilderness designation to remain viable in the area. Most key species probably would benefit, however, from a designation.

Public Interests and Concerns: This area is very sparsely populated. The nearest town of any size is Broken Bow, Nebraska, about 50 miles to the southeast. Broken Bow's population is about 4,000. Designating the area as Wilderness might attract people from urban areas farther east, including Lincoln and Omaha, Nebraska.

A considerable number of people and organizations have called on the Forest Service to designate a grassland Wilderness somewhere on the Northern Great Plains. Currently, the Forest Service provides for no grassland Wilderness areas anywhere within the National Forest System.

Dismal River: Environmental Consequences

Management Prescription Allocations by Alternative:

Alternative 2:	MA 3.64	280 acres
	MA 6.1	12,700 acres
Alternative 3:	MA 3,64	280 acres
	MA 6.1	12,700 acres
Alternative 4:	MA 3.64	280 acres
	MA 6.1	12,700 acres
Alternative 5:	MA 3.64	280 acres
	MA 6.1	12,700 acres

Designation: Wilderness

Prescription: MA 1.2 Recommended for Wilderness

Alternatives: Wilderness designation is not considered in any alternative because of the area's existing level of mineral development.

Designation: Non-wilderness

Prescription: MA 3.64, Special Plant and Wildlife Habitat

Alternatives: 2, 3, 4, and 5

Environmental Consequences: Vegetation, terrestrial and aquatic habitats would usually but not always appear natural. There would be some evidence of vegetative manipulation to maintain high levels of habitat effectiveness. Past human use, such as fences, trails, water developments, and primitive roads, would be evident. The natural appearance is broken in portions by rectangular, hand planted, conifer forest blocks of trees. Opportunities for isolation and solitude in a motorized setting would be available. There would be an opportunity for discovery and interpretation of ecological, biological, cultural, historic, and paleontological resources. Livestock grazing would occur periodically to meet management objectives.

Mitigation Measures: The area would be managed for no decrease in pasture size and for no net gain of fences, water developments, and roads. Motorized access would be allowed but limited to roads and trails. Although grazing could occur to meet management objectives, the area would normally be considered unsuitable for grazing.

Economic and Social Effects: Both motorized and nonmotorized opportunities would be available. Opportunities for those desiring solitude and isolation would be about the same as present. Those accustomed to accessing the area by vehicle would have limited access. Opportunities for discovery and interpretation of ecological, biological, cultural, historic and paleontological resources would be good. Livestock grazing would likely remain the primary economic benefit from the area but would be reduced from present levels. The primitive to semi-primitive character of the area would be substantially retained.

Designation: Non-wilderness

Prescription: MA 6.1 Rangeland with Broad Resource Emphasis

Alternative: 2, 3, 4, and 5

Environmental Consequences: The evidence of motorized roads and trails would continue to be present. Livestock and livestock facilities would be apparent. Open meadows, grasslands, shrublands, and areas of woody vegetation would dominate the area. Vegetation treatments would be apparent. The vegetation would consist of open, park-like stands and a variety of successional stages. Opportunities for isolation and solitude in a motorized setting would be available.

Mitigation Measures: A full spectrum of motorized opportunities would be allowed unless specific areas are designated as closed or travel restricted to designated roads and trails. Construction of livestock and recreation facilities, roads, power lines, fences, water developments, and other features would be allowed. The area would be managed for a diversity of plants, animals, and ecological functions and processes, while providing livestock forage and other amenity values. Although, mitigation measures would be applied to meet Grassland-wide Plan standards and guidelines, there is possibility the area would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased gradually while at the same time opportunities for nonmotorized activities would be reduced and perhaps lost permanently. Opportunities for solitude, lower human encounters, and nonmotorized settings would gradually be reduced. All users would be permitted motorized access. Livestock grazing would remain the primary economic benefit. The area would continue to provide the existing mix of economic benefits while roadless primitive to semi-primitive character could be lost through time and perhaps permanently lost making future wilderness designation unlikely.

Criteria Common to All Roadless Areas on this Administrative Unit

Capability Criteria

Challenge: Challenges center around survival in a dry, vast, and open environment. Summer temperatures can exceed 100° Fahrenheit. Winter temperatures can drop to more than -30° Fahrenheit, with wind-chill factors well in excess of -85° Fahrenheit. The wide-open landscapes can be very deceptive and visitors can become altered very easily. No developed recreation trails exist, although some two-track roads exist. Wildfire is frequent, and moves very rapidly over a highly flammable landscape. It can easily overtake people on foot, horseback or in motorized vehicles.

Opportunities for Outdoor Education: A visitor should find plenty of features to stimulate curiosity: grassland ecosystems, grassland flora and fauna, shifting weather patterns and cloud types and clear night skies with unimpeded views of the stars. Skills in maneuvering a rugged terrain, using a compass, taking precautions for snake and spider bites, heat stroke, frostbite, setting up a primitive campsite and outdoor cooking may all test and develop a visitor's understanding of the outdoors. However, no interpretive resources, such as brochures or interpretive signing, exist in these areas.

Visitor-information services are limited. Still, a visitor should find plenty of features to stimulate curiosity and self-education: grassland ecosystems, grassland flora and fauna, sand-dune topography, shifting weather patterns and cloud types, and clear nights with unimpeded views of the stars. Skills in maneuvering through a repetitious sand-dune landscape, using a compass, taking precautions for heat stroke, frostbite or freezing, setting up a primitive campsite, securing water, and outdoor cooking may all test a visitor's understanding of the Sand Hills prairie.

Availability Criteria

Biotic Control Measures and Fire Protection: Chemical, biological and mechanical control methods may be used in these areas to stem the expansion of undesirable plant species. Wildfire suppression would be addressed in Wilderness management plans that would be developed if any of the roadless areas are designated by Congress as Wilderness.

Effects on Adjacent Lands: Some acres of Canada thistle and leafy spurge do occur in these areas and there is a possibility that it could spread to adjacent lands of other ownership. The potential exists that wildfire igniting in the area could spread to adjacent lands. It may be more likely that ignitions would begin outside these areas on adjacent lands of other ownership, which could spread onto National Forest System lands, especially along river corridors where recreation is concentrated.

Buffalo Gap National Grassland

Fall River Ranger District

Cheyenne River: An Overview of the Affected Environment

The 7,570-acre Cheyenne River area lies about 15 miles southeast of Hermosa, South Dakota, and about six miles southeast of Fairburn, South Dakota. Specifically, the Cheyenne River area is located, either partly or fully, in Township 4 South, Range 9 East, Sections 35 and 35, and Township 5 South, Range 9 East, Sections 1-4, 8-15, 17, and 23-24. Access is via Highway 79, east three miles along Custer County Road 18, through Fairburn, then 14 miles on Forest Development Road 7053, or southeast 21 miles from Hermosa via U.S. Highway 40 to Forest Development Road 7053 turning to the west.

The Cheyenne River area lies within the Great Plains-Palouse Dry Steppe Province ecoregion of the Temperate Steppe Division as identified by Robert G. Bailey (71). The topography of the area is varied, consisting of gently rolling grasslands or highly vegetated tabletop buttes with steep, dissected slopes exposing layers of color-banded clays of reds and shades of white and gray. Elsewhere, sparsely vegetated, mounded, clay badlands terrain and beds of agates exist. Natural seeps frequently occur along some of the hillsides. The elevation of the area ranges from between 2,750 to 3,300 feet above sea level. The dominant feature in the northern portion of the area is the Chalk Hills Ridge, exhibiting side slopes of white shale clays. This ridge runs in a northeasterly or southwesterly direction and is the most visible landmark in the northern portion of the area. The dominant feature in the southern portion is the Cheyenne River itself. Between the Chalk Hills and Cheyenne River are rolling grasslands dominated by western wheatgrass.

The dominant grasses include western wheatgrass, green needlegrass, buffalo grass, and blue gramma. Some crested wheatgrass, an exotic, can be found in isolated areas. The noxious weed Canada thistle also is found in the area. Woody shrub and browse species, mainly found in alluvial draws or dissected drainages, include skunkbrush sumac, chokecherry, snowberry, buffaloberry, and wild rose. North-facing exposures may be dominated by Rocky Mountain juniper. Draws in the area contain some green ash and chokecherry. A healthy, functioning, regenerating cottonwood community exists along the Cheyenne River. Sandbars provide special habitat conditions for some species.

Wildlife includes mule and white-tailed deer, pronghorn antelope, sharp-tailed grouse, high populations of raptors, such as red-tailed and Swainson's hawks, coyotes, porcupines, badgers, raccoons, prairie dogs, meadowlarks, loggerhead shrikes, belted kingfishers, northern flickers, long-billed curlews, upland sandpipers, prairie rattlesnakes, spiny softshell turtles, Woodhouse's toads, chorus frogs, and garter snakes. Bald eagles winter in the riverine cottonwoods. Fish species include channel catfish, stonecat and the flathead chub.

Recreational opportunities include rock hounding, hunting, horseback riding, canoeing, prairie dog shooting, and hiking. Livestock are grazed in the area.

Current fire management requires immediate, initial-attack suppression due to the proximity of adjacent private land.

Cheyenne River: Capability Analyses

Environment

Opportunity for Solitude and Serenity: This area provides a high opportunity for solitude and serenity. The remote badlands and rolling grassland terrain offers a visitor the chance to become isolated and removed from more developed areas on the Great Plains. Few range developments, except for fences, are located in the Cheyenne River area.

Natural Appearance and Integrity: This area retains a fairly high natural appearance. The landscape is only minimally altered from historic conditions. Generally, this area is scenic and provides the visitor a chance to experience the grassland as it appeared more than 100 years ago. Livestock may detract from the natural appearance. Livestock developments include a few stock dams, some fencing, and some two-track roads. Overall, the vegetative health is high, with most plant communities functioning properly. Most of the ecological processes, with the possible exception of fire, are intact.

Challenge: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Buffalo Gap National Grassland (Fall River Ranger District).

Recreation Opportunities: A number of recreational activities occur in the area, including rock hounding, prairie dog shooting and viewing, other hunting opportunities, horseback riding, nature study, birdwatching, limited off-road motorized recreation, some canoeing, and other associated activities.

Special Features

Unique Characteristics and Scenic Features: The Chalk Hills, which provide badlands features, including steep slopes, shale escarpments, and Rocky Mountain juniper, are a colorful portion of this area. The Cheyenne River marks the southern boundary to the area and provides scenic canoeing opportunities. A fair number of visitors come to the area to search for gemstones and agates. Fossils found in White River Group and Pierre Shale deposits represent the Eocene and Oligocene (45 to 26 million years ago) and the Late Cretaceous (90 to 65 million years ago) periods.

Opportunities for Outdoor Education: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Buffalo Gap National Grassland (Fall River Ranger District).

Manageability

Size and Shape: The 7,570-acre Cheyenne River area has an irregular shape. It contains one inholding of about 320 acres. The Cheyenne area is about five miles wide east to west and five miles long north to south.

Potential to Manage Boundaries: All but about two miles of the area's boundaries is fenced, so posting and signing would be quite easy. Clear and visible signing should discourage illegal motorized trespass; however, enforcing motorized closures would prove difficult because the area is so remote.

Cheyenne River: Availability Analyses

Resource Values and Potentials

Oil and Gas: The development potential is low. Oil shale and geothermal resources exist in the area.

Coal: No coal resources exist on the Buffalo Gap National Grassland.

Livestock Grazing: Two permittees graze cattle on two allotments, producing about 1,520 AUMs per year from July through November.

Locatable Minerals: Known and potential deposits of gold occur in the area, especially along the Cheyenne River where placer mining opportunities exist. Potential uranium, molybdenum, selenium, and vanadium resources may occur in this area.

Common Minerals: Known sand and gravel deposits exist along the Cheyenne River. In addition, known deposits of gemstones, Chadron bentonite/clay resources, and Pierre shale exist in the area. Potential specialty sand and potential building stone also may occur in the area.

Timber: No merchantable timber exists in the area.

Recreation: This area would provide excellent backcountry recreational experiences, including horseback riding, dispersed camping, rock hounding, canoeing, nature study, hiking and associated nonmotorized activities. Opportunities for physically challenged and elderly access under a Wilderness designation would likely be reduced. Walk-in hunting opportunities would likely increase. Motorized recreation of all kinds, including ATV, snowmobile, and four-wheel-drive use, would be prohibited.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Peregrine falcon; whooping crane: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.
- Bald eagle: Effects from Wilderness designation would have a beneficial effect on the nesting success and wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.

- Mountain plover: A Wilderness designation would likely reduce prairie dog shooting, thereby increasing the expansion of prairie dog towns which, in turn, enhances mountain plover habitat. Designation would reduce motorized activities that can disturb mountain plovers and destroy their nests.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitats. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access within Wilderness areas.

Black-tailed prairie dogs and species closely associated with prairie dog towns and colonies: Prairie dogs and prairie dog-associated species would largely benefit from Wilderness designations, primarily because the poisoning of prairie dog towns, accomplished mainly with motorized support, would be greatly reduced. In addition, fewer prairie dog shooters would frequent prairie dog towns in Wilderness areas due to restrictions on motorized access. However, prairie dogs and associated species may be adversely affected by a Wilderness designation due to the reduction anticipated in predator control, which would result from motorized restrictions. Finally, the mountain plover, which favors areas affected by fire, may be adversely affected due to reduced motorized support in conducting prescribed fires.

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around both aerial- and ground-nesting raptor sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Buffalo Gap National Grassland (Fall River Ranger District) include: the black-tailed prairie dog, plains sharp-tailed grouse and the sage grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered falling under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the table at the very end of this document.

Management Obligations, Constraints, or Encumbrances

Mineral Leases and Subsurface Rights: No current federal mineral leases exist in the area. Nearly the entire area has been leased in the past. About 1,586 acres of private, subsurface minerals ownership exist beneath National Forest System lands in the area. No private leases exist in the area.

Existing Contracts and Agreements: The two permittees in the area have direct permits issued by the U.S. Forest Service.

Biotic Control Measures and Fire Protection: Wildfire and noxious weed control would continue despite future management, including Wilderness designation.

Effects on Adjacent Lands: Vehicles would not be used for transportation or fire suppression when the fire danger is low. Vehicles would be used when fire conditions are high enough that firefighters walking and using hand tools would not be able to prevent a large fire.

Defensible fuel profile zones would be developed to permit options in managing restoration-designed prescribed fires.

Cheyenne River: Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The following are the closest designated Wilderness areas:

- Sage Creek Wilderness (64,144 acres) about 20 miles to the east in Badlands National Park. Represents a mixed-grass prairie ecosystem.
- Black Elk Wilderness (9,824 acres) about 27 miles to the west in the Black Hills. Represents a ponderosa pine ecosystem.

The Cheyenne River Wilderness would represent a mixed-grass prairie in a badlands setting and would share many of the characteristics of the Sage Creek Wilderness.

Representation of Landforms and Ecosystems: This area is representative of rolling grasslands, limited badlands, riparian cottonwood floodplain, and green ash/chokecherry wooded draws.

Biota: No species are dependent upon a Wilderness designation to remain viable in the area. Most key species probably would benefit, however, from a designation.

Public Interests and Concerns: The general local concerns expressed about this area include maintaining range improvements with motorized vehicles and suppression of wildfires with motorized vehicles. Local environmental groups have expressed an interest in designating areas for backcountry experiences, which may include Wilderness designation. In addition, a newly proposed railroad line, sponsored by the Dakota, Minnesota, and Eastern Railroad Company could be routed through the area. Such an expansion of railway service into the area would severely reduce the opportunity for solitude and serenity.

Cheyenne River: Environmental Consequences

Management Prescription Allocations by Alternative:

Alternative 2:	MA 6.1	7,570 acres
Alternative 3:	MA 6.1	7,570 acres
Alternative 3A:	MA 2.1	7,570 acres
Alternative 4:	MA 1.2	7,570 acres
Alternative 5:	MA 1.31	7,570 acres

Designation: Wilderness

Prescription: MA 1.2 Recommended for Wilderness

Alternatives: 4

Environmental Consequences: Vegetation composition and structure are controlled by natural processes, such as fire, insects, disease, and grazing. There is some evidence of past human use, such as fences, trails, water developments, and primitive roads, but these would diminish

through time. Isolation and solitude would characterize the area. Recreation activities would be those not requiring motorized equipment in a primitive setting such as hiking, walking, horseback riding, and nonmotorized hunting. There would be an opportunity for discovery of ecological, biological, cultural, historic, geologic, and paleontological resources. Disturbance to wildlife by human activity would be minimized.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. New developments including livestock fences and water developments would not be allowed to detract from the wilderness character of the area. Oil and gas potential is low and oil and gas development is unlikely under any management scenario. Common variety mineral development would be prohibited. If the area was designated Wilderness, it would normally be withdrawn from mineral location and entry and mineral opportunities would be forgone.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings will be maintained or increased while at the same time opportunities for motorized recreation would be forgone. Those presently using the area for motorized activities, recreation and hunting would no longer be able to do so. Opportunities for those desiring walk in hunting would increase. Some interpretive opportunities would be forgone. Livestock grazing would likely remain the primary economic benefit from the area. Unless locatable mineral development occurred, the primitive to semi-primitive character of the area would be maintained.

Designation: Non-wilderness

Prescription: MA 1.31 Backcountry Recreation Nonmotorized

Alternatives: 5

Environmental Consequences: Vegetation composition and structure are controlled by natural processes, such as fire, insects, disease, and grazing. There is some evidence of past human use, such as fences, trails, water developments, and primitive roads, but these would diminish through time. Isolation and solitude would characterize the area. Recreation activities would be those not requiring motorized equipment in a primitive setting such as hiking, walking, horseback riding, and nonmotorized hunting. There would be an opportunity for discovery of ecological, biological, cultural, historic, geologic, and paleontological resources. Disturbance to wildlife by human activity would be minimized.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. New developments including livestock fences and water developments would not be allowed to detract from the primitive to semi-primitive character of the area. Oil and gas potential is low and oil and gas development is unlikely under any management scenario. Common variety mineral development opportunities would be prohibited. Locatable minerals could still be developed with appropriate mitigating measures.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings will be maintained or increased while at the same time opportunities for motorized recreation would be forgone. Those presently using the area for motorized activities, recreation and hunting would no longer be able to do so. Opportunities for those desiring walk in hunting would increase. Some interpretive opportunities would be forgone. Livestock grazing would likely remain the primary economic benefit from the area. Unless locatable mineral development occurred, the primitive to semi-primitive character of the area would be maintained.

Designation: Non-wilderness

Prescription: MA 2.1, Special Interest Areas

Alternatives: 3A

Environmental Consequences: Vegetation, terrestrial and aquatic habitats would usually but not always appear natural. There would be some evidence of vegetative manipulation. Past human use, such as fences, trails, water developments, and primitive roads, would be evident. Opportunities for isolation and solitude in a motorized setting would be available. At various times wildlife would be disturbed by human activities. There would be an opportunity for discovery and interpretation of ecological, biological, cultural, historic, geologic, and paleontological resources. Livestock and livestock facilities would be apparent.

Mitigation Measures: Motorized travel would be restricted to designated routes to protect the special values of the area. Livestock grazing and recreation use would be restricted if it hinders achievement of the desired condition for the SIA. Roads not necessary for administrative, scientific, or valid private access would be closed or obliterated. Mineral development, oil, gas, locatable and common variety, would be allowed with appropriate mitigation measures. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act.

Economic and Social Effects: Opportunities for recreation, interpretation, and educational activities would be increased. The need to provide good public access for recreation, interpretation, and educational opportunities would increase. If better access were provided, the challenge to protect the Special Features of the area would increase. Opportunities for those desiring solitude and isolation would still exist but would be less than in a nonmotorized designation. Those desiring motorized opportunities would be limited and off-road vehicle opportunities would be forgone. Those accustomed to accessing the area by vehicle would continue to have limited access. Livestock grazing would likely remain the primary economic benefit from the area. Unless mineral development occurred, the primitive to semi-primitive character of the area would be substantially retained.

Designation: Non-wilderness

Prescription: MA 6.1 Rangeland with Broad Resource Emphasis

Alternative: 2 and 3

Environmental Consequences: The evidence of motorized roads and trails would continue to be present. Livestock and livestock facilities would be apparent. Open meadows, grasslands, shrublands, and areas of woody vegetation would dominate the area. Vegetation treatments would be apparent. The vegetation would consist of open, park-like stands and a variety of

successional stages. Opportunities for isolation and solitude in a motorized setting would be available.

Mitigation Measures: A full spectrum of motorized opportunities would be allowed unless specific areas are designated as closed or travel restricted to designated roads and trails. Construction of livestock and recreation facilities, roads, power lines, fences, water developments, mineral developments and other features would be allowed. The area would be managed for a diversity of plants, animals, and ecological functions and processes, while providing livestock forage and other amenity values. Although, mitigation measures would be applied to meet Grassland-wide Plan standards and guidelines, there is possibility the area would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased gradually while at the same time opportunities for nonmotorized activities would be reduced and perhaps forgone. Opportunities for solitude, lower human encounters, and nonmotorized settings would gradually be reduced. All users would be permitted motorized access. Livestock grazing would remain the primary economic benefit. The area would continue to provide the existing mix of economic benefits while roadless primitive to semi-primitive character could be altered through time and perhaps permanently altered, making future wilderness designation unlikely.

First Black Canyon: An Overview of the Affected Environment

The 4,960-acre First Black Canyon area lies about 12 miles northeast of Smithwick, South Dakota. Specifically, the First Black Canyon area is located, either partly or fully, in Township 7 South, Range 9 East, Sections 3-4, 9-15, and 22-27. Access from Smithwick is via Fall River County Road Number 1 east for about eight miles, then north on Forest Development Road 7045 for about 10 miles, then northeast on Forest Development Road 7063 for about two miles. The Jim Wilson Canyon Public Proposed Roadless Area lies to the west of First Black Canyon.

The First Black Canyon area lies within the Great Plains-Palouse Dry Steppe Province ecoregion of the Temperate Steppe Division as identified by Robert G. Bailey (71). The topography of the area is varied, consisting of rolling to steep hilly grasslands, some of it fairly rugged and dissected with gullies, with a few patches of hard, flat clay pan. The elevation of the area ranges from between 2,900 to 3,240 feet above sea level.

The dominant grasses include western wheatgrass, green needlegrass, buffalo grass, and blue gramma. The noxious weed Canada thistle also is found in the area. No woody shrub components exist, although a few solitary cottonwoods may be found.

Wildlife includes mule and white-tailed deer, pronghorn antelope, sharp-tailed grouse, high populations of raptors, such as red-tailed and Swainson's hawks, coyotes, porcupines, badgers, prairie dogs, meadowlarks, loggerhead shrikes, northern flickers, long-billed curlews, upland sandpipers, prairie rattlesnakes, Woodhouse's toads, chorus frogs, and garter snakes.

Recreational opportunities include hunting, horseback riding, prairie dog shooting, and off-highway recreational motorized use. Livestock grazing occurs in the area.

Current fire management requires immediate, initial-attack suppression due to the explosive nature of the natural fuels.

First Black Canyon: Capability Analyses

Environment

Opportunity for Solitude and Serenity: Opportunities for solitude and serenity are available. The terrain offers an opportunity for isolation within the rolling hills. In addition, on open stretches, the nature of the mixed-grass prairie provides isolation; however, a fair number of developments do exist, such as stock dams, stock tanks, and two-track roads. The visitor might still experience the grassland much as early settlers and American Indians did more than a century ago.

Natural Appearance and Integrity: Overall, this area retains a natural appearance, representative of a healthy native grassland with rolling hills terrain. Most of the ecological processes, including seasonal flash flooding, remain intact. Closer examination reveals some signs of livestock activities. Cattle frequent the area from May through October. Livestock developments include some fencing, seven stock dams, and five stock tanks, which detract from the natural setting. About eight miles of buried pipeline are located in the area, but buried pipeline is not easily identifiable.

Challenge: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Buffalo Gap National Grassland (Fall River Ranger District).

Recreation Opportunities: The opportunities exist for hiking across an isolated hilly area. Currently, hunting pressure in this area is moderate to high. Should the area be designated as a Wilderness, all hunting would be on a walk-in basis only.

Special Features

Unique Characteristics and Scenic Features: Eight active prairie dog towns of about 115 acres provide unique grassland habitat to numerous grassland species. In conjunction with the adjacent Jim Wilson Canyon, this area provides one of the highest concentrations of prairie dog complexes on the Fall River District. First Black Canyon also offers open, native grassland landscapes, which might be an attractive feature to people looking for a grassland experience.

Opportunities for Outdoor Education: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Buffalo Gap National Grassland (Fall River Ranger District).

Manageability

Size and Shape: The 4,960-acre First Black Canyon area is a contiguous block of National Forest System land with no inholdings under other ownership. It is about one to two miles wide east to west and about three to four miles long north to south. Existing developments pose only minor management challenges; however, the buried pipeline and fence lines do need to be maintained on an annual basis.

Potential to Manage Boundaries: The current boundaries consist of fencelines and Forest Development Roads. Fence lines offer the opportunity for clear and visible signing. They also prevent unauthorized motorized access. Since about three-quarters of the area's boundary are formed by Forest Development Roads, illegal motorized access may be difficult to prevent should the area be designated as a Wilderness.

First Black Canyon: Availability Analyses

Resource Values and Potentials

Oil and Gas: No oil and gas developments exist in the area. No interest has been expressed to develop any sites. The development potential is low, although oil shale and geothermal resources do exist in the area.

Coal: No coal resources exist on the Buffalo Gap National Grassland.

Livestock Grazing: Typically, livestock grazing occurs from May through October. This area is within the Gamet Allotment, with six permittees, for an average estimate of 1,800 permitted AUMs per year for this portion of the Gamet Allotment.

Locatable Minerals: No known locatable minerals exist in the area.

Common Minerals: Known sand, gravel and Pierre shale resources exist in the area.

Timber: No merchantable timber exists in the area.

Recreation: Wilderness designation might decrease hunting pressure, as well as restrict physically challenged and elderly access. Some increase in backcountry visitation might occur under Wilderness designation.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Peregrine falcon; whooping crane: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.
- Bald eagle: Effects from Wilderness designation would have a beneficial effect on the nesting success and wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.
- Black-footed ferret: Effects from Wilderness designation would be both beneficial and adverse. Beneficial effects result from the reduced human disturbances and reduced potential mortality due to motorized vehicles. In addition, ferrets would benefit from the significant reduction in prairie dog shooters, who would lose motorized access to prairie dog towns in a Wilderness area. Adverse effects result from restrictions on the motorized support to aid in ferret reintroduction projects. Ferrets may be targeted for reintroduction projects in the future in several areas on the Northern Great Plains, including this area.
- Mountain plover: A Wilderness designation would likely reduce prairie dog shooting, thereby increasing the expansion of prairie dog towns which, in turn, enhances mountain plover habitat. Designation would reduce motorized activities that can disturb mountain plovers and destroy their nests.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitats. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access within Wilderness areas.

Black-tailed prairie dogs and species closely associated with prairie dog towns and colonies: Prairie dogs and prairie dog-associated species would largely benefit from Wilderness designations, primarily because the poisoning of prairie dog towns, accomplished mainly with motorized support, would be greatly reduced. In addition, fewer prairie dog shooters would frequent prairie dog towns in Wilderness areas due to restrictions on motorized access. However, prairie dogs and associated species may be adversely affected by a Wilderness designation due to the reduction anticipated in predator control, which would result from motorized restrictions. Finally, the mountain plover, which favors areas affected by fire, may be adversely affected due to reduced motorized support in conducting prescribed fires.

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around both aerial- and ground-nesting raptor sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Buffalo National Grassland (Fall River Ranger District) include: the black-tailed prairie dog, and plains sharp-tailed grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered falling under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the table at the very end of this document.

Management Obligations, Constraints, or Encumbrances

Mineral Leases and Subsurface Rights: About 1,857 acres of private, subsurface minerals ownership exist beneath National Forest System lands in the area. No private leases exist in the area.

Existing Contracts and Agreements: The area is permitted under a grazing permit held by the Pioneer Grazing Association.

Biotic Control Measures and Fire Protection: Wildfire and noxious weed control would continue, despite future management, including Wilderness designation.

Effects on Adjacent Lands: Better strategies to identify public/private interface boundaries and to educate the public about landownership patterns may be needed. Some control of noxious or exotic plants is currently done in the area. Minor prairie dog control (usually less than 100 acres once every three to five years) is conducted and takes into account adjacent private lands.

The current boundaries consist of fence lines and Forest Development Roads. Fence lines offer the opportunity for clear and visible signing. They also prevent unauthorized motorized access. Unauthorized motorized access may be more difficult to prevent along Forest Development Roads.

Under Wilderness designation, vehicles would not be used for transportation or fire suppression when the fire danger is low. Vehicles will be used when fire conditions are high enough that firefighters walking and using hand tools would not be able to prevent a large fire.

Defensible fuel profile zones would be developed to permit options in managing restoration-designed prescribed fires.

First Black Canyon: Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The following are the closest designate Wilderness areas:

- Black Elk Wilderness (9,824 acres) in the Black Hills lies about 33 miles to the northwest and is the closest designated Wilderness to First Black Canyon. Represents a ponderosa pine ecosystem.
- Sage Creek Wilderness (64,144 acres) is about 37 miles to the northeast in Badlands National Park. Represents a mixed-grass prairie ecosystem. It is the only designated Wilderness in the White River Badlands.

Representation of Landforms and Ecosystems: This area represents a mixed-grass prairie.

Biota: No species are dependent upon a Wilderness designation to remain viable in the area. A Wilderness designation may impede predator control and monitoring of any future reintroductions of the black-footed ferret to the area. Most other key species probably would benefit from a designation.

Public Interests and Concerns: The area is very sparsely populated. Rapid City, with a population of about 55,000 and about 40 miles to the northwest, is the closest area of significant population. It is likely that more people from Rapid City would visit the area under Wilderness designation.

A considerable number of people and organizations have called for the Forest Service to designate a grassland Wilderness somewhere on the Northern Great Plains. Currently, the Forest Service provides for no grassland Wilderness anywhere within the National Forest System.

First Black Canyon: Environmental Consequences

Management Prescription Allocations by Alternative:

Alternative 2:	MA 6.1	4,960 acres
Alternative 3:	MA 3.63	4,960 acres
Alternative 3A:	MA 6.1	4,960 acres
Alternative 4:	MA 1.2	4,960 acres
Alternative 5:	MA 3.63	4,960 acres

Designation: Wilderness

Prescription: MA 1.2 Recommended for Wilderness

Alternatives: 4

Environmental Consequences: Vegetation composition and structure are controlled by natural processes, such as fire, insects, disease, and grazing. There is some evidence of past human use, such as fences, trails, water developments, and primitive roads, but these would diminish through time. Isolation and solitude would characterize the area. Recreation activities would be those not requiring motorized equipment in a primitive setting such as hiking, walking, horseback riding, and nonmotorized hunting. There would be an opportunity for discovery of ecological, biological, cultural, historic, and paleontological resources. Disturbance to wildlife by human activity would be minimized.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. New developments including livestock fences and water developments would not be allowed to detract from the wilderness character of the area.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings will be maintained or increased while at the same time opportunities for motorized recreation would be forgone. Those presently using the area for motorized activities, recreation, and hunting would no longer be able to do so. Opportunities for those desiring walk in hunting would increase. Some interpretive opportunities would be forgone. Mineral potential in the area is low and mineral development is unlikely under any management scenario. Livestock grazing would likely remain the primary economic benefit from the area. The primitive to semi-primitive character of the area would be maintained.

Designation: Non-wilderness

Prescription: MA 3.63 Black-footed Ferret Reintroduction Habitat

Alternatives: 3 and 5

Environmental Consequences: The evidence of motorized roads and trails would continue to be present. Open meadows, grasslands, and shrub lands would dominate the area. Vegetation treatments would be apparent. The vegetation would consist of a variety of successional stages. Black-tailed prairie dog and thus black-footed ferret habitat would increase and become an increasing part of the landscape. Opportunities for isolation and solitude in a motorized setting would be available. Livestock and livestock facilities would be apparent.

Mitigation Measures: Recreation, grazing, mineral leasing, road construction and other similar activities are allowed only it they contribute to the enhancement of black-footed ferret reintroduction habitat. Construction of livestock and recreation facilities, roads, power lines, fences, water developments, and other features would be allowed if they meet reintroduction objectives. Motorized opportunities would be available but limited. The primitive to semi-primitive character of the area would be altered with prairie dog complexes.

Economic and Social Effects: Motorized activities would be limited to designated routes. Opportunities for solitude, lower human encounters, and nonmotorized settings would remain approximately the same as present. Livestock grazing would continue primarily as a tool to

help meet habitat objectives, and remain the primary economic benefit. The area would continue to provide the existing mix of economic benefits while roadless primitive to semi-primitive character would likely be reasonably maintained. However, there is a possibility, such as in the case of mineral development, that the character of the area would be altered so that future wilderness designation would be unlikely.

Designation: Non-wilderness

Prescription: MA 6.1 Rangeland with Broad Resource Emphasis

Alternative: 2 and 3A

Environmental Consequences: The evidence of motorized roads and trails would continue to be present. Livestock and livestock facilities would be apparent. Open meadows, grasslands, and shrub lands would dominate the area. Vegetation treatments would be apparent. The vegetation would consist a variety of successional stages. Opportunities for isolation and solitude in a motorized setting would be available.

Mitigation Measures: A full spectrum of motorized opportunities would be allowed unless specific areas are designated as closed or travel restricted to designated roads and trails. Construction of livestock and recreation facilities, roads, power lines, fences, water developments, and other features would be allowed. The area would be managed for a diversity of plants, animals, and ecological functions and processes, while providing livestock forage and other amenity values. Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is possibility the area would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased gradually while at the same time opportunities for nonmotorized activities would be reduced and perhaps forgone. Opportunities for solitude, lower human encounters, and nonmotorized settings would gradually be reduced. All users would be permitted motorized access. Livestock grazing would remain the primary economic benefit. The area would continue to provide the existing mix of economic benefits while roadless primitive to semi-primitive character could be altered through time and perhaps permanently altered, making future wilderness designation unlikely.

Indian Creek (Public Proposed):

The 3,760-acre portion of the Indian Creek area on the Fall River Ranger District shares a contiguous boundary with the Wall Ranger District. Since 25,100 acres of the Indian Creek area lie within the Wall Ranger District, the narrative for the Indian Creek area is found under the Wall Ranger District section.

Jim Wilson Canyon: An Overview of the Affected Environment

The 6,020-acre Jim Wilson Canyon area lies about 12 miles northeast of Smithwick, South Dakota. Specifically, the Jim Wilson area is located, either partly or fully, in Township 7 South, Range 9 East, Sections 4-5, 8-9, 15-18, 20-22, 27-29, and 32-34. Access from Smithwick is via Fall River County Road Number 1 east for about eight miles, then north on Forest Development Road 7045 for about 10 miles, then northeast on Forest Development Road 7063 for about a quarter mile. The First Black Canyon Public Proposed Roadless Area lies to the east of Jim Wilson Canyon.

The Jim Wilson Canyon area lies within the Great Plains-Palouse Dry Steppe Province ecoregion of the Temperate Steppe Division as identified by Robert G. Bailey (71). The topography of the area is varied, consisting of rolling to steep hilly grasslands, some of it fairly rugged and dissected with gullies, with a few patches of hard, flat clay pan. The elevation of the area ranges from between 2,900 to 3,350 feet above sea level.

The dominant grasses include western wheatgrass, green needlegrass, buffalo grass, and blue gramma. The noxious weed Canada thistle also is found in the area. No woody shrub components exist, although a few solitary cottonwoods may be found.

Wildlife includes mule and white-tailed deer, pronghorn antelope, sharp-tailed grouse, high populations of raptors, such as red-tailed and Swainson's hawks, coyotes, porcupines, badgers, prairie dogs, meadowlarks, loggerhead shrikes, northern flickers, long-billed curlews, upland sandpipers, prairie rattlesnakes, Woodhouse's toads, chorus frogs, and garter snakes.

Recreational opportunities include hunting, horseback riding, prairie dog shooting, and off-highway recreational motorized use. One bass fishery exists at Island Dam. Livestock grazing occurs in the area.

Current fire management requires immediate, initial-attack suppression due to the explosive nature of the natural fuels.

Jim Wilson Canyon: Capability Analyses

Environment

Opportunity for Solitude and Serenity: Opportunities for solitude and serenity are available. The terrain offers an opportunity for isolation within the rolling hills. In addition, on open stretches, the nature of the mixed-grass prairie provides isolation; however, a fair number of developments do exist, such as stock dams, stock tanks, and two-track roads. The visitor might still experience the grassland much as early settlers and American Indians did more than a century ago.

Natural Appearance and Integrity: Overall, this area retains a natural appearance, representative of a healthy native grassland with rolling hills terrain. Most of the ecological processes, including seasonal flash flooding, remain intact. Closer examination reveals some signs of livestock activities. Cattle frequent the area from May through October. Livestock developments include some fencing, 12 stock dams, and eight stock tanks, which detract from the natural setting. About ten and a half miles of buried pipeline are located in the area, but buried pipeline is not easily identifiable. Two artificial raptor nesting platforms exist in the area.

Challenge: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Buffalo Gap National Grassland (Fall River Ranger District).

Recreation Opportunities: The opportunities exist for hiking across an isolated hilly area. Currently, hunting pressure in this area is moderate to high. Should the area be designated as a Wilderness, all hunting would be on a walk-in basis only. The bass fishery at Island Dam would be on a walk-in basis only under Wilderness designation.

Special Features

Unique Characteristics and Scenic Features: In conjunction with the adjacent First Black Canyon, this area provides one of the highest concentrations of prairie dog complexes on the Fall River District. Jim Wilson Canyon also offers open, native grassland landscapes, which might be an attractive feature to people looking for a grassland experience

Opportunities for Outdoor Education: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Buffalo Gap National Grassland (Fall River Ranger District).

Manageability

Size and Shape: The 6,020-acre Jim Wilson Canyon area is a contiguous block of National Forest System land with no inholdings under other ownership. It is about three-quarters to two and one-half miles wide east to west and about five and a half miles long north to south. Existing developments pose only minor management challenges; however, the buried pipeline and fencelines do need to be maintained on an annual basis.

Potential to Manage Boundaries: The current boundaries consist of fence lines and Forest Development Roads. Fence lines offer the opportunity for clear and visible signing. They also prevent unauthorized motorized access. Since about three-quarters of the area's boundary is formed by Forest Development Roads, illegal motorized access may be difficult to prevent should the area be designated as a Wilderness.

Jim Wilson Canyon: Availability Analyses

Resource Values and Potentials

Oil and Gas: No oil and gas developments exist in the area. No interest has been expressed to develop any sites. The development potential is low, although oil shale and geothermal resources exist in the area.

Coal: No coal resources exist on the Buffalo Gap National Grassland.

Livestock Grazing: Typically, livestock grazing occurs from May through October. This area is within the Gamet Allotment, with six permittees, for an average estimate of 1,800 permitted AUMs per year for this portion of the Gamet Allotment.

Locatable Minerals: No known locatable minerals exist in the area.

Common Minerals: Known sand, gravel, and Pierre shale resources exist in the area.

Timber: No merchantable timber exists in the area.

Recreation: Wilderness designation might decrease hunting pressure, as well as restrict physically challenged and elderly access. Some increase in backcountry visitation might occur under Wilderness designation. Designation would support a walk-in fishery for bass at Island Dam.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Peregrine falcon; whooping crane: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.
- Bald eagle: Effects from Wilderness designation would have a beneficial effect on the nesting success and wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.
- Black-footed ferret: Effects from Wilderness designation would be both beneficial and adverse. Beneficial effects result from the reduced human disturbances and reduced potential mortality due to motorized vehicles. In addition, ferrets would benefit from the significant reduction in prairie dog shooters, who would lose motorized access to prairie dog towns in a Wilderness area. Adverse effects result from restrictions on the motorized support to aid in ferret reintroduction projects. Ferrets may be targeted for reintroduction projects in the future in several areas on the Northern Great Plains, including this area.
- Mountain plover: A Wilderness designation would likely reduce prairie dog shooting, thereby increasing the expansion of prairie dog towns which, in turn, enhances mountain plover habitat. Designation would reduce motorized activities that can disturb mountain plovers and destroy their nests.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitats. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access within Wilderness areas.

Black-tailed prairie dogs and species closely associated with prairie dog towns and colonies: Prairie dogs and prairie dog-associated species would largely benefit from Wilderness designations, primarily because the poisoning and shooting of prairie dogs, accomplished mainly with motorized support, would be greatly reduced. However, travel restrictions would also mean a reduction in predator control, which would be harmful to prairie dogs. Finally, the mountain plover, which favors areas affected by fire, may be adversely affected due to reduced motorized support in conducting prescribed fires.

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around both aerial- and ground-nesting raptor sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Buffalo Gap National Grassland (Fall River Ranger District) include: the black-tailed prairie dog, plains sharp-tailed grouse and the sage grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered falling under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the table at the very end of this document.

Management Obligations, Constraints, or Encumbrances

Mineral Leases and Subsurface Rights: About 2,920 acres of private, subsurface minerals ownership exist beneath National Forest System lands in the area. No private leases exist in the area.

Existing Contracts and Agreements: The area is permitted under a grazing permit held by the Pioneer Grazing Association.

Biotic Control Measures and Fire Protection: Wildfire and noxious weed control would continue, despite future management, including Wilderness designation.

Effects on Adjacent Lands: Better strategies to identify public/private interface boundaries and to educate the public about landownership patterns may be needed. Some control of noxious or exotic plants is currently done in the area. Minor prairie dog control (usually less than 100 acres once every three to five years) is conducted, and takes into account adjacent private lands.

The current boundaries consist of fence lines and Forest Development Roads. Fence lines offer the opportunity for clear and visible signing. They also prevent unauthorized motorized access. Unauthorized motorized access may be more difficult to prevent along Forest Development Roads.

Under Wilderness designation, vehicles would not be used for transportation or fire suppression when the fire danger is low. Vehicles would be used when fire conditions are high enough that firefighters walking and using hand tools would not be able to prevent a large fire.

Defensible fuel profile zones would be developed to permit options in managing restoration-designed prescribed fires.

Jim Wilson Canyon: Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The following are the closest Wilderness areas:

- Black Elk Wilderness (9,824 acres) in the Black Hills lies about 33 miles to the northwest and is the closest designated Wilderness to First Black Canyon. Represents a ponderosa pine ecosystem.
- Sage Creek Wilderness (64,144 acres) is about 37 miles to the northeast in Badlands National Park. Represents a mixed-grass prairie ecosystem. It is the only designated Wilderness in the White River Badlands.

Representation of Landforms and Ecosystems: This area represents a mixed-grass prairie.

Biota: No species are dependent upon a Wilderness designation to remain viable in the area. A Wilderness designation may impede any future reintroductions of the black-footed ferret to the area. Most other key species probably would benefit from a designation.

Public Interests and Concerns: The area is very sparsely populated. Rapid City, with a population of about 55,000 and about 40 miles to the northwest, is the closest area of significant population. It is likely that more people from Rapid City would visit the area under Wilderness designation.

A considerable number of people and organizations have called for the Forest Service to designate a grassland Wilderness somewhere on the Northern Great Plains. Currently, the Forest Service provides for no grassland Wilderness anywhere within the National Forest System.

Jim Wilson Canyon: Environmental Consequences

Management Prescription Allocations by Alternative:

Alternative 2:	MA 6.1	6,020 acres
Alternative 3:	MA 3.63	6,020 acres
Alternative 3A:	MA 6.1	6,020 acres
Alternative 4:	MA 1.2	6,020 acres
Alternative 5:	MA 3.63	6,020 acres

Designation: Wilderness

Prescription: MA 1.2 Recommended for Wilderness

Alternatives: 4

Environmental Consequences: Vegetation composition and structure are controlled by natural processes, such as fire, insects, disease, and grazing. There is some evidence of past human use, such as fences, trails, water developments, and primitive roads, but these would diminish through time. Isolation and solitude would characterize the area. Recreation activities would be those not requiring motorized equipment in a primitive setting such as hiking, walking, horseback riding, and nonmotorized hunting. There would be an opportunity for discovery of ecological, biological, cultural, historic, and paleontological resources. Disturbance to wildlife by human activity would be minimized.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration, noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. New developments including livestock fences and water developments would not be allowed to detract from the wilderness character of the area. Valid existing mineral rights would be honored.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings will be maintained or increased while at the same time opportunities for motorized recreation would be forgone. Those presently using the area for motorized activities, recreation and hunting would no longer be able to do so. Opportunities for those desiring walk in hunting would increase. Some interpretive opportunities would be forgone. Mineral potential in the area is low and mineral development is unlikely under any management scenario. Livestock grazing would likely remain the primary economic benefit from the area. The primitive to semi-primitive character of the area would be unless valid outstanding minerals were developed. If outstanding mineral rights were developed, the primitive to semi-primitive character of the development area could be altered, making future wilderness designation unlikely.

Designation: Non-wilderness

Prescription: MA 3.63

Alternatives: 3 and 5

Environmental Consequences: The evidence of motorized roads and trails would continue to be present. Open meadows, grasslands, and shrub lands would dominate the area. Vegetation treatments would be apparent. The vegetation would consist of a variety of successional stages. Black-tailed prairie dog and thus black-footed ferret habitat would increase and become an increasing part of the landscape. Opportunities for isolation and solitude in a motorized setting would be available. Livestock and livestock facilities would be apparent.

Mitigation Measures: Recreation, grazing, mineral leasing, road construction and other similar activities are allowed only it they contribute to the enhancement of black-footed ferret reintroduction habitat. Construction of livestock and recreation facilities, roads, power lines, fences, water developments, and other features would be allowed if they meet reintroduction objectives. Motorized opportunities would be available but limited. Valid existing mineral rights would be honored. The primitive to semi-primitive character of the area would be altered with prairie dog complexes.

Economic and Social Effects: Motorized activities would be limited to designated routes. Opportunities for solitude, lower human encounters, and nonmotorized settings would remain approximately the same as present. Livestock grazing would continue primarily as a tool to help meet habitat objectives, and remain the primary economic benefit. The area would continue to provide the existing mix of economic benefits while roadless primitive to semi-primitive character would likely be reasonably maintained. However, there is a possibility, such as in the case of mineral development, that the character of the area would be altered so that future wilderness designation would be unlikely.

Designation: Non-wilderness

Prescription: MA 6.1 Rangeland with Broad Resource Emphasis

Alternatives: 2 and 3A

Environmental Consequences: The evidence of motorized roads and trails would continue to be present. Livestock and livestock facilities would be apparent. Open meadows, grasslands, and shrub lands would dominate the area. Vegetation treatments would be apparent. The vegetation would consist of a variety of successional stages. Opportunities for isolation and solitude in a motorized setting would be available.

Mitigation Measures: A full spectrum of motorized opportunities would be allowed unless specific areas are designated as closed or travel restricted to designated roads and trails. Construction of livestock and recreation facilities, roads, power lines, fences, water developments, and other features would be allowed. The area would be managed for a diversity of plants, animals, and ecological functions and processes, while providing livestock forage and other amenity values. Although, mitigation measures would be applied to meet Grassland-wide Plan standards and guidelines, there is possibility the area would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased gradually while at the same time opportunities for nonmotorized activities would be reduced and perhaps forgone. Opportunities for solitude, lower human encounters, and nonmotorized settings would gradually be reduced. All users would be permitted motorized access. Livestock grazing would remain the primary economic benefit. The area would continue to provide the existing mix of economic benefits while roadless primitive to semi-primitive character could be altered through time and perhaps permanently altered, making future wilderness designation unlikely.

Red Shirt: An Overview of the Affected Environment

The 7,130-acre Red Shirt area lies about 16 miles southeast of Hermosa, South Dakota, and about 13 miles east of Fairburn, South Dakota. Specifically, the Red Shirt area is located, either partly or fully, in Township 4 South, Range 9 East, Sections 1-3, 10-15, 24, and Township 4 South, Range 10 East, Sections 7-8, 17-22, and 27-30. Access is via Highway 79, east along Custer County Road 18, through Fairburn, to Forest Development Road 7053, or southeast from Hermosa via U.S. Highway 40 to Forest Development Road 7053 turning to the west. The Cheyenne roadless area lies directly to the south.

The Red Shirt area lies within the Great Plains-Palouse Dry Steppe Province ecoregion of the Temperate Steppe Division as identified by Robert G. Bailey (71). The topography of the Red Shirt area is varied, consisting of gently rolling grasslands or highly vegetated tabletop buttes with steep, dissected slopes exposing layers of color-banded clays of reds and shades of white and gray. Elsewhere, sparsely vegetated, mounded, clay badlands terrain and beds of agates exist. Natural seeps frequently occur along some of the hillsides. The elevation of the area ranges from between 2,700 to 3,200 feet above sea level. This area is the most western extension of the White River Badlands on the Buffalo Gap National Grassland. The Red Shirt area is locally often referred to as Shoemaker Canyon.

The dominant grasses include western wheatgrass, green needlegrass, buffalo grass, and blue gramma. Some crested wheatgrass, an exotic, can be found in isolated areas. The noxious weed Canada thistle also is found in the area. Woody shrub and browse species, mainly found in alluvial draws or dissected drainages, include skunkbrush sumac, chokecherry, snowberry, buffaloberry, and wild rose. North-facing exposures may be dominated by Rocky Mountain juniper. In the alluvial floodplains or in some of the sharp dissected cutbanks along Red Shirt Creek and Camp Creek, cottonwood is the dominant riparian community. Both creeks are intermittently vegetated with conspicuous stands of cordgrass.

Wildlife includes mule and white-tailed deer, pronghorn antelope, sharp-tailed grouse, high populations of raptors, such as red-tailed and Swainson's hawks, coyotes, porcupines, raccoons, prairie dogs, meadowlarks, loggerhead shrikes, lark sparrows, northern orioles, American goldfinches, long-billed curlews, upland sandpipers, prairie rattlesnakes, Woodhouse's toads, chorus frogs, and garter snakes.

Recreational opportunities include rock hounding, hunting, horseback riding, and hiking. Other uses include livestock grazing and the gathering of sacred and medicinal plants and herbs by American Indians. One permittee currently grazes bison.

Current fire management requires immediate, initial-attack suppression due to the proximity of adjacent private land.

Red Shirt: Capability Analyses

Environment

Opportunity for Solitude and Serenity: Opportunities for solitude and serenity are available. The rugged terrain offers an opportunity for isolation within Red Shirt (Shoemaker) Canyon, and within the rolling hills. In addition, on open stretches, the vast nature of the mixed-grass prairie and the lack of visible human developments allow the visitor to experience the grassland much as early settlers and American Indians did more than a century ago.

Natural Appearance and Integrity: Overall, this area retains a natural appearance, representative of a healthy native grassland with rolling hills and rough badlands terrain. Most of the ecological processes, including seasonal flash flooding, remain intact. Closer examination may reveal some signs of livestock activities. Cattle may frequent the area during the spring or fall grazing seasons. Livestock developments, including two developed springs, some fencing and four stock dams, detract from the natural setting. One buried pipeline is located in the area, but it is not easily identifiable.

Challenge: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Buffalo Gap National Grassland (Fall River Ranger District).

Recreation Opportunities: A number of recreational activities occur in the area, including rock hounding, prairie dog shooting and viewing, other hunting opportunities, horseback riding, nature study, birdwatching, limited off-road motorized recreation, some canoeing, and other associated activities.

Special Features

Unique Characteristics and Scenic Features: Active prairie dog towns provide unique grassland habitat to numerous grassland species. Bison graze at least a small portion of the area. The Red Shirt area is very scenic. It offers colorful badlands terrain and open, native grassland landscapes. Numerous agate beds (commonly called the Fairburn Agate Beds) are scattered throughout the area and rock hounds find such collectible gems as Fairburn, prairie, and black agates, banded jasper, chalcedony and rattle stones. Fossils found in White River Group and Pierre Shale deposits represent the Eocene and Oligocene (45 to 26 million years ago) and the Late Cretaceous (90 to 65 million years ago) periods.

Opportunities for Outdoor Education: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Buffalo Gap National Grassland (Fall River Ranger District).

Manageability

Size and Shape: The 7,130-acre Red Shirt area is a contiguous, though irregularly shaped, block of National Forest System land. It has no inholdings under other ownership. The area is about eight miles wide east to west and about two to four miles long north to south. The few existing developments pose only minor management challenges; however, fencelines do need to be maintained on an annual basis.

Potential to Manage Boundaries: The current boundaries consist of fence lines and natural topographical features. Fence lines offer the opportunity for clear and visible signing. They also prevent unauthorized motorized access. Natural boundaries pose a larger management challenge. Clear boundary identification and signing may be more difficult than with fence lines and unauthorized motorized access may be more difficult to prevent.

Red Shirt: Availability Analyses

Resource Values and Potentials

Oil and Gas: The development potential is low. Oil shale and geothermal resources exist in the area.

Coal: No coal resources exist on the Buffalo Gap National Grassland.

Livestock Grazing: Five permittees graze livestock (and bison) on four allotments, numbering about 3,000 permitted AUMs per year.

Locatable Minerals: Known and potential deposits of gold occur in the area in Cheyenne River deposits where placer mining opportunities exist. Potential uranium, molybdenum, selenium, and vanadium resources may occur in this area.

Common Minerals: Known gemstones, Chadron bentonite / clay resources, and Pierre shale exist in the area. Potential sand and gravel resources and specialty sand resources may occur in the area.

Timber: No merchantable timber exists in this area.

Recreation: This area would provide excellent backcountry recreational experiences, including horseback riding, dispersed camping, rock hounding, nature study, hiking and associated nonmotorized activities. Opportunities for physically challenged and elderly access under a Wilderness designation would likely be reduced. Walk-in hunting opportunities would likely increase. Motorized recreation of all kinds, including ATV, snowmobile, and four-wheel-drive use, would be prohibited.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Peregrine falcon; whooping crane: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.
- Bald eagle: Effects from Wilderness designation would have a beneficial effect on the nesting success and wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.
- Mountain plover: A Wilderness designation would likely reduce prairie dog shooting, thereby increasing the expansion of prairie dog towns which, in turn, enhances mountain plover habitat. Designation would reduce motorized activities that can disturb mountain plovers and destroy their nests.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitats. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access within Wilderness areas.

Black-tailed prairie dogs and species closely associated with prairie dog towns and colonies: Prairie dogs and prairie dog-associated species would largely benefit from Wilderness designations, primarily because the poisoning of prairie dog towns, accomplished mainly with motorized support, would be greatly reduced. In addition, fewer prairie dog shooters would frequent prairie dog towns in Wilderness areas due to restrictions on motorized access. However, prairie dogs and associated species may be adversely affected by a Wilderness designation due to the reduction anticipated in predator control, which would result from motorized restrictions. Finally, the mountain plover, which favors areas affected by fire, may be adversely affected due to reduced motorized support in conducting prescribed fires.

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around both aerial- and ground-nesting raptor sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Buffalo Gap National Grassland (Fall River Ranger District) include: the black-tailed prairie dog, and plains sharp-tailed grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered falling under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the table at the very end of this document.

Management Obligations, Constraints, or Encumbrances

Mineral Leases and Subsurface Rights: No current federal mineral leases exist in this area. The majority of the entire area has been leased in the past. About 6,773 acres of private, subsurface minerals ownership exist beneath National Forest System lands in the area. No private leases exist in the area.

Existing Contracts and Agreements: The five permittees in the area are issued direct permits by the U.S. Forest Service.

Biotic Control Measures and Fire Protection: Wildfire, and noxious weed control would continue despite future management, including Wilderness designation.

Effects on Adjacent Lands: Vehicles would not be used for transportation or fire suppression when the fire danger is low. Vehicles would be used when fire conditions are high enough that firefighters walking and using hand tools would not be able to prevent a large fire.

Defensible fuel profile zones would be developed to permit options in managing restoration-designed prescribed fires.

Red Shirt: Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The following are the closest Wilderness areas:

- Black Elk Wilderness (9,824 acres) in the Black Hills lies about 25 miles to the west. Represents a ponderosa pine ecosystem.
- Sage Creek Wilderness (64,144 acres) is about 20 miles to the east in Badlands National Park. Represents a mixed-grass prairie ecosystem. The Red Shirt Wilderness area would be a mixed-grass prairie in a badlands setting and would share some of the characteristics of the Sage Creek Wilderness

Representation of Landforms and Ecosystems: This area is representative of rolling grasslands, scenic badlands terrain, green ash / chokecherry wooded draws, and Rocky Mountain juniper breaks.

Biota: No species are dependent upon a Wilderness designation to remain viable in the area. Most key species probably would benefit, however, from a designation.

Public Interests and Concerns: The general local concerns expressed about this area include maintaining range improvements with motorized vehicles and suppression of wildfires with motorized vehicles. Local environmental groups have expressed an interest in designating areas for backcountry experiences, which may include Wilderness designation. The U.S. Forest Service is concerned about the environmental effects resulting from expanding off-road motorized recreation in the area. In addition, a newly proposed railroad line, sponsored by the Dakota, Minnesota and Eastern Railroad Company, could be routed through the area. Such an expansion of railway service into the area would severely reduce the opportunity for solitude and serenity.

Red Shirt: Environmental Consequences

Management Prescription Allocations by Alternative:

	Forest Service Inventoried Acres		RARE II Acres
Alternative 2:	MA 1.31		9,210 acres
	MA 2.2	1,560 acres	
	MA 6.1	5,570 acres	
Alternative 3:	MA 1.2	5,300 acres	8,450 acres
	MA 2.2	1,610 acres	
	MA 6.1	220 acres	760 acres
Alternative 3A:	MA 2.1	5,570 acres	9,210 acres
	MA 2.2	1,560 acres	
Alternative 4:	MA 1.2	5,840 acres	9,210 acres
	MA 3.4	210 acres	
	MA 6.1	1,080 acres	
Alternative 5:	MA 1.2		9,210 acres
	MA 1.31	5,300 acres	
	MA 2.2	1,560 acres	
	MA 4.4	200 acres	
	MA 6.1	70 acres	

Designation: Wilderness

Prescription: MA 1.2 Recommended for Wilderness

Alternatives: 3, 4, and 5

Environmental Consequences: Vegetation composition and structure are controlled by natural processes, such as fire, insects, disease, and grazing. There is some evidence of past human use, such as fences, trails, water developments, and primitive roads, but these would diminish through time. Isolation and solitude would characterize the area. Recreation activities would be those not requiring motorized equipment in a primitive setting such as hiking, walking, horseback riding, and nonmotorized hunting. There would be an opportunity for discovery of ecological, biological, cultural, historic, and paleontological resources. Disturbance to wildlife by human activity would be minimized.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. New developments including livestock fences and water developments would not be allowed to detract from the wilderness character of the area. Valid existing mineral rights would be honored.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings will be maintained or increased while at the same time opportunities for motorized recreation would be forgone. Those presently using the area for motorized activities, recreation and hunting would no longer be able to do so. Opportunities for those desiring walk in hunting would increase. Some interpretive opportunities would be forgone. Mineral potential in the area is low and mineral development is unlikely under any management scenario. Livestock grazing would likely remain the primary economic benefit from the area. The primitive to semi-primitive character of the area would be maintained unless valid outstanding minerals were developed. If outstanding mineral rights were developed, the primitive to semi-primitive character of the development area could be altered making future wilderness designation unlikely.

Designation: Non-wilderness

Prescription: MA 1.31 Backcountry Recreation Nonmotorized

Alternatives: 2 and 5

Environmental Consequences: Vegetation composition and structure are controlled by natural processes, such as fire, insects, disease, and grazing. There is some evidence of past human use, such as fences, trails, water developments, and primitive roads, but these would diminish through time. Isolation and solitude would characterize the area. Recreation activities would be those not requiring motorized equipment in a primitive setting such as hiking, walking, horseback riding, and nonmotorized hunting. There would be an opportunity for discovery of ecological, biological, cultural, historic, and paleontological resources. Disturbance to wildlife by human activity would be minimized.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. New developments including livestock fences and water developments would not be allowed to detract from the primitive to semi-primitive character of the area. Valid existing mineral rights would be honored.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings will be maintained or increased while at the same time opportunities for motorized recreation would be forgone. Those presently using the area for motorized activities, recreation and hunting would no longer be able to do so. Opportunities for those desiring walk in hunting would increase. Some interpretive opportunities would be forgone. Mineral potential in the area is low and mineral development is unlikely under any management scenario. Livestock grazing would likely remain the primary economic benefit from the area. The primitive to semi-primitive character of the area would be maintained unless valid outstanding minerals were developed. If outstanding mineral rights were developed, the primitive to semi-primitive character of the development area could be altered making future wilderness designation unlikely.

Designation: Non-wilderness

Prescription: MA 2.1, Special Interest Areas

Alternatives: 3A

Environmental Consequences: Vegetation, terrestrial and aquatic habitats would usually but not always appear natural. There would be some evidence of vegetative manipulation. Past human use, such as fences, trails, water developments, and primitive roads, would be evident. Opportunities for isolation and solitude in a motorized setting would be available. At various times wildlife would be disturbed by human activities. There would be an opportunity for discovery and interpretation of ecological, biological, cultural, historic, and paleontological resources. Livestock and livestock facilities would be apparent.

Mitigation Measures: Motorized travel would be restricted to designated routes to protect the special values of the area. Livestock grazing and recreation use would be restricted if it hinders achievement of the desired condition for the SIA. Roads not necessary for administrative, scientific, or valid private access would be closed or obliterated. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Valid existing mineral rights would be honored.

Economic and Social Effects: Opportunities for recreation, interpretation, and educational activities would be increased. The need to provide good public access for recreation, interpretation, and educational opportunities would increase. If better access were provided the challenge to protect the Special Features of the area would increase. Opportunities for those desiring solitude and isolation would still exist but would be less than in a nonmotorized designation. Those desiring motorized opportunities would be limited and off-road vehicle opportunities would be forgone. Those accustomed to accessing the area by vehicle would continue to have limited access. Livestock grazing would likely remain the primary economic benefit from the area. The primitive to semi-primitive character of the area would be substantially retained unless valid outstanding minerals were developed. If outstanding mineral rights were developed, the primitive to semi-primitive character of the development

area could be altered making future wilderness designation unlikely.

Designation: Non-wilderness

Prescription: MA 2.2, Research Natural Areas

Alternatives: 2, 3, and 3A

Environmental Consequences: Vegetation composition and structure are controlled by natural processes, such as fire, insects, disease, and grazing. There is some evidence of past human use, such as fences, trails, water developments, and primitive roads, but these would diminish through time. Isolation and solitude would characterize the area. Recreation activities would be those not requiring motorized equipment in a primitive setting such as hiking, walking, horseback riding, and nonmotorized hunting. There would be an opportunity for discovery of ecological, biological, cultural, historic, and paleontological resources. Disturbance to wildlife by human activity would be minimized.

Mitigation Measures: Motorized access would be restricted except for authorized administrative, law enforcement, emergency, and scientific purposes. Construction of roads and trails would not be allowed except to correct resource damage. Livestock grazing and recreation use would be restricted if it hinders achievement of the desired condition for the RNA. New developments including livestock fences and water developments would not be allowed to detract from the primitive to semi-primitive character of the area. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Valid existing mineral rights would be honored.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings will be maintained or increased while at the same time opportunities for motorized recreation would be forgone. Those presently using the area for motorized activities, recreation and hunting would no longer be able to do so. Opportunities for those desiring walk in hunting would increase. Some interpretive opportunities would be forgone. Mineral potential in the area is low and mineral development is unlikely under any management scenario. Livestock grazing would likely remain the primary economic benefit from the area. The primitive to semi-primitive character of the area would substantially retained unless valid outstanding minerals were developed. If outstanding mineral rights were developed, the primitive to semi-primitive character of the development area could be altered making future wilderness designation unlikely.

Designation: Non-wilderness

Prescription: MA 3.4 National River System, Scenic Rivers Recommended

Alternatives: 4

Environmental Consequences: Opportunities for isolation and solitude in a free-flowing river setting would be available. Shorelines would be largely primitive and undeveloped, but accessible in places by roads. Vegetation, terrestrial and aquatic habitats would usually but not always appear natural. There would be some evidence of vegetative manipulation. Past human use, such as fences, trails, water developments, and primitive roads, would be evident. There would be an opportunity for discovery and interpretation of ecological, biological, cultural, historic, and paleontological resources. Livestock and livestock facilities would be apparent.

Mitigation Measures: Motorized travel is generally permitted on water or land within the Scenic River designation. Motorized travel would be restricted to designated routes to protect the special values of the area. Livestock grazing and recreation are also permitted activities but use may be use-restricted if it hinders achievement of the desired condition for the Scenic Rivers designation. Roads not necessary for administrative, scientific, or valid private access would be closed or obliterated. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Valid existing mineral rights would be honored.

Economic and Social Effects: Opportunities for recreation, interpretation, and educational activities would be increased. The need to provide good public access for recreation, interpretation, and educational opportunities would increase. If better access were provided the challenge to protect the Special Features of the area would increase. Opportunities for those desiring solitude and isolation would still exist but would be less than in a nonmotorized designation. Those desiring motorized opportunities would be limited and off-road vehicle opportunities would be forgone. Those accustomed to accessing the area by vehicle would continue to have limited access. Livestock grazing would likely remain the primary economic benefit from the area. The semi-primitive character of the area would be maintained unless valid outstanding minerals were developed. If outstanding mineral rights were developed, the primitive to semi-primitive character of the development area could be altered making future wilderness designation unlikely.

Designation: Non-wilderness

Prescription: MA 4.4 National River System, Recreation Rivers Recommended

Alternatives: 5

Environmental Consequences: Recreation opportunities in a free-flowing natural riverine setting would be available. Roads or railroads would be in close proximity to one or both of the banks. Some development along the shoreline would be expected. Vegetation, terrestrial and aquatic habitats would usually but not always appear natural. There would be some evidence of vegetative manipulation. Past human use, such as fences, trails, water developments, and primitive roads, would be evident. There would be an opportunity for discovery and interpretation of ecological, biological, cultural, historic, and paleontological resources. Livestock and livestock facilities would be apparent.

Mitigation Measures: Motorized travel is generally permitted on water or land within the Scenic River designation. Motorized travel would be restricted to designated routes to protect the special values of the area. Livestock grazing and recreation are also permitted activities but use may be use restricted if it hinders achievement of the desired condition for the Scenic Rivers designation. Roads not necessary for administrative, scientific, or valid private access would be closed or obliterated. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Valid existing mineral rights would be honored.

Economic and Social Effects: Opportunities for recreation, interpretation, and educational activities would be increased. The need to provide good public access for recreation, interpretation, and educational opportunities would increase. If better access were provided the challenge to protect the Special Features of the area would increase. Opportunities for those desiring solitude and isolation would still exist but would be less than in a nonmotorized designation. Those desiring motorized opportunities would be limited and off-road vehicle opportunities would be forgone. Those accustomed to accessing the area by vehicle would continue to have limited access. Livestock grazing would likely remain the primary economic

benefit from the area. The primitive to semi-primitive character of the area would be maintained unless valid outstanding minerals were developed. If outstanding mineral rights were developed, the primitive to semi-primitive character of the development area could be altered making wilderness designation unlikely.

Designation: Non-wilderness

Prescription: MA 6.1 Rangeland with Broad Resource Emphasis

Alternative: 2, 3, 4, and 5

Environmental Consequences: The evidence of motorized roads and trails would continue to be present. Livestock and livestock facilities would be apparent. Open meadows, grasslands, shrublands, and areas of woody vegetation would dominate the area. Vegetation treatments would be apparent. The vegetation would consist of open, park-like stands and a variety of successional stages. Opportunities for isolation and solitude in a motorized setting would be available.

Mitigation Measures: A full spectrum of motorized opportunities would be allowed unless specific areas are designated as closed or travel restricted to designated roads and trails. Construction of livestock and recreation facilities, roads, power lines, fences, water developments, and other features would be allowed. The area would be managed for a diversity of plants, animals, and ecological functions and processes, while providing livestock forage and other amenity values. Although, mitigation measures would be applied to meet Grassland-wide Plan standards and guidelines, there is possibility the area would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased gradually while at the same time opportunities for nonmotorized activities would be reduced and perhaps forgone. Opportunities for solitude, lower human encounters, and nonmotorized settings would gradually be reduced. All users would be permitted motorized access. Livestock grazing would remain the primary economic benefit. The area would continue to provide the existing mix of economic benefits while roadless primitive to semi-primitive character could be altered through time and perhaps permanently altered, making future wilderness designation unlikely.

Criteria Common to All Roadless Areas on this Administrative Unit

Capability Criteria

Challenge: Challenges center around survival in a harsh and dry environment. Any existing water developments used by livestock are not suitable for human consumption. Summer temperatures can exceed 100° Fahrenheit. Winter temperatures can drop to more than -30° Fahrenheit, with wind-chill factors well in excess of -85° Fahrenheit. Broken terrain and open landscapes can be deceptive and may disorient visitors' abilities to mark their directions. No developed trails exist, although some two-track roads exist. Prairie rattlesnakes may be encountered and can be dangerous. Seasonal flash flooding may test a visitor's skill in adapting to this natural phenomenon and creates water hazards and slick gumbo conditions.

Opportunities for Outdoor Education: A visitor should find plenty of features to stimulate curiosity: grassland ecosystems, grassland flora and fauna, shifting weather patterns and cloud types, and clear night skies with unimpeded views of the stars. Skills in maneuvering a rugged terrain, using a compass, taking precautions for snake and spider bites, heat stroke, frostbite, setting up a primitive campsite, and outdoor cooking may all test and develop a visitor's understanding of the outdoors. However, no interpretive resources, such as brochures or interpretive signing, exist in these areas.

Buffalo Gap National Grassland

Wall Ranger District

Indian Creek (RARE II) Area: An Overview of the Affected Environment

The 25,100-acre Indian Creek RARE II area is located about five miles west of Scenic, South Dakota, and 37 miles southeast of Rapid City, South Dakota. Specifically, the Indian Creek (RARE II) area is located, either partly or fully, in Township 4 South, Range 13 East, Sections 6-7 and 18-19, and Township 3 South, Range 13 East, Sections 29-32, and Township 3 South, Range 12 East, Sections 23-28 and 31-35, and Township 4 South, Range 12 East, Sections 1-15 and 17-24, and Township 4 South, Range 11 East, Sections 1-2, 9, 11-15 and 21-24, and Township 3 South, Range 11 East, Section 35. Access is via State Highway 44 to Scenic, then north on Pennington County Road 580 (locally known as Spring Draw Road).

The Indian Creek (RARE II) area lies within the Great Plains-Palouse Dry Steppe Province ecoregion of the Temperate Steppe Division as identified by Robert G. Bailey (71), in the White River Badlands. The area is by far the most remote, rugged and inaccessible on the entire Wall Ranger District. Topography consists of intermingled badlands and grassland table terrain, with drainages off of the tables deeply incised and eroded, exposing cliffs of multi-colored clays. Large flat floodplains lie below the tables. This area does not exhibit the sharp, serrated pinnacles of nearby Badlands National Park. Rather, badlands terrain is more rounded in shape and very sparsely vegetated. Three ridgelines, which create distinctive landmarks, cross the area north to south. Two of them exhibit tabletop characteristics--Heutmacher and Zebell Tables. The third isn't named and is not generally flat on top. The two main drainages are Indian Creek and Big Corral Draw, which flow north and west into the Cheyenne River. Elevation ranges from 3,000 feet above sea level along the ridgelines to 2,600 feet above sea level along the Cheyenne River, which intermittently forms the western boundary of the area. Agate beds can be found in the area, as can significant fossil deposits. A great deal of fossil theft is occurring in the area. The well-known Sheep Mountain Table lies outside of the area to the east.

Dominant vegetation includes mixed-grass uplands of western wheatgrass, blue gramma, and buffalo grass. In some side drainages, big and little bluestem can be found. Elsewhere, Rocky Mountain juniper is found in the draws and cutbanks and on hillside slopes, especially with a north-facing aspect. Juniper is the largest woody component in the area. The main floodplains, including the Cheyenne River, Indian Creek, and Big Corral Draw, provide cottonwood habitat. Cottonwood is generally in good health and is regenerating along the Cheyenne River. The cottonwood along Indian Creek and Big Corral Draw is in less vigorous health, although recent

changes in livestock stocking levels is improving the condition of cottonwoods in these drainages. Silver sagebrush can be found in the floodplains, while chokecherry and snowberry exist in some of the side draws and drainages. Some Canada thistle may be scattered around stock ponds, and crested wheatgrass and cheat grass can be found on some upland sites.

Wildlife includes mule and white-tailed deer, pronghorn antelope, sharp-tailed grouse, mourning dove, coyote, badger, skunk, golden eagles, great-horned owls, Swainson's and red-tailed hawks, meadowlarks, horned larks, eastern and western kingbirds, prairie rattlesnakes, bull snakes, and catfish.

One designated two-track road (Forest Development Road 7129) enters along Indian Creek Drainage, but it is not maintained. Currently, no motorized traffic or mechanized traffic (such as bicycles) is allowed into the area, except along FDR 7129. An excellent scenic vista is found at the end of FDR 7129. A minimum of fencing exists in the area. No buried pipelines exist, although about 30 stock dams and two windmills are within the Indian Creek RARE II area.

Recreational opportunities include hiking, primitive camping, horseback riding, hunting, limited canoeing, and rock hounding. No developed trails exist in the area. Other uses include livestock grazing, some authorized scientific study of fossils, and the collection of sacred and medicinal plants by American Indians.

Current fire management requires immediate, initial-attack suppression due to the proximity of adjacent private land.

Indian Creek (RARE II Area): Capability Analyses

Environment

Opportunity for Solitude and Serenity: Opportunities for solitude and serenity are available. The rugged terrain offers an opportunity for isolation among the canyons. In addition, on open stretches of the tabletops, the unimpeded nature of the mixed-grass prairie and the relative lack of visible human developments allow the visitor to experience the grassland much as early settlers and American Indians did more than a century ago. However, on some stretches outside but adjacent to the area, farmsteads, cultivated fields, and power lines may be visible. Few fences occur in the area. In addition, the lazy meandering of the Cheyenne River adds a natural charm and sense of timelessness.

Natural Appearance and Integrity: This area retains a natural appearance, representative of rough and rolling badlands terrain. Most of the ecological processes, with the possible exception of frequent natural wildfire, remain intact. Closer examination reveals signs of livestock grazing and illegal fossil excavation. Cattle may be frequently encountered during the warmer grazing season on the flat tables or in the bottom lands. Livestock developments, including fences, primitive trails and stock dams, detract from the natural setting, although most range developments are constructed to blend with the natural surroundings as much as possible. Fossil extraction, which is mostly illegal, also detracts from the natural surroundings.

Challenge: Challenge in this area centers around survival in a dry, harsh environment. Summer temperatures can exceed 100° Fahrenheit in an area with few drinkable water sources. Winter temperatures can drop to in excess of -30° Fahrenheit, with wind-chill factors in excess of -85° Fahrenheit. Broken terrain and open landscapes are deceptive and may disorient the visitor's ability to mark his or her directions. Hiking may be much more difficult than anticipated with steep slopes and difficult terrain. Only cattle or abandoned trails exist in the area, and they may intermittently disappear or reappear along their course.

Recreation Opportunities: Recreation can include hiking, primitive camping, walk-in hunting, photography, wildlife and wildflower viewing, rock hounding, and limited canoeing during the peak flow season along the Cheyenne River. The Sage Creek Wilderness Campground is about 18 miles to the east in Badlands National Park.

Special Features

Unique Characteristics and Scenic Features: Some archeological sites may exist in the area, representing prehistoric and historic homestead occupation. A few, small prairie dog towns do exist in the area, but not in excess of 200 acres. This area is scenic. It provides colorful badlands terrain and open, native grassland sites on tabletops and bottomlands. The Cheyenne River provides a riverine environment. Fossils found in White River Group and Pierre Shale deposits represent the Eocene and Oligocene (45 to 26 million years ago) and the Late Cretaceous (90 to 65 million years ago) periods. Numerous agate resources add to the Special Features of the area.

Opportunities for Outdoor Education: A visitor should find plenty of features to stimulate curiosity: geology and fossil resources, grassland ecosystems, grassland flora and fauna, bared soil layers, shifting weather patterns and cloud types, incredibly clear night skies offering unimpeded views of the stars. Skills in maneuvering a rugged terrain, using a compass, taking precautions for snake and spider bites, heat stroke, frostbite and freezing, setting up a primitive campsite, and outdoor cooking may all test and develop a visitor's understanding of the outdoors.

Manageability

Size and Shape: The 25,100-acre Indian Creek RARE II area is mostly in contiguous acres in a rectangular shape extending about five and a half miles north to south and 10 miles east to west. Five inholdings of other ownership (about 2,500 acres) are in the area, including one section of state school land.

Potential to Manage Boundaries: Although this area is currently managed for nonmotorized access, it is very difficult to restrict motorized access. Two reasons predominate: the number of areas along the boundary for easy entry, and the distance personnel would have to travel to enforce motorized restrictions. It is likely that entry violations would still occur under Wilderness designation without the implementation of additional strategies to restrict access.

The signing of the area is not anticipated to be a large management concern. Maintenance of signing, due to vandalism, could become more problematic.

Indian Creek (RARE II Area): Availability Analyses

Resource Values and Potentials

Oil and Gas: No oil and gas developments exist in the area. The development potential is low. No interest has been expressed in the last 15 or more years concerning oil and gas development. Oil shale and geothermal resources do exist in the area.

Coal: No coal resources exist on the Buffalo Gap National Grassland.

Livestock Grazing: Typically, livestock grazing occurs from mid-May through October. There are four allotments, with nine permittees, for an average of 4,000 permitted AUMs per year in the Indian Creek RARE II area.

Locatable Minerals: Known gold and uranium resources exist in the area. Potential molybdenum, selenium and vanadium resources may exist in the area.

Common Minerals: Known gemstone, Chadron bentonite/clay resources, Pierre shale, and sand and gravel resources exist in the area. Potential specialty sand resources may exist in the area.

Timber: No merchantable timber exists in the area, except for some post-and-pole material that could be taken infrequently from some stands of Rocky Mountain juniper.

Recreation: Wilderness designation might increase the likelihood for a special-use outfitter permit to provide horseback riding in the area. Opportunities for physically challenged and elderly access under a Wilderness designation would likely be reduced. Walk-in hunting opportunities would likely increase. Motorized recreation of all kinds, including ATV, snowmobile, and four-wheel-drive use, would be prohibited.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Peregrine falcon; whooping crane: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.
- Bald eagle: Effects from Wilderness designation would have a beneficial effect on the nesting success and wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.
- Mountain plover: A Wilderness designation would likely reduce prairie dog shooting, thereby increasing the expansion of prairie dog towns which, in turn, enhances mountain plover habitat. Designation would reduce motorized activities that can disturb mountain plovers and destroy their nests.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitats. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access within Wilderness areas.

Black-tailed prairie dogs and species closely associated with prairie dog towns and colonies: Prairie dogs and prairie dog-associated species would largely benefit from Wilderness designations, primarily because the poisoning of prairie dog towns, accomplished mainly with motorized support, would be greatly reduced. In addition, fewer prairie dog shooters would frequent prairie dog towns in Wilderness areas due to restrictions on motorized access. However, prairie dogs and associated species may be adversely affected by a Wilderness designation due to the reduction anticipated in predator control, which would result from motorized restrictions. Finally, the mountain plover, which favors areas affected by fire, may be adversely affected due to reduced motorized support in conducting prescribed fires.

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around both aerial- and ground-nesting raptor sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Buffalo Gap National Grassland (Wall Ranger District) include: the black-tailed prairie dog and plains sharp-tailed grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered falling under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the table at the very end of this document.

Management Obligations, Constraints, or Encumbrances

Mineral Leases and Subsurface Rights: About 15,810 acres of private, subsurface minerals ownership exist beneath National Forest System lands in the area. No private leases exist in the area.

Existing Contracts and Agreements: There are nine direct grazing permits in effect in the area.

Biotic Control Measures and Fire Protection: Chemical, biological and mechanical control methods may be used in these areas to stem the expansion of undesirable plant species. Wildfire suppression would be addressed in Wilderness management plans that would be developed if any of the roadless areas are designated by Congress as Wilderness.

Effects on Adjacent Lands: Better strategies to identify public/private interface boundaries and to educate the public about landownership patterns may be needed. No control of noxious or exotic plants is currently done in the area. Minor prairie dog control (usually less than 100 acres once every three to five years) is conducted and takes into account adjacent private lands.

The current boundaries consist of fence lines and natural topographical features. Fence lines offer the opportunity for clear and visible signing. They also prevent unauthorized motorized access. Natural boundaries pose a larger management challenge. Clear boundary identification and signing may be more difficult than with fence lines and unauthorized motorized access may be more difficult to prevent.

Vehicles would be used for fire suppression.

Defensible fuel profile zones would be developed to permit options in managing restoration-designed prescribed fires.

Indian Creek (RARE II Area): Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The following are the closest Wilderness areas:

- Black Elk Wilderness (9,824 acres) in the Black Hills lies about 40 miles to the northwest and is the closest designated Wilderness to First Black Canyon. Represents a ponderosa pine ecosystem.
- Sage Creek Wilderness (64,144 acres) is about 10 miles to the east in Badlands National Park. Represents a mixed-grass prairie ecosystem with characteristics similar to those found in the Indian Creek RARE II area. It is the only designated Wilderness in the White River Badlands.

Representation of Landforms and Ecosystems: Mixed-grass prairies, cottonwood floodplains, juniper breaks, and White River Badlands are the predominant landforms and ecosystems in this area.

Biota: No species are dependent upon a Wilderness designation to remain viable in the area. Most key species probably would benefit, however, from a designation.

Public Interests and Concerns: The area is very sparsely populated. Rapid City, with a population of about 55,000 and about 40 miles to the northwest, is the closest area of significant population. Some increases in visitation may occur under a Wilderness designation, but it probably wouldn't be significant. Most of the visitors may already be visiting nearby Badlands National Park. More people from Rapid City may or may not visit the area under Wilderness designation.

A considerable number of people and organizations have called for the Forest Service to designate a grassland Wilderness somewhere on the Northern Great Plains. Currently, the Forest Service provides for no grassland Wilderness anywhere within the National Forest System.

Indian Creek (RARE II) Area: Environmental Consequences

Management Prescription Allocations by Alternative:

Wall Ranger District

Alternative 2:	MA 6.1	25,100 acres
Alternative 3:	MA 1.2	23, 890 acres
	MA 3.63	760acres
	MA 6.1	450 acres
Alternative 4:	MA 1.2	24,940acres
	MA 3.63	120 acres
	MA 6.1	40 acres
Alternative 5:	MA 2.1	24,340 acres
	MA 6.1	760 acres

Designation: Wilderness

Prescription: MA 1.2 Recommended for Wilderness

Alternatives: 4

Environmental Consequences: Vegetation composition and structure are controlled by natural processes, such as fire, insects, disease, and grazing. There is some evidence of past human use, such as fences, trails, water developments, and primitive roads, but these would diminish through time. Isolation and solitude would characterize the area. Recreation activities would be those not requiring motorized equipment in a primitive setting such as hiking, walking, horseback riding, and nonmotorized hunting. There would be an opportunity for discovery of ecological, biological, cultural, historic, and paleontological resources. Disturbance to wildlife by human activity would be minimized.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. New developments including livestock fences and water developments would not be allowed to detract from the wilderness character of the area. Valid existing mineral rights would be honored.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings will be maintained or increased while at the same time opportunities for motorized recreation would be forgone. Those presently using the area for motorized activities, recreation and hunting would no longer be able to do so. Opportunities for those desiring walk in hunting would increase. Some interpretive opportunities would be forgone. Mineral potential in the area is low and mineral development is unlikely under any management scenario. Livestock grazing would likely remain the primary economic benefit from the area. The primitive to semi-primitive character of the area would be maintained unless valid outstanding minerals were developed. If outstanding mineral rights were developed, the primitive to semi-primitive character of the development area could be altered making future wilderness designation unlikely.

Designation: Non-wilderness

Prescription: MA 2.1, Special Interest Areas

Alternatives: 3 and 5

Environmental Consequences: Vegetation, terrestrial and aquatic habitats would usually but not always appear natural. There would be some evidence of vegetative manipulation. Past human use, such as fences, trails, water developments, and primitive roads, would be evident. Opportunities for isolation and solitude in a motorized setting would be available. At various times wildlife would be disturbed by human activities. There would be an opportunity for discovery and interpretation of ecological, biological, cultural, historic, and paleontological resources. Livestock and livestock facilities would be apparent.

Mitigation Measures: Motorized travel would be restricted to designated routes to protect the special values of the area. Livestock grazing and recreation use would be restricted if it hinders achievement of the desired condition for the SIA. Roads not necessary for administrative, scientific, or valid private access would be closed or obliterated. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Valid outstanding mineral rights would be honored.

Economic and Social Effects: Opportunities for recreation, interpretation, and educational activities would be increased. The need to provide good public access for recreation, interpretation, and educational opportunities would increase. If better access were provided the challenge to protect the Special Features of the area would increase. Opportunities for those desiring solitude and isolation would still exist but would be less than in a nonmotorized designation. Those desiring motorized opportunities would be limited and off-road vehicle opportunities would be forgone. Those accustomed to accessing the area by vehicle would continue to have limited access. Livestock grazing would likely remain the primary economic benefit from the area. The primitive to semi-primitive character of the area would be substantially retained unless valid outstanding minerals were developed. If outstanding mineral rights were developed the primitive to semi-primitive character of the area would be altered so that future wilderness designation would be unlikely.

Designation: Non-wilderness

Prescription: MA 3.63

Alternatives: 3 and 4

Environmental Consequences: The evidence of motorized roads and trails would continue to be present. Open meadows, grasslands, and shrub lands would dominate the area. Vegetation treatments would be apparent. The vegetation would consist of a variety of successional stages. Black-tailed prairie dog and thus black-footed ferret habitat would increase and become an increasing part of the landscape. Opportunities for isolation and solitude in a motorized setting would be available. Livestock and livestock facilities would be apparent.

Mitigation Measures: Recreation, grazing, mineral leasing, road construction and other similar activities are allowed only it they contribute to the enhancement of black-footed ferret reintroduction habitat. Construction of livestock and recreation facilities, roads, power lines, fences, water developments, and other features would be allowed if they meet reintroduction objectives. Motorized opportunities would be available but limited. The primitive to semi-primitive character of the area would be altered with prairie dog complexes. Valid outstanding mineral rights would be honored.

Economic and Social Effects: Motorized activities would be limited to designated routes. Opportunities for solitude, lower human encounters, and nonmotorized settings would remain approximately the same as present. Livestock grazing would continue primarily as a tool to help meet habitat objectives, and remain the primary economic benefit. The area would continue to provide the existing mix of economic benefits while roadless primitive to semi-primitive character would likely be reasonably maintained. However, there is a possibility, such as in the case of mineral development, that the character of the area would be altered so that future wilderness designation would be unlikely.

Designation: Non-wilderness

Prescription: MA 6.1 Rangeland with Broad Resource Emphasis

Alternative: 2, 4, and 5

Environmental Consequences: The evidence of motorized roads and trails would continue to be present. Livestock and livestock facilities would be apparent. Open meadows, grasslands, shrublands, and areas of woody vegetation would dominate the area. Vegetation treatments would be apparent. The vegetation would consist of open, park-like stands and a variety of successional stages. Opportunities for isolation and solitude in a motorized setting would be available.

Mitigation Measures: A full spectrum of motorized opportunities would be allowed unless specific areas are designated as closed or travel restricted to designated roads and trails. Construction of livestock and recreation facilities, roads, power lines, fences, water developments, mineral developments, and other features would be allowed. The area would be managed for a diversity of plants, animals, and ecological functions and processes, while providing livestock forage and other amenity values. Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is possibility the area would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased gradually while at the same time opportunities for nonmotorized activities would be reduced and perhaps forgone. Opportunities for solitude, lower human encounters, and nonmotorized settings would gradually be reduced. All users would be permitted motorized access. Livestock grazing would remain the primary economic benefit. The area would continue to provide the existing mix of economic benefits while roadless primitive to semi-primitive character could be altered through time and perhaps permanently altered, making future wilderness designation unlikely.

Indian Creek (Public Proposed) Area: An Overview of the Affected Environment

The 6980-acre Indian Creek Public Proposed area lies just north and southwest of the Indian Creek RARE II area. Specifically, this area is located, either partly or fully, in Township 3 South, Range 12 East, Sections 4-5, 8-9, 17, 19-23 and 29-30, Township 2 South, Range 12 East, Section 33, and Township 4 South, range 11 East, Sections 17, 19-21, 28-32. In a practical sense, this area is mainly an extension of the Indian Creek RARE II area. It shares nearly all of the attributes of the RARE II area, except that it is smaller. For purposes of this evaluation, the narrative for the Indian Creek RARE II area would be nearly identical for the Indian Creek Public Proposed area. Please see that narrative.

Indian Creek (Public Proposed Area): Capability Analyses

Environment

Opportunity for Solitude and Serenity: Please, refer to the same section as provided in the Indian Creek RARE II area.

Natural Appearance and Integrity: Please, refer to the same section as provided in the Indian Creek RARE II area.

Challenge: Please, refer to the same section as provided in the Indian Creek RARE II area.

Recreation Opportunities: Please, refer to the same section as provided in the Indian Creek RARE II area.

Special Features

Unique Characteristics and Scenic Features: Please, refer to the same section as provided in the Indian Creek RARE II area.

Opportunities for Outdoor Education: Please, refer to the same section as provided in the Indian Creek RARE II area.

Manageability

Size and Shape: The 3,770-acre Indian Creek (Public Proposed) area to the north of the RARE II area resembles a stove pipe, which sits to the north atop the 25,100 acre Indian Creek RARE II area. Three separate segments make up the area, the smallest about 80 acres in size, the next largest about 400 acres in size and the largest about 2,730 acres in size. This area is rather narrow and is about three miles wide east to west and three miles long north to south. The area contains two inholdings of about 1,200 acres. The 3,760-acre area to the southwest is across the Cheyenne River from the RARE II and is one continuous block

Potential to Manage Boundaries: Please, refer to the same section as provided in the Indian Creek RARE II area.

Indian Creek (Public Proposed Area): Availability Analyses

Resource Values and Potentials

Oil and Gas: Please, refer to the same section as provided in the Indian Creek RARE II area.

Coal: Please, refer to the same section as provided in the Indian Creek RARE II area.

Livestock Grazing: Two allotments with two permittees for an annual average of 560 permitted AUMs exist in this area. The allotments are typically grazed during the winter from November 1 to January 1.

Locatable Minerals: Please, refer to the same section as provided in the Indian Creek RARE II area.

Common Minerals: Please, refer to the same section as provided in the Indian Creek RARE II area.

Timber: Please, refer to the same section as provided in the Indian Creek RARE II area.

Recreation: Please, refer to the same section as provided in the Indian Creek RARE II area.

Unique Plant and Animal Species: Please, refer to the same section as provided in the Indian Creek RARE II area.

Management Obligations, Constraints, or Encumbrances

Mineral Leases and Subsurface Rights: Please, refer to the same section as provided in the Indian Creek RARE II area.

Existing Contracts and Agreements: There are two direct livestock grazing permits.

Biotic Control Measures and Fire Protection: Chemical, biological and mechanical control methods may be used in these areas to stem the expansion of undesirable plant species. Wildfire suppression would be addressed in Wilderness management plans that would be developed if any of the roadless areas are designated by Congress as Wilderness.

Effects on Adjacent Lands: Please, refer to the same section as provided in the Indian Creek RARE II area.

Indian Creek (Public Proposed Area): Evidence of Need for Wilderness

Contributions to Wilderness Distribution: Please, refer to the same section as provided in the Indian Creek RARE II area.

Representation of Landforms and Ecosystems: Please, refer to the same section as provided in the Indian Creek RARE II area.

Survival of Biotic Species: Please, refer to the same section as provided in the Indian Creek RARE II area.

Public Interests and Concerns: Please, refer to the same section as provided in the Indian Creek RARE II area.

Indian Creek (Public Proposed Area): Environmental Consequences

Management Prescription Allocations by Alternative:

	Wall Ranger District		Fall River Ranger District
Alternative 2:	MA 6.1	3,210 acres	3, 770 acres
Alternative 3:	MA 1.2	1,070 acres	
	MA 6.1	2,140 acres	3,770 acres
Alternative 3A:	MA 2.1	3,770 acres	
Alternative 4:	MA 1.2	3,190 acres	2,090 acres
	MA 3.4		1,060 acres
	MA 6.1	20 acres	620 acres
Alternative 5:	MA 1.2	2,700 acres	
	MA 2.1	3,190 acres	
	MA 4.4		1,070 acres
	MA 6.1	20 acres	

Designation: Wilderness

Prescription: MA 1.2 Recommended for Wilderness

Alternatives: 4

Environmental Consequences: Vegetation composition and structure are controlled by natural processes, such as fire, insects, disease, and grazing. There is some evidence of past human use, such as fences, trails, water developments, and primitive roads, but these would diminish through time. Isolation and solitude would characterize the area. Recreation activities would be those not requiring motorized equipment in a primitive setting such as hiking, walking, horseback riding, and nonmotorized hunting. There would be an opportunity for discovery of

ecological, biological, cultural, historic, and paleontological resources. Disturbance to wildlife by human activity would be minimized.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. New developments including livestock fences and water developments would not be allowed to detract from the wilderness character of the area. Valid outstanding mineral rights would be honored.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings will be maintained or increased while at the same time opportunities for motorized recreation would be forgone. Those presently using the area for motorized activities, recreation and hunting would no longer be able to do so. Opportunities for those desiring walk in hunting would increase. Some interpretive opportunities would be forgone. Mineral potential in the area is low and mineral development is unlikely under any management scenario. Livestock grazing would likely remain the primary economic benefit from the area. The primitive to semi-primitive character of the area would be maintained unless valid outstanding minerals were developed. If outstanding mineral rights were developed, the primitive to semi-primitive character of the development area could be altered, making wilderness designation unlikely.

Designation: Non-wilderness

Prescription: MA 2.1, Special Interest Areas

Alternatives: 3, 3A, and 5

Environmental Consequences: Vegetation, terrestrial and aquatic habitats would usually but not always appear natural. There would be some evidence of vegetative manipulation. Past human use, such as fences, trails, water developments, and primitive roads, would be evident. Opportunities for isolation and solitude in a motorized setting would be available. At various times wildlife would be disturbed by human activities. There would be an opportunity for discovery and interpretation of ecological, biological, cultural, historic, and paleontological resources. Livestock and livestock facilities would be apparent.

Mitigation Measures: Motorized travel would be restricted to designated routes to protect the special values of the area. Livestock grazing and recreation use would be restricted if it hinders achievement of the desired condition for the SIA. Roads not necessary for administrative, scientific, or valid private access would be closed or obliterated. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Valid outstanding mineral rights would be honored.

Economic and Social Effects: Opportunities for recreation, interpretation, and educational activities would be increased. The need to provide good public access for recreation, interpretation, and educational opportunities would increase. If better access were provided the challenge to protect the special features of the area would increase. Opportunities for those desiring solitude and isolation would still exist but would be less than in a nonmotorized designation. Those desiring motorized opportunities would be limited and off-road vehicle opportunities would be forgone. Those accustomed to accessing the area by vehicle would continue to have limited access. Livestock grazing would likely remain the primary economic benefit from the area. The primitive to semi-primitive character of the area would be

substantially retained unless valid outstanding minerals were developed. If outstanding mineral rights were developed the primitive to semi-primitive character of the area would be altered so that future wilderness designation would be unlikely.

Designation: Non-wilderness

Prescription: MA 3.4 National River System, Scenic Rivers Recommended

Alternatives: 4

Environmental Consequences: Opportunities for isolation and solitude in a free-flowing river setting would be available. Shorelines would be largely primitive and undeveloped, but accessible in places by roads. Vegetation, terrestrial and aquatic habitats would usually but not always appear natural. There would be some evidence of vegetative manipulation. Past human use, such as fences, trails, water developments, and primitive roads, would be evident. There would be an opportunity for discovery and interpretation of ecological, biological, cultural, historic, and paleontological resources. Livestock and livestock facilities would be apparent.

Mitigation Measures: Motorized travel is generally permitted on water or land within the Scenic River designation. Motorized travel would be restricted to designated routes to protect the special values of the area. Livestock grazing and recreation are also permitted activities but use may be use restricted if it hinders achievement of the desired condition for the Scenic Rivers designation. Roads not necessary for administrative, scientific, or valid private access would be closed or obliterated. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Valid outstanding mineral rights would be honored.

Economic and Social Effects: Opportunities for recreation, interpretation, and educational activities would be increased. The need to provide good public access for recreation, interpretation, and educational opportunities would increase. If better access were provided the challenge to protect the special features of the area would increase. Opportunities for those desiring solitude and isolation would still exist but would be less than in a nonmotorized designation. Those desiring motorized opportunities would be limited and off-road vehicle opportunities would be forgone. Those accustomed to accessing the area by vehicle would continue to have limited access. Livestock grazing would likely remain the primary economic benefit from the area. The semi-primitive character of the area would be retained unless valid outstanding minerals were developed. If outstanding mineral rights were developed the semi-primitive character of the area would be altered so that future wilderness designation would be unlikely.

Designation: Non-wilderness

Prescription: MA 4.4, National River System, Recreation Rivers Recommended

Alternatives: 5

Environmental Consequences: Recreation opportunities in a free-flowing natural riverine setting would be available. Roads or railroads would be in close proximity to one or both of the banks. Some development along the shoreline would be expected. Vegetation, terrestrial and aquatic habitats would usually but not always appear natural. There would be some evidence of vegetative manipulation. Past human use, such as fences, trails, water developments, and primitive roads, would be evident. There would be an opportunity for discovery and interpretation of ecological, biological, cultural, historic, and paleontological resources.

Livestock and livestock facilities would be apparent.

Mitigation Measures: Motorized travel is generally permitted on water or land within the Scenic River designation. Motorized travel would be restricted to designated routes to protect the special values of the area. Livestock grazing and recreation are also permitted activities but use may be use-restricted if it hinders achievement of the desired condition for the Scenic Rivers designation. Roads not necessary for administrative, scientific, or valid private access would be closed or obliterated. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. Valid outstanding mineral rights would be honored.

Economic and Social Effects: Opportunities for recreation, interpretation, and educational activities would be increased. The need to provide good public access for recreation, interpretation, and educational opportunities would increase. If better access were provided the challenge to protect the Special Features of the area would increase. Opportunities for those desiring solitude and isolation would still exist but would be less than in a nonmotorized designation. Those desiring motorized opportunities would be limited and off-road vehicle opportunities would be forgone. Those accustomed to accessing the area by vehicle would continue to have limited access. Livestock grazing would likely remain the primary economic benefit from the area. The primitive to semi-primitive character of the area would be retained unless valid outstanding minerals were developed. If outstanding mineral rights were developed the semi-primitive character of the area would be altered so that future wilderness designation would be unlikely.

Designation: Non-wilderness

Prescription: MA 6.1 Rangeland with Broad Resource Emphasis

Alternative: 2, 3, 4, and 5

Environmental Consequences: The evidence of motorized roads and trails would continue to be present. Livestock and livestock facilities would be apparent. Open meadows, grasslands, shrublands, and areas of woody vegetation would dominate the area. Vegetation treatments would be apparent. The vegetation would consist of open, park-like stands and a variety of successional stages. Opportunities for isolation and solitude in a motorized setting would be available.

Mitigation Measures: A full spectrum of motorized opportunities would be allowed unless specific areas are designated as closed or travel restricted to designated roads and trails. Construction of livestock and recreation facilities, roads, power lines, fences, water developments, mineral developments, and other features would be allowed. The area would be managed for a diversity of plants, animals, and ecological functions and processes, while providing livestock forage and other amenity values. Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is possibility the area would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased gradually while at the same time opportunities for nonmotorized activities would be reduced and perhaps forgone. Opportunities for solitude, lower human encounters, and nonmotorized settings would gradually be reduced. All users would be permitted motorized access. Livestock grazing would remain the primary economic benefit. The area would continue to provide the existing mix of economic benefits while roadless primitive to semi-primitive character could be altered through time and perhaps permanently altered, making future wilderness designation unlikely.

Rake Creek Badlands (Public Proposed): An Overview of the Affected Environment

The 12,300-acre Rake Creek Badlands area is located about 10 miles east of Interior, South Dakota, and about three miles south of Cactus Flats, South Dakota. Specifically, the Rake Creek area is located, either partly or fully, in Township 3 South, Range 20 East, Section 30, and Township 3 South, Range 19 East, Sections 1-2, 7-9 and 11-30. Access from Interior is east for eight miles on Jackson County Road 6, then two miles north on Jackson County 6, and another mile north on Forest Development Road 7156. Access from Cactus Flats, which sits on Interstate 90, is south two miles on State Highway 240. Rake Creek is immediately east of the highway. The area is located in Township 3 South, Range 19 East.

The Rake Creek Badlands area lies within the Great Plains-Palouse Dry Steppe Province ecoregion of the Temperate Steppe Division as identified by Robert G. Bailey (71). The topography of the area includes open rolling grasslands and intermingled grasslands within a broken, badlands wash terrain. The area is divided in two by a distinctive landscape feature called the "Wall." The Wall extends across the White River Badlands and is one of its most remarkable features. Most of the Rake Creek Badlands roadless area lies below the Wall, where open grasslands are dissected by cutbanks and incisions and some vertical badlands formations, creating a ruptured badlands landscape. Above the Wall, flat open grasslands predominate. The Wall itself is a steep, highly eroded cliff that suddenly and dramatically drops about 200 feet. Elevation in the area ranges from about 2,400 feet above sea level to 2,650 feet above sea level. The area below the Wall is drained to the south by Rake Creek and Cut Creek, which empty into the White River. The area above the Wall contains no major creeks or drainages, but generally flows to the north, eventually draining into the Bad River.

Vegetation on the uplands includes Western wheatgrass, green needlegrass, blue gramma, and buffalo grass. Little bluestem and big bluestem can be found in the drainages and draws. Woody species include snowberry and silver sage. A few solitary cottonwoods exist. No juniper breaks exist in this area. Very little riparian vegetation is found in the area. Wildflowers bloom in season, especially on flat areas, and include gumbo lily.

Representative wildlife includes pronghorn antelope, a low number of mule deer, prairie dogs, raptors, reptiles, such as the prairie rattlesnake and bull snake, grassland songbirds and coyotes.

Several two-track roads curl into the area. A couple of buried pipelines exist, about 17 miles in total length. Fourteen stock tanks connect to these pipelines. Thirty-eight stock dams are located within the area. Fencing divides the land into pastures for livestock.

Recreational opportunities include hiking, primitive camping, picnicking, off-road motorized use, and horseback riding. Livestock grazing is the predominate use.

Current fire management requires immediate, initial-attack suppression due to the proximity of adjacent private land.

Rake Creek Badlands: Capability Analyses

Environment

Opportunity for Solitude and Serenity: Opportunities for solitude and serenity are available. The Wall provides a visual barrier, isolating the lower portion from the more developed upper portion. Overall, the area is not overly developed and the visitor should be able to experience the grassland much as early settlers and American Indians did more than a century ago.

Natural Appearance and Integrity: This area does retain a natural appearance, representative of badlands terrain. Most of the ecological processes, with the possible exception of natural wildfire, remain intact. Closer examination reveals signs of livestock activities. Cattle may be encountered during the warmer grazing season. Color-banded clays are exposed, especially along the Wall, and are quite scenic. This area is a true example of badlands topography, with open stark grasslands in an eroded, highly dissected terrain. Livestock developments, including fencing, primitive trails, stock tanks and stock ponds, detract from the natural setting, although most of the range developments have been constructed to blend with the natural surroundings.

Challenge: in this area centers around survival in a dry, harsh environment. Summer temperatures can exceed 100° Fahrenheit in an area with few drinkable water sources. Winter temperatures can drop to in excess of -30° Fahrenheit, with wind-chill factors in excess of -85° Fahrenheit. The open landscape and badlands terrain are deceptive, although the Wall does help orientate the visitor. No marked trails exist in the area, although a few two-track roads do exist. Prairie rattlesnakes may be encountered and can be dangerous. Seasonal flash flooding and seasonal thunderstorms with hail may test a visitor's outdoor skills. Wet weather creates slick, gumbo conditions, making travel, including hiking, difficult.

Recreation Opportunities: Recreational opportunities include hiking, primitive camping, picnicking, off-road motorized use, and horseback riding. Currently, along State Highway 240 in Badlands National Park, a scenic overlook provides a very scenic view into the Rake Creek area.

Special Features

Unique Characteristics and Scenic Features: The Wall is the major scenic landmark in the area. Several archeological sites may exist, representing prehistoric and historic homestead occupation. A couple of small prairie dog towns of no more than 150 total acres are found in the area. Overall, the area is colorful and rugged, with areas of flat grasslands. Fossil resources from the Late Cretaceous (90 to 65 million years ago) found in the area's Pierre Shale Formation deposits exist and include marine fossils.

Opportunities for Outdoor Education: A visitor should find features to stimulate curiosity: geology and fossil resources, grassland ecosystems, grassland flora and fauna, shifting weather patterns and cloud types, clear night skies offering unimpeded views of the stars. Skills in maneuvering an open grassland and badlands terrain, using a compass, taking precautions for snake and spider bites, heat stroke, frostbite and freezing, setting up a primitive campsite, and outdoor cooking may all test and develop a visitor's understanding of the outdoors. No interpretive signing, brochures or staff are available on or near the site to help describe the characteristics of the area. Grassland and badlands interpretation is available in nearby Badlands National Park at Cedar Pass (about five miles away) or at the National Grassland Visitor's Center in Wall, about 25 miles away.

Manageability

Size and Shape: The 12,300-acre Rake Creek Badlands area is generally a contiguous block of National Forest System land with no inholdings of other ownership. It is about five mile long north to south and five and a half miles wide east to west.

Potential to Manage Boundaries: The current boundaries consist of fence lines that may require annual maintenance. However, the potential to manage these fence lines is high. These fence lines do offer the opportunity for clear and visible signing. Opportunities for access below the Wall, where the greatest share of this area exists, are limited. Opportunities for access above the Wall are high, although less than 2,000 acres of this area exists above the Wall. The area shares about three miles of boundary on its west side in common with Badlands National Park.

Rake Creek Badlands: Availability Analyses

Resource Values and Potentials

Oil and Gas: No known oil and gas resources exist in the area. No interest has been expressed in the last 15 or more years concerning oil and gas development. The development potential is low. Geothermal resources do exist in the area.

Coal: No coal resources exist on the Buffalo Gap National Grassland.

Livestock Grazing: Four permittees run cattle on four allotments for an average of about 4,000 annual permitted AUMs. Livestock are typically run from June 1 through October.

Locatable Minerals: No known locatable minerals exist in the area.

Common Minerals: Known deposits of Chadron bentonite/clay resources and Pierre shale resources exist in the area.

Timber: No merchantable timber exists in the area.

Recreation: Wilderness designation would prohibit off-road motorized recreation and other motorized access. Walk-in hunting opportunities would increase. Handicapped and elderly access may be reduced, though not eliminated under a Wilderness designation.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Peregrine falcon; whooping crane: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.
- Bald eagle: Effects from Wilderness designation would have a beneficial effect on the nesting success and wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.
- Mountain plover: A Wilderness designation would likely reduce prairie dog shooting, thereby increasing the expansion of prairie dog towns which, in turn, enhances mountain plover habitat. Designation would reduce motorized activities that can disturb mountain plovers and destroy their nests.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitats. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access within Wilderness areas.

Black-tailed prairie dogs and species closely associated with prairie dog towns and colonies: Prairie dogs and prairie dog-associated species would largely benefit from Wilderness designations, primarily because the poisoning of prairie dog towns, accomplished mainly with motorized support, would be greatly reduced. In addition, fewer prairie dog shooters would frequent prairie dog towns in Wilderness areas due to restrictions on motorized access. However, prairie dogs and associated species may be adversely affected by a Wilderness designation due to the reduction anticipated in predator control, which would result from motorized restrictions. Finally, the mountain plover, which favors areas affected by fire, may be adversely affected due to reduced motorized support in conducting prescribed fires.

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around both aerial- and ground-nesting raptor sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Buffalo Gap National Grassland (Wall Ranger District) include the black-tailed prairie dog and plains sharp-tailed grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered falling under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the table at the very end of this document.

Management Obligations, Constraints, or Encumbrances

Mineral Leases and Subsurface Rights: About 8,490 acres of private, subsurface minerals ownership exist in the area. No private leases exist in the area.

Existing Contracts and Agreements: The White River Grazing Association holds a 10-year permit in the area. That agreement was last renewed in 1996.

Biotic Control Measures and Fire Protection: Chemical, biological and mechanical control methods may be used to stem the expansion of undesirable plant species. Wildfire suppression would be addressed in Wilderness management plans that would be developed if any of the roadless areas are designated by Congress as Wilderness.

Effects on Adjacent Lands: Wilderness designation would increase the need for visible signing. Scattered patches of Canadian thistle can be found around stock ponds. Some limited prairie dog control is conducted every three to five years on no more than 50 acres. Adjacent Badlands National Park land periodically undergoes prescribed fire to promote vegetative diversity. Currently, fire in the Rake Creek Badlands is suppressed as quickly as possible.

Vehicles would be used for fire suppression.

Defensible fuel profile zones would be developed to permit options in managing restoration-designed prescribed fires.

Rake Creek Badlands: Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The following are the closest designated Wilderness areas:

- Sage Creek Wilderness (64,144 acres) about eight miles to the west in Badlands National Park. Represents a mixed-grass prairie ecosystem, not unlike the Rake Creek roadless area.
- Black Elk Wilderness (9,824 acres) in the Black Hills lies about 80 miles to the west. Represents a ponderosa pine ecosystem.

Representation of Landforms and Ecosystems: This area is representative of the White River Badlands and of a mixed-grass prairie.

Biota: No species are dependent upon a Wilderness designation to remain viable in the area. Most key species probably would benefit, however, from a designation.

Public Interests and Concerns: The area is sparsely populated. The nearest urban area is Rapid City, with a population in excess of 55,000, which is just more than 50 miles to the west. Pierre, with a population in excess of 13,000, is about 90 miles to the northeast. Some increases in visitation may occur under a Wilderness designation, but may not be significant. Most of the visitors may already be visiting nearby Badlands National Park, so a Wilderness designation may simply disperse those visitors into the Rake Creek Badlands area.

A considerable number of people and organizations have called on the Forest Service to designate a grassland Wilderness somewhere on the Northern Great Plains. Currently, the Forest Service provides for no grassland Wilderness areas anywhere within the National Forest System.

Rake Creek Badlands: Environmental Consequences

Management Prescription Allocations by Alternative:

Alternative 2:	MA 6.1	12,300 acres
Alternative 3:	MA 1.31	12,030 acres
	MA 6.1	270 acres
Alternative 4:	MA 1.2	12,030 acres
	MA 6.1	270 acres
Alternative 5:	MA 1.31	12,030 acres
	MA 6.1	270 acres

Designation: Wilderness

Prescription: MA 1.2 Recommended for Wilderness

Alternatives: 4

Environmental Consequences: Vegetation composition and structure are controlled by natural processes, such as fire, insects, disease, and grazing. There is some evidence of past human use, such as fences, trails, water developments, and primitive roads, but these would diminish through time. Isolation and solitude would characterize the area. Recreation activities would be those not requiring motorized equipment in a primitive setting such as hiking, walking, horseback riding, and nonmotorized hunting. There would be an opportunity for discovery of ecological, biological, cultural, historic, and paleontological resources. Disturbance to wildlife by human activity would be minimized.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. New developments including livestock fences and water developments would not be allowed to detract from the wilderness character of the area. Valid outstanding mineral rights would be honored.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings will be maintained or increased while at the same time opportunities for motorized recreation would be forgone. Those presently using the area for motorized activities, recreation and hunting would no longer be able to do so. Opportunities for those desiring walk in hunting would increase. Some interpretive opportunities would be forgone. Mineral potential in the area is low and mineral development is unlikely under any management scenario. Livestock grazing would likely remain the primary economic benefit from the area. The primitive to semi-primitive character of the area would be retained unless outstanding minerals were developed. If outstanding mineral rights were developed, the primitive to semi-primitive character of the development area could be altered making future wilderness designation unlikely.

Designation: Non-wilderness

Prescription: MA 1.31 Backcountry Recreation Nonmotorized

Alternatives: 3 and 5

Environmental Consequences: Vegetation composition and structure are controlled by natural processes, such as fire, insects, disease, and grazing. There is some evidence of past human use, such as fences, trails, water developments, and primitive roads, but these would diminish through time. Isolation and solitude would characterize the area. Recreation activities would be those not requiring motorized equipment in a primitive setting such as hiking, walking, horseback riding, and nonmotorized hunting. There would be an opportunity for discovery of ecological, biological, cultural, historic, and paleontological resources. Disturbance to wildlife by human activity would be minimized.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration and noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. New developments including livestock fences and water developments would not be allowed to detract from the primitive to semi-primitive character of the area. Valid outstanding mineral rights would be honored.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings will be maintained or increased while at the same time opportunities for motorized recreation would be forgone. Those presently using the area for motorized activities, recreation and hunting would no longer be able to do so. Opportunities for those desiring walk in hunting would increase. Some interpretive opportunities would be forgone. Mineral potential in the area is low and mineral development is unlikely under any management scenario. Livestock grazing would likely remain the primary economic benefit from the area. The primitive to semi-primitive character of the area would be retained unless outstanding minerals were developed. If outstanding mineral rights were developed, the primitive to semi-primitive character of the development area could be altered making future wilderness designation unlikely.

Designation: Non-wilderness

Prescription: MA 6.1 Rangeland with Broad Resource Emphasis

Alternative: 2, 3, 4, and 5

Environmental Consequences: The evidence of motorized roads and trails would continue to be present. Livestock and livestock facilities would be apparent. Open meadows, grasslands, shrublands, and areas of woody vegetation would dominate the area. Vegetation treatments would be apparent. The vegetation would consist of open, park-like stands and a variety of successional stages. Opportunities for isolation and solitude in a motorized setting would be available.

Mitigation Measures: A full spectrum of motorized opportunities would be allowed unless specific areas are designated as closed or travel restricted to designated roads and trails. Construction of livestock and recreation facilities, roads, power lines, fences, water developments, mineral developments, and other features would be allowed. The area would be managed for a diversity of plants, animals, and ecological functions and processes, while

providing livestock forage and other amenity values. Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is possibility the area would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased gradually while at the same time opportunities for nonmotorized activities would be reduced and perhaps forgone. Opportunities for solitude, lower human encounters, and nonmotorized settings would gradually be reduced. All users would be permitted motorized access. Livestock grazing would remain the primary economic benefit. The area would continue to provide the existing mix of economic benefits while roadless primitive to semi-primitive character could be altered through time and perhaps permanently altered, making future wilderness designation unlikely.

Criteria Common to All Roadless Areas on this Administrative Unit

There are no criteria common to all roadless areas on the Wall Ranger District of the Buffalo Gap National Grassland.

Fort Pierre National Grassland

Fort Pierre Ranger District

Cedar Creek (Public Proposed): An Overview of the Affected Environment

The 8,730-acre Cedar Creek area lies about 15 miles south-southeast of Pierre, South Dakota. It is located, either partly or fully, in Township 108 North, Range 78 West, Sections 10, 15, 19-24, 26-33 and Township 107 North, Range 78 West, Sections 4 and 5. The area can be accessed from the north by driving south from the town of Fort Pierre, South Dakota, for 12 miles on U. S. Highway 83, then seven miles east and south on gravel roads. The area can be accessed from Interstate 90 by driving about 11 miles north on U. S. Highway 83, then east and north on gravel roads for about eight miles.

The Cedar Creek area lies within the Pierre Hills Physiographic Division, as identified by T. Van Bruggen in *The Vascular Plants of South Dakota*, 1976. Robert G. Bailey further identifies the area as a part of the Great Plains Steppe Province ecoregion of the Temperate Steppe Division. This gently rolling landscape west of the Missouri River historically supported mostly mixed-grass vegetation typical of central South Dakota. Today, much of the area surrounding the Fort Pierre National Grassland has been plowed into crop production. Elevation in the Cedar Creek area varies from about 1,720 feet to 2,050 feet above sea level.

Cedar Creek drains to the area to the east toward the Missouri River. Cedar Creek forks upstream, a mile west of the eastern boundary to the area. Above the fork, the South Branch of Cedar Creek is more prominent in terms of vegetative diversity and varied topography than the branch, which is simply referred to as Cedar Creek. Scattered plains cottonwood and peachleaf or sandbar willows grow along the floodplain of the eastern part of the main creek and the South Branch. Prairie cordgrass crowds the creek channel. Western snowberry covers floodplain segments and dense patches of wild plum and chokecherry grow in favored sites.

Along the South Branch, elevation varies about 100 feet from the creek to ridgetops. The topography becomes gently rolling away from the creek forks. Vegetation on the uplands is almost entirely grass. Western wheatgrass and green needlegrass cover flats and ridges. Big and little bluestem, sideoats grama, and porcupine grass join western wheatgrass on the slopes.

Mule deer inhabit floodplains and creek breaks and occasional white-tailed deer can be seen anywhere in the area. Small herds of pronghorn are also present. Sharp-tailed grouse and the greater prairie chicken are common. The Fort Pierre National Grassland has one of the most stable populations of the greater prairie chicken in the nation. The Cedar Creek area has productive habitat for the greater prairie chicken, but is not unique in this way. There are a few scattered ring-necked pheasants. Coyotes, raccoons, and badgers are common predators. Swainson's hawks and occasional ferruginous hawks nest in the area.

Several two-track roads cross the area, as do about seven miles of buried pipeline used for livestock. Eleven metal tanks water cattle. About 22 miles of interior fence have been strung through the area, which amounts to 1.6 miles of interior fence per section. Nineteen small reservoirs (fish ponds and stock dams) have been constructed across drainages. The largest is Mallard Dam, on the main fork of Cedar Creek. Mallard Dam was reconstructed with assistance from Ducks Unlimited. Mallard Dam supports a marsh of almost 25 acres. Thirteen water dugouts for cattle have also been excavated.

Recreational opportunities include hunting, hiking, horseback riding, camping, and fishing for bass and panfish. Livestock grazing is a common use.

Cedar Creek: Capability Analyses

Environment

Opportunity for Solitude and Serenity: Opportunities for solitude and serenity are available on a limited basis, but such opportunities are not consistent throughout the area. The valleys along the creek forks offer some isolation among a broken landscape. This allows a visitor to experience semi-primitive grassland. When a visitor climbs the valley slopes, however, ranches can be spotted in several directions and a radio tower can be seen seven miles to the south. No upland trees are present to block sight distances or to absorb sound. About a third of the boundary in the Cedar Creek area is against private cropland, although some of this cropland has been planted to grass through the Conservation Reserve Program.

Natural Appearance and Integrity: Overall, along the valley of the South Branch, this roadless area retains a natural appearance representative of a rolling grassland. Cropland and private buildings are visible, however, from the ridgelines. Most of the ecological processes, including flash flooding--but with the exception of frequent natural wildfire--remain intact. The portion of the area in which adjacent farmland and ranch-base properties are not obvious exists along the South Branch and a drainage flowing into the South Branch from the south. This portion accounts for less than 20 percent of the entire roadless area.

Signs of livestock activities are common. Cattle may be frequently encountered during the warmer grazing season. About seven miles of buried range-water pipeline exist in the area. Livestock developments, including fences, primitive trails, stock tanks, dugouts, and small ponds detract from the natural setting, although the ponds provide wildlife habitat and recreational opportunities.

Challenge: Challenge in this area centers around survival in a moderately dry, harsh environment. Summer temperatures can exceed 100° Fahrenheit in an area with few drinkable water sources. Winter temperatures can drop to in excess of -30° Fahrenheit, with wind-chill factors in excess of -85° Fahrenheit. The open landscape can be deceptive. Prairie rattlesnakes may be encountered and can be dangerous. Seasonal flash flooding and seasonal thunderstorms with hail may test a visitor's outdoor skills. Wet weather creates slick conditions, making travel difficult.

Hillsides are often steep but short. The area affords pleasant hiking opportunities, but the activity is not especially challenging in this area.

Recreation Opportunities: The most frequent recreation is hunting for sharp-tailed grouse, prairie chicken, deer, and pronghorn. Hunting in this area is all by walk-in only, since vehicle travel on the Fort Pierre National Grassland during September, October, and November is confined to designated routes and none of these routes go through the area. During other times, vehicle travel is permitted, and the gentle topography and lack of woody vegetation on uplands allow vehicles to access a very high percent of the area. Fishing, hiking, horseback riding, nature study, photography and other associated activities may also take place, although non-consumptive recreation in not currently high. Parts of the area, especially along the South Branch, have a semi-primitive, low-development setting. In other places, private cropland and ranches are visible.

Special Features

Unique Characteristics and Scenic Features: Several homestead sites exist, as do two, old, inoperable windmills. Two very small prairie dog towns lie in the area. The South Branch is scenic, especially in the autumn when the cottonwood leaves turn and bluestem on the slopes become red.

Opportunities for Outdoor Education: The south unit of the Mallard Allotment has been proposed as a Research Natural Area. This allotment features the diverse creek bottom of the South Branch, along with varied vegetation on surrounding hills. This allotment probably has as much vegetation as any similarly sized area on the Fort Pierre National Grassland.

Manageability

Size and Shape: This 8,730-acre Cedar Creek area is irregular in shape, about five and one-half miles east to west. Blocks of land jut out to the north and south from the main rectangular configuration of the area. North to south the area ranges from between two miles to four miles. The area has one inholding, scheduled to be traded to the U.S. Forest Service. Another 160-acre parcel on the northwestern portion of the area is scheduled to be traded into private ownership.

Potential to Manage Boundaries: Fence lines compose the boundary on all sides of this area. They hold the potential to offer clear and visible signing should the area be designated as a Wilderness area. A major challenge under a Wilderness designation may be restricting vehicle trespass, since two-thirds of the boundary is shared with private land, most of which has easy vehicle access.

Cedar Creek: Availability Analyses

Resource Values and Potentials

Oil and Gas: The minerals potential for oil and gas is low, and no oil and gas developments currently exist within the area.

Coal: No known coal resources exist in the area.

Livestock Grazing: Five livestock permittees operate on all or part of five allotments within the area, grazing about 7,604 animal-unit-months per year.

Locatable Minerals: No known locatable minerals exist in the area.

Common Minerals: No known common minerals exist in the area.

Timber: No commercial timber is present in the area.

Recreation: Motorized recreation would be prohibited under a Wilderness designation. Current nonmotorized recreation, such as dispersed camping, hunting, hiking, horseback riding and nature study, would be allowed. Wilderness designation would preclude off-highway motorized recreation, such as ATV and snowmobile use. A few ponds with fisheries potential exist in the area and anglers now use vehicles to reach them. Walk-in hunting opportunities would not increase, since no vehicles are currently allowed off of designated routes during the hunting season, except when driven by physically challenged hunters. Backcountry experiences would be enhanced with the exclusion of motorized activities. Opportunities for physically challenged and elderly access may be reduced or eliminated in the area under a Wilderness designation.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Whooping crane; American burying beetle: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.
- Bald eagle: Effects from Wilderness designation would have beneficial effect on the nesting success and wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitats. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access within Wilderness areas.

Black-tailed prairie dogs and species closely associated with prairie dog towns and colonies: Prairie dogs and prairie dog-associated species would largely benefit from Wilderness designations, primarily because the poisoning of prairie dog towns, accomplished mainly with motorized support, would be greatly reduced. In addition, fewer prairie dog shooters would frequent prairie dog towns in Wilderness areas due to restrictions on motorized access. However, prairie dogs and associated species may be adversely affected by a Wilderness designation due to the reduction anticipated in predator control, which would result from motorized restrictions. Finally, the mountain plover, which favors areas affected by fire, may be adversely affected due to reduced motorized support in conducting prescribed fires.

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around both aerial- and ground-nesting raptor sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially due to reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Fort Pierre National Grassland include: the greater prairie chicken, black-tailed prairie dog, and the plains sharp-tailed grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered falling under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the tables at the very end of this document.

Management Obligations, Constraints, or Encumbrances

Mineral Leases and Subsurface Rights: There are no outstanding mineral leases.

Existing Contracts and Agreements: The Central South Dakota Cooperative Grazing District holds the 10-year livestock grazing agreement in the area.

Biotic Control Measures and Fire Protection: Chemical, biological and mechanical control methods may be used to stem the expansion of undesirable plant species. Wildfire suppression would be addressed in Wilderness management plans that would be developed if any of the roadless areas are designated by Congress as Wilderness. Currently, motor vehicles are used to spray noxious weeds and to control occasional wildfires.

Effects on Adjacent Lands: The most significant effect to adjacent land under a Wilderness designation may be trespass from the Wilderness area onto adjacent lands, especially if boundary signing is inadequate.

Cedar Creek: Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The following are the nearest designated Wilderness areas:

- Fort Niobrara Wilderness (4,635 acres) located about 90 miles to the south on the Fort Niobrara National Wildlife Refuge in north central Nebraska. Represents a mixed-grass prairie ecosystem.
- Sage Creek Wilderness (64,144 acres) in Badlands National Park lies about 115 miles west of the Cedar Creek area. Represents a mixed-grass prairie ecosystem.
- Soldier Creek Wilderness (7,794 acres) is located about 165 miles to the west on the Black Hills National Forest. Represents a ponderosa pine ecosystem.

Representation of Landforms and Ecosystems: This area represents a mixed-grass prairie with a hardwood draw/cottonwood floodplain component.

Biota: No species are dependent upon a Wilderness designation to remain viable in this area. Most key species would benefit, however, from a designation.

Public Interests and Concerns: There are no large cities in central South Dakota. Rapid City and Sioux Falls, both in South Dakota, are 155 miles and 180 miles away respectively. Rapid City has a population of about 50,000, while Sioux Falls has a population of more than 80,000. Pierre, the state capital, is 15 miles to the north. It supports about 12,000 residents, with another 1,800 people living in nearby Fort Pierre.

A considerable number of people and organizations have called on the Forest Service to designate a grassland Wilderness somewhere on the Northern Great Plains. Currently, the Forest Service provides for no grassland Wilderness areas anywhere within the National Forest System.

Cedar Creek: Environmental Consequences

Management Prescription Allocations by Alternative: In the Final EIS (Record of Decision), the area will be allocated to MA 1.2 Recommended for Wilderness in one or more alternatives.

Alternative 2:	MA 6.1	8,730 acres
Alternative 3:	MA 2.2	1,050 acres
	MA 6.1	7,680 acres
Alternative 4:	MA 2.2	1,050 acres
	MA 6.1	7,680 acres
Alternative 5:	MA 2.2	1,050 acres
	MA 6.1	7,680 acres

Designation: Non-wilderness

Prescription: MA 2.2, Research Natural Areas

Alternatives: 3, 4, and 5

Environmental Consequences: Vegetation composition and structure are controlled by natural processes, such as fire, insects, disease, and grazing. There is some evidence of past human use, such as fences, trails, water developments, and primitive roads, but these would diminish through time. Isolation and solitude would characterize the area. Recreation activities would be those not requiring motorized equipment in a primitive setting such as hiking, walking, horseback riding, and nonmotorized hunting. There would be an opportunity for discovery of ecological, biological, cultural, historic, and paleontological resources. Disturbance to wildlife by human activity would be minimized.

Mitigation Measures: Motorized access would be restricted except for authorized administrative, law enforcement, emergency, and scientific purposes. Construction of roads and trails would not be allowed except to correct resource damage. Livestock grazing and recreation use would be restricted if it hinders achievement of the desired condition for the RNA. New developments including livestock fences and water developments would not be allowed to detract from the primitive to semi-primitive character of the area. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings will be maintained or increased while at the same time opportunities for motorized recreation would be forgone. Those presently using the area for motorized activities, recreation and hunting would no longer be able to do so. Opportunities for those desiring walk in hunting would increase. Some interpretive opportunities would be forgone. Mineral

potential in the area is low and mineral development is unlikely under any management scenario. Livestock grazing would likely remain the primary economic benefit from the area. The primitive to semi-primitive character of the area would substantially retained.

Designation: Non-wilderness

Prescription: MA 6.1 Rangeland with Broad Resource Emphasis

Alternative: 2, 3, 4, and 5

Environmental Consequences: The evidence of motorized roads and trails would continue to be present. Livestock and livestock facilities would be apparent. Open meadows, grasslands, shrublands, and areas of woody vegetation would dominate the area. Vegetation treatments would be apparent. The vegetation would consist of open, park-like stands and a variety of successional stages. Opportunities for isolation and solitude in a motorized setting would be available.

Mitigation Measures: A full spectrum of motorized opportunities would be allowed unless specific areas are designated as closed or travel restricted to designated roads and trails. Construction of livestock and recreation facilities, roads, power lines, fences, water developments, and other features would be allowed. The area would be managed for a diversity of plants, animals, and ecological functions and processes, while providing livestock forage and other amenity values. Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is possibility the area would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased gradually while at the same time opportunities for nonmotorized activities would be reduced and perhaps forgone. Opportunities for solitude, lower human encounters, and nonmotorized settings would gradually be reduced. All users would be permitted motorized access. Livestock grazing would remain the primary economic benefit. The area would continue to provide the existing mix of economic benefits while roadless primitive to semi-primitive character could be altered through time and perhaps permanently altered, making future wilderness designation unlikely.

Oglala National Grassland

Pine Ridge Ranger District

Sugarloaf (Public Proposed): An Overview of the Affected Environment

The 9,090-acre Sugarloaf area is located in extreme northwestern Nebraska, about 23 miles west of Chadron, Nebraska, and six miles north of Crawford, Nebraska. Specifically, the Sugarloaf area is located, either partly or fully, in Township 35 North, Range 5 East, Section 36, and Township 34 North, Range 5 East, Sections 1-3, 9-15, and 21-24 and Township 34 North, Range 6 East, Sections 6-8 and 13-14. Access is via U.S. Highway 20 to Crawford, then north on State Highways 2 and 71.

The Sugarloaf area lies within the Great Plains-Palouse Dry Steppe Province ecoregion of the Temperate Steppe Division as identified by Robert G. Bailey (71). Its topography consists of rolling hills of mixed grasses. In some areas, steep hillside slopes expose agate beds or bare clay. Some areas rise like humps, with exposed bands of red and green clay deposits. Elevation ranges from between 3,700 to 3,800 feet above sea level.

The dominant grasses include western wheatgrass, green needlegrass, buffalograss, and blue grama. The noxious weed Canada thistle is found in isolated areas and recent control efforts include both biological and chemical applications. Woody shrub and browse species include sagebrush, cottonwood, green ash, willow, and boxelder. Some woody vegetation is found along the Long Branch Creek Drainage, which generally flows northwest into Hat Creek.

Representative wildlife includes pronghorn antelope, mule deer, wild turkey, raptors, such as the red-tailed and Swainson's hawks, coyotes, meadowlarks, loggerhead shrikes, upland sandpipers, long-billed curlews, and prairie rattlesnakes.

Recreational opportunities include rock hounding, hunting, horseback riding, hiking, off-highway vehicle recreation, and primitive camping. A small bass fishery can be found at Sioux Reservoir. The other primary use in the area is livestock grazing.

Current fire management requires immediate, initial-attack suppression due to the proximity of adjacent private land.

Sugarloaf: Capability Analyses

Environment

Opportunity for Solitude and Serenity: Opportunities for solitude and serenity are available. The rolling grassland terrain provides an opportunity for isolation. The open nature of the landscape offers some opportunities to experience the grassland in a semi-primitive condition. Nearby developments, including a well-traveled highway (State Highway 71) and a high-traffic Burlington Northern Railroad corridor, do create background noise. In addition, sporadic fly-overs from a military base near Rapid City, South Dakota, (Ellsworth Air Force Base), reduce the area's potential to provide serenity.

Natural Appearance and Integrity: Overall, this area retains a natural appearance, representative of a healthy native grassland of rolling hills and exposed agate beds. Most of the ecological processes, including seasonal flash flooding, especially along Long Branch Creek, remain intact. Frequent wildfire starts may occur. Closer examination reveals signs of livestock activities. Power lines and a railroad corridor, outside of the area's boundaries, are visible. Livestock developments do detract from the natural setting, and include: fencing, 16 stock tanks, eight stock ponds, one small reservoir, one wildlife guzzler, three wildlife exclosures, and about 15 miles of buried pipeline.

Challenge: Challenge in this area centers around survival in a dry, harsh environment. Summer temperatures can exceed 100° Fahrenheit in an area with few drinkable water sources. Winter temperatures can drop to in excess of -30° Fahrenheit, with wind-chill factors in excess of -85° Fahrenheit. The open landscape is deceptive, although enough landmarks, including the nearby Pine Ridge, or human-made constructions, including the nearby railway corridor, provide visitors with visual markers to direct their movements. No marked trails exist in the area, although a number of two-track roads do exist. Prairie rattlesnakes may be encountered and can be dangerous. Seasonal flash flooding and seasonal thunderstorms with hail may test a

visitor's outdoor skills. Wet weather creates slick, gumbo conditions, making travel difficult.

Recreation Opportunities: Recreational opportunities include rock hounding, hunting, horseback riding, hiking, motorized sight-seeing, off-highway vehicle recreation and primitive camping. A small bass fishery can be found at Sioux Reservoir.

Special Features

Unique Characteristics and Scenic Features: The area is scenic, with a swelling, sea-like grassland terrain. Significant quantities of agates and other collectible semi-precious gems and stones occur in this area. They are found in exposed beds, often along hillside slopes. Rock hounds visit these sites to search for prairie and Fairburn agates, jasper and other interesting gem materials. Numerous archeological sites have been identified, including prehistoric sites. Fossils found in White River Group and Pierre Shale deposits represent the Eocene and Oligocene (45 to 26 million years ago) and the Late Cretaceous (90 to 65 million years ago) periods. Long Branch Creek provides one of only a few extensive riparian sites on the Oglala National Grassland.

Opportunities for Outdoor Education: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Pine Ridge Ranger District (Oglala National Grassland).

Manageability

Size and Shape: This 9,090-acre Sugarloaf area is a contiguous block of National Forest System land with no inholdings of other ownership within it. The area is about six miles wide east to west and about five miles long north to south.

Potential to Manage Boundaries: The current boundaries consist of fencelines and would require annual maintenance. These fence lines do offer the opportunity for clear and visible signing. The numerous developments inside the area may require annual maintenance. Because of the area's location to nearby travel routes, especially State Highway 71, preventing illegal motorized entry under a Wilderness designation may prove challenging.

Sugarloaf: Availability Analyses

Resource Values and Potentials

Oil and Gas: Oil shale exists in the area. The oil and gas potential for this area is rated as moderate.

Coal: No coal resources exist in the area.

Livestock Grazing: Four members of the Sugarloaf Grazing Association run cattle on four allotments with an average of about 4,465 annual permitted AUMs.

Locatable Minerals: The potential for uranium deposits may exist in the Sugarloaf area.

Common Minerals: Known gemstone, Chadron bentonite/clay resources, and Pierre shale resources exist in the area.

Timber: No merchantable sawlog timber or significant quantities of post and pole timber exist in the area.

Recreation: Under Wilderness designation, mechanized recreation, including off-highway vehicle use, would be prohibited. Nonmotorized hunting would likely increase. Handicapped and elderly access would probably be reduced, though not eliminated. A small, walk-in bass fishery at Sioux Reservoir would be available.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Peregrine falcon: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.
- Bald eagle: Effects from Wilderness designation would have a beneficial effect on the nesting success and wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.
- Mountain plover: A Wilderness designation would likely reduce prairie dog shooting, thereby increasing the expansion of prairie dog towns which, in turn, enhances mountain plover habitat. Designation would reduce motorized activities that can disturb mountain plovers and destroy their nests.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitats. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access within Wilderness areas.

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around both aerial- and ground-nesting raptor sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Oglala National Grassland include: the black-tailed prairie dog and plains sharp-tailed grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered falling under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the table at the very end of this document.

Management Obligations, Constraints, or Encumbrances

Mineral Leases and Subsurface Rights: All 9,090 acres of the Sugarloaf area were acquired, mostly during the 1930s and early 1940s under the authority of such laws and the 1937 Bankhead-Jones Farm Tenant Act. No acres of private, subsurface minerals ownership exist in the area. No leases exist in the area.

Existing Contracts and Agreements: A 10-year grazing permit with the Sugarloaf Grazing Association is in force in the area, with an effective expiration date of February 2001. Special-use permits are in force for paleontological resources for educational purposes. Water pipelines are under permit in this area.

Biotic Control Measures and Fire Protection: Chemical, biological and mechanical control methods may be used to stem the expansion of undesirable plant species. Wildfire suppression would be addressed in Wilderness management plans that would be developed if any of the roadless areas are designated by Congress as Wilderness.

Effects on Adjacent Lands: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Pine Ridge Ranger District (Oglala National Grassland).

Sugarloaf: Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The nearest designated Wilderness are as follows:

- Soldier Creek Wilderness (7,794 acres) about 15 miles to the south on the Pine Ridge of Nebraska. Represents a ponderosa pine ecosystem.
- Black Elk Wilderness (9,824 acres) in the Black Hills is about 60 miles to the north. Represents a ponderosa pine ecosystem.

Representation of Landforms and Ecosystems: This area is representative of a mixed-grass prairie over an open and rolling grassland terrain.

Biota: No species are dependent upon a Wilderness designation to remain viable in the area. Most key species probably would benefit, however, from a designation.

Public Interests and Concerns: This area is sparsely populated. The nearest towns of any size include Crawford and Chadron, Nebraska, with a combined population of about 7,000. Designating the area as Wilderness might attract some people from urban areas in eastern Nebraska, Rapid City, South Dakota, and Cheyenne, Wyoming.

A considerable number of people and organizations have called on the Forest Service to designate a grassland Wilderness somewhere on the Northern Great Plains. Currently, the Forest Service provides for no grassland Wilderness areas anywhere within the National Forest System.

Sugarloaf: Environmental Consequences

Management Prescription Allocations by Alternative:

Alternative 2:	MA 6.1	9,090 acres
Alternative 3:	MA 6.1	9,090 acres
Alternative 4:	MA 1.2	8,360 acres
	MA 6.1	730 acres
Alternative 5:	MA 1.31	8,360 acres
	MA 6.1	730 acres

Designation: Wilderness

Prescription: MA 1.2 Recommended for Wilderness

Alternatives: 4

Environmental Consequences: Vegetation composition and structure are controlled by natural processes, such as fire, insects, disease, and grazing. There is some evidence of past human use, such as fences, trails, water developments, and primitive roads, but these would diminish through time. Isolation and solitude would characterize the area. Recreation activities would be those not requiring motorized equipment in a primitive setting such as hiking, walking, horseback riding, and nonmotorized hunting. There would be an opportunity for discovery of ecological, biological, cultural, historic and paleontological resources. Disturbance to wildlife by human activity would be minimized.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration, noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. New developments including livestock fences and water developments would not be allowed to detract from the wilderness character of the area. The area has a moderate oil and gas potential for development but no existing leases.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings will be maintained or increased while at the same time opportunities for motorized recreation would be forgone. Those presently using the area for motorized activities, recreation and hunting would no longer be able to do so. Opportunities for those desiring walk in hunting would increase. Some interpretive opportunities would be forgone. Mineral potential in the area is low and mineral development is unlikely under any management scenario. Livestock grazing would likely remain the primary economic benefit from the area. The primitive to semi-primitive character of the area would be retained unless outstanding minerals were developed. If outstanding mineral rights were developed the primitive to semi-primitive character of the development area could be altered making future wilderness designation unlikely.

Designation: Non-wilderness

Prescription: MA 1.31 Backcountry Recreation Nonmotorized

Alternatives: 5

Environmental Consequences: Vegetation composition and structure are controlled by natural processes, such as fire, insects, disease, and grazing. There is some evidence of past human use, such as fences, trails, water developments, and primitive roads, but these would diminish through time. Isolation and solitude would characterize the area. Recreation activities would be those not requiring motorized equipment in a primitive setting such as hiking, walking, horseback riding, and nonmotorized hunting. There would be an opportunity for discovery of ecological, biological, cultural, historic and paleontological resources. Disturbance to wildlife by human activity would be minimized.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration, noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act.

New developments including livestock fences and water developments would not be allowed to detract from the primitive to semi-primitive character of the area. The area has a moderate oil and gas potential for development but no existing leases.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings will be maintained or increased while at the same time opportunities for motorized recreation would be forgone. Those presently using the area for motorized activities, recreation and hunting would no longer be able to do so. Opportunities for those desiring walk in hunting would increase. Some interpretive opportunities would be forgone. Mineral potential in the area is low and mineral development is unlikely under any management scenario. Livestock grazing would likely remain the primary economic benefit from the area. The primitive to semi-primitive character of the area would be retained unless outstanding minerals were developed. If outstanding mineral rights were developed the primitive to semi-primitive character of the development area could be altered making future wilderness designation unlikely.

Designation: Non-wilderness

Prescription: MA 6.1 Rangeland with Broad Resource Emphasis

Alternative: 2, 3, 4, and 5

Environmental Consequences: The evidence of motorized roads and trails would continue to be present. Livestock and livestock facilities would be apparent. Open meadows, grasslands, shrub lands and areas of woody vegetation would dominate the area. Vegetation treatments would be apparent. The vegetation would consist of open, park-like stands and a variety of successional stages. Opportunities for isolation and solitude in a motorized setting would be available.

Mitigation Measures: A full spectrum of motorized opportunities would be allowed unless specific areas are designated as closed or travel restricted to designated roads and trails. Construction of livestock and recreation facilities, roads, power lines, fences, water developments, mineral developments, and other features would be allowed. The area would be managed for a diversity of plants, animals, and ecological functions and processes, while providing livestock forage and other amenity values. Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is possibility the area would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased gradually while at the same time opportunities for nonmotorized activities would be reduced and perhaps forgone. Opportunities for solitude, lower human encounters, and nonmotorized settings would gradually be reduced. All users would be permitted motorized access. Livestock grazing would remain the primary economic benefit. The area would continue to provide the existing mix of economic benefits while roadless primitive to semi-primitive character could be altered through time and perhaps permanently altered making future wilderness designation unlikely.

Toadstool (Public Proposed): An Overview of the Affected Environment

The 5,280-acre Toadstool area is located in extreme northwestern Nebraska, about 29 miles west of Chadron, Nebraska, and 10 miles northwest of Crawford, Nebraska. Specifically, the Toadstool area is located, either partly or fully, in Township 33 North, Range 5 East, Sections 4-8, 17 and 18, and Township 33 North, Range 4 East, Sections 1, 2 and 12, and Township 34 North, Range 5 East, Section 31, and Township 34 North, Range 4 East, Section 35.

The Toadstool area lies within the Great Plains-Palouse Dry Steppe Province ecoregion of the Temperate Steppe Division as identified by Robert G. Bailey (71). Its topography consists of rolling hills of mixed grasses. In some areas, steep hillside slopes expose bare clay in badlands landscapes. Some areas rise like humps, with exposed bands of red and green clay deposits. Elevation ranges between about 3,780 and 4,300 feet above sea level.

The dominant grasses include western wheatgrass, green needlegrass, buffalograss, and blue grama. The noxious weed Canada thistle is found in isolated areas and recent control efforts include both biological and chemical applications. Woody shrub and browse species include sagebrush, cottonwood, green ash, willow, and boxelder. Ponderosa pine and Rocky Mountain juniper are also found in the area.

Representative wildlife includes pronghorn antelope, mule deer, wild turkey, raptors, such as the red-tailed and Swainson's hawks, coyotes, meadowlarks, loggerhead shrikes, upland sandpipers, long-billed curlews, and prairie rattlesnakes.

Recreational opportunities include hunting, horseback riding, hiking, off-highway vehicle recreation, and primitive camping. The other primary use is livestock grazing.

Toadstool Campground borders this area on the eastern flank. This developed campground includes six sites, a picnic area, an interpretive kiosk, vault toilets and a reproduction "soddie" that represents the era of homesteading in the area.

The Hudson-Meng Bison Bonebed Site borders the southern portion of this area. This site is producing the remains of an extinct species of 10,000-year-old bison that died en masse. An interpretive visitor center is available.

Current fire management requires immediate, initial-attack suppression due to the proximity of adjacent private land.

Toadstool: Capability Analyses

Environment

Opportunity for Solitude and Serenity: Opportunities for solitude and serenity are available. The rolling grassland and badlands terrain provides an opportunity for isolation. The generally open nature of the landscape offers some opportunities to experience the grassland in a semi-primitive condition. Nearby developments, including a high-traffic Burlington Northern Railroad corridor, do create background noise. In addition, sporadic fly-overs from a military base near Rapid City, South Dakota, (Ellsworth Air Force Base), reduce the area's potential to provide serenity.

Natural Appearance and Integrity: Overall, this area retains a natural appearance, representative of a healthy native grassland of rolling hills and badlands terrain. Most of the ecological processes, including seasonal flash flooding, remain intact. Frequent wildfire starts may occur. Closer examination reveals signs of livestock activities. Power lines and a railroad corridor, outside of the area's boundaries, are visible. Livestock developments do detract from the natural setting, and include: fencing, nine stock tanks, four water impoundments and one windmill.

Challenge: Challenge in this area centers around survival in a dry, harsh environment. Summer temperatures can exceed 100° Fahrenheit in an area with few drinkable water sources. Winter temperatures can drop to in excess of -30° Fahrenheit, with wind-chill factors in excess of -85° Fahrenheit. The open landscape is deceptive, although enough landmarks, including the nearby Pine Ridge, or human-made constructions, including the nearby railway corridor, provide visitors with visual markers to direct their movements. About one mile of interpretive trail, originating from Toadstool Campground, exists in the area. About one-quarter mile of this trail is physically challenged accessible. A number of two-track roads exist in the area. Prairie rattlesnakes may be encountered and can be dangerous. Seasonal flash flooding and seasonal thunderstorms with hail may test a visitor's outdoor skills. Wet weather creates slick, gumbo conditions, making travel difficult.

Recreation Opportunities: Recreational opportunities include hunting, horseback riding, hiking, motorized sight-seeing, off-highway vehicle recreation, and primitive camping. The Toadstool Campground and the Hudson-Meng Bison Bonebed Site are adjacent to this area. About one mile of interpretive hiking trail, originating from the Toadstool Campground, exists in the area. The area is very scenic, with badlands topography, and attracts many visitors each year.

Special Features

Unique Characteristics and Scenic Features: The area is scenic, with a swelling, sea-like grassland terrain and eroded badlands landscapes elsewhere. Numerous archeological sites have been identified, including prehistoric sites. Fossils found in White River Group and Pierre Shale deposits represent the Eocene and Oligocene (45 to 26 million years ago) and the Late Cretaceous (90 to 65 million years ago) periods. Fossils from the Oligocene are world-renowned. Whitehead Creek provides an intermittent stream and riparian vegetation. A scenic canyon-like experience can be had along this creek. Abundant Eastern red cedar grows along this drainage.

Opportunities for Outdoor Education: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Pine Ridge Ranger District (Oglala National Grassland).

Manageability

Size and Shape: This 5,280-acre Toadstool area is a contiguous block of National Forest System land with no inholding of other ownership within it. The area is about four miles wide east to west and about three miles long north to south. The area's shape is similar to a heavy "t."

Potential to Manage Boundaries: The current boundaries consist of fence lines and would require annual maintenance. These fence lines do offer the opportunity for clear and visible signing. The numerous developments inside the area may require annual maintenance. Because of the area's location to nearby travel routes, preventing illegal motorized entry under a Wilderness designation may prove challenging.

Toadstool: Availability Analyses

Resource Values and Potentials

Oil and Gas: Oil shale exists in the area. The oil and gas potential for the area is rated as moderate to high.

Coal: No coal resources exist in the area.

Livestock Grazing: Three members of the Sugarloaf Grazing Association run cattle on three allotments with an average of about 1,450 annual permitted AUMs.

Locatable Minerals: The potential for uranium deposits may exist in the Toadstool area.

Common Minerals: Chadron bentonite/clay resources and Pierre shale resources exist in the area.

Timber: No merchantable sawlog timber or significant quantities of post and pole timber exist in the area.

Recreation: Under Wilderness designation, mechanized recreation, including off-highway vehicle use, would be prohibited. Nonmotorized hunting would likely increase. Handicapped and elderly access would probably be reduced, though not eliminated.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Peregrine falcon: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.
- Bald eagle: Effects from Wilderness designation would have a beneficial effect on the nesting success and wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.
- Mountain plover: A Wilderness designation would likely reduce prairie dog shooting, thereby increasing the expansion of prairie dog towns which, in turn, enhances mountain plover habitat. Designation would reduce motorized activities that can disturb mountain plovers and destroy their nests.

Bighorn Sheep: Wilderness designation would have beneficial effects on bighorn sheep due to the lack of human disturbances and reductions in motorized activities a designation would bring, especially during the birthing season.

Rare Plants: Rare plants would largely benefit from Wilderness designation due to the reductions in motorized activities, which can destroy individual plants and their habitats. In addition, theft of rare plants by collectors might be reduced due to restrictions placed on motorized access within Wilderness areas.

Black-tailed prairie dogs and species closely associated with prairie dog towns and colonies: Prairie dogs and prairie dog-associated species would largely benefit from Wilderness designations, primarily because the poisoning of prairie dog towns, accomplished mainly with motorized support, would be greatly reduced. In addition, fewer prairie dog shooters would frequent prairie dog towns in Wilderness areas due to restrictions on motorized access. However, prairie dogs and associated species may be adversely affected by a Wilderness designation due to the reduction anticipated in predator control, which would result from motorized restrictions. Finally, the mountain plover, which favors areas affected by fire, may be adversely affected due to reduced motorized support in conducting prescribed fires.

Non-listed raptors: Non-listed raptors would benefit from designated Wilderness due to a reduction in human disturbances, including reductions in motorized use, especially in and around both aerial- and ground-nesting raptor sites.

Management Indicator Species: Wilderness designation would largely have beneficial effects on management indicator species, especially reductions in human disturbances, including restrictions on motorized use. Management indicator species on the Oglala National Grassland include: the black-tailed prairie dog and plains sharp-tailed grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered falling under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the table at the very end of this document.

Management Obligations, Constraints, or Encumbrances

Mineral Leases and Subsurface Rights: About 180 acres of private, subsurface minerals ownership exist in the area. No private leases exist in the area.

Existing Contracts and Agreements: A 10-year grazing permit with the Sugarloaf Grazing Association is in force in the area, with an effective expiration date of February 2001. Special-use permits are in force for paleontological resources for educational purposes. Water pipelines are under permit in this area.

Biotic Control Measures and Fire Protection: Chemical, biological and mechanical control methods may be used in these areas to stem the expansion of undesirable plant species. Wildfire suppression would be addressed in Wilderness management plans that would be developed if any of the roadless areas are designated by Congress as Wilderness.

Effects on Adjacent Lands: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Pine Ridge Ranger District (Oglala National Grassland).

Toadstool: Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The nearest designated Wilderness is the 7,794-acre Soldier Creek Wilderness, about seven miles to the south on the Pine Ridge of Nebraska. The 9,824-acre Black Elk Wilderness in the Black Hills is about 57 miles to the north. Both of these Wilderness areas are representative of ponderosa pine ecosystems.

Representation of Landforms and Ecosystems: This area is representative of a mixed-grass prairie on a badlands and rolling plains terrain.

Biota: No species are dependent upon a Wilderness designation to remain viable in the area. Most key species probably would benefit, however, from a designation.

Public Interests and Concerns: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Pine Ridge Ranger District (Oglala National Grassland).

Toadstool: Environmental Consequences

Management Prescription Allocations by Alternative:

Alternative 2:	MA 2.1	910 acres
	MA 6.1	4,370 acres
Alternative 3:	MA 2.1	910 acres
	MA 6.1	4,370 acres
Alternative 4:	MA 1.2	5,270 acres
	MA 6.1	10 acres
Alternative 5:	MA 1.31	4,360 acres
	MA 2.1	910 acres
	MA 6.1	10 acres

Designation: Wilderness

Prescription: MA 1.2 Recommended for Wilderness

Alternatives: 4

Environmental Consequences: Vegetation composition and structure are controlled by natural processes, such as fire, insects, disease, and grazing. There is some evidence of past human use, such as fences, trails, water developments, and primitive roads, but these would diminish through time. Isolation and solitude would characterize the area. Recreation activities would be those not requiring motorized equipment in a primitive setting such as hiking, walking, horseback riding, and nonmotorized hunting. There would be an opportunity for discovery of ecological, biological, cultural, historic and paleontological resources. Disturbance to wildlife by human activity would be minimized.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration, noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. New developments including livestock fences and water developments would not be allowed to detract from the wilderness character of the area. The area has a moderate to high oil and gas potential for development.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings will be maintained or increased while at the same time opportunities for motorized recreation would be forgone. Those presently using the area for motorized activities, recreation and hunting would no longer be able to do so. Opportunities for those desiring walk in hunting would increase. Some interpretive opportunities would be forgone. Mineral potential in the area is low and mineral development is unlikely under any management scenario. Livestock grazing would likely remain the primary economic benefit from the area.

The primitive to semi-primitive character of the area would be retained unless outstanding minerals were developed. If outstanding mineral rights were developed the primitive to semi-primitive character of the development area could be altered making future wilderness designation unlikely.

Designation: Non-wilderness

Prescription: MA 1.31 Backcountry Recreation Nonmotorized

Alternatives: 5

Environmental Consequences: Vegetation composition and structure are controlled by natural processes, such as fire, insects, disease, and grazing. There is some evidence of past human use, such as fences, trails, water developments, and primitive roads, but these would diminish through time. Isolation and solitude would characterize the area. Recreation activities would be those not requiring motorized equipment in a primitive setting such as hiking, walking, horseback riding, and nonmotorized hunting. There would be an opportunity for discovery of ecological, biological, cultural, historic and paleontological resources. Disturbance to wildlife by human activity would be minimized.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration, noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. New developments including livestock fences and water developments would not be allowed to detract from the primitive to semi-primitive character of the area. The area has a moderate to high oil and gas potential for development. Valid outstanding mineral rights would be honored.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings will be maintained or increased while at the same time opportunities for motorized recreation would be forgone. Those presently using the area for motorized activities, recreation and hunting would no longer be able to do so. Opportunities for those desiring walk in hunting would increase. Some interpretive opportunities would be forgone. Mineral potential in the area is low and mineral development is unlikely under any management scenario. Livestock grazing would likely remain the primary economic benefit from the area. The primitive to semi-primitive character of the area would be retained unless outstanding minerals were developed. If outstanding mineral rights were developed the primitive to semi-primitive character of the development area could be altered making future wilderness designation unlikely.

Designation: Non-wilderness

Prescription: MA 2.1, Special Interest Areas

Alternatives: 2, 3, and 5

Environmental Consequences: Vegetation, terrestrial and aquatic habitats would usually but not always appear natural. There would be some evidence of vegetative manipulation. Past human use, such as fences, trails, water developments, and primitive roads, would be evident. Opportunities for isolation and solitude in a motorized setting would be available. At various times wildlife would be disturbed by human activities. There would be an opportunity for discovery and interpretation of ecological, biological, cultural, historic and paleontological resources. Livestock and livestock facilities would be apparent. The area has a moderate to high oil and gas potential for development.

Mitigation Measures: Motorized travel would be restricted to designated routes to protect the special values of the area. Livestock grazing and recreation use would be restricted if it hinders achievement of the desired condition for the SIA. Roads not necessary for administrative, scientific, or valid private access would be closed or obliterated. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. The area has a moderate to high oil and gas potential for development. Valid outstanding mineral rights would be honored.

Economic and Social Effects: Opportunities for recreation, interpretation and educational activities would be increased. The need to provide good public access for recreation, interpretation and educational opportunities would increase. If better access were provided the challenge to protect the Special Features of the area would increase. Opportunities for those desiring solitude and isolation would still exist but would be less than in a nonmotorized designation. Those desiring motorized opportunities would be limited and off-road vehicle opportunities would be forgone. Those accustomed to accessing the area by vehicle would continue to have limited access. Livestock grazing would likely remain the primary economic benefit from the area. The primitive to semi-primitive character of the area would be substantially retained unless outstanding minerals were developed. If outstanding mineral rights were developed the primitive to semi-primitive character of the development area could be altered making future wilderness designation unlikely.

Designation: Non-wilderness

Prescription: MA 6.1 Rangeland with Broad Resource Emphasis

Alternative: 2 and 3

Environmental Consequences: The evidence of motorized roads and trails would continue to be present. Livestock and livestock facilities would be apparent. Open meadows, grasslands, shrub lands and areas of woody vegetation would dominate the area. Vegetation treatments would be apparent. The vegetation would consist of open, park-like stands and a variety of successional stages. Opportunities for isolation and solitude in a motorized setting would be available.

Mitigation Measures: A full spectrum of motorized opportunities would be allowed unless specific areas are designated as closed or travel restricted to designated roads and trails. Construction of livestock and recreation facilities, roads, power lines, fences, water developments, mineral developments, and other features would be allowed. The area would be managed for a diversity of plants, animals, and ecological functions and processes, while providing livestock forage and other amenity values. Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is possibility the area would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased gradually while at the same time opportunities for nonmotorized activities would be reduced and perhaps forgone. Opportunities for solitude, lower human encounters, and nonmotorized settings would gradually be reduced. All users would be permitted motorized access. Livestock grazing would remain the primary economic benefit. The area would continue to provide the existing mix of economic benefits while roadless primitive to semi-primitive character could be altered through time and perhaps permanently altered making future wilderness designation unlikely.

Soldier Creek (Public Proposed), North East Pasture: An Overview of the Affected Environment

The 1,830-acre Management Area is located in extreme northwestern Nebraska, about 39 miles west of Chadron, Nebraska, and nine miles west of Crawford, Nebraska. Specifically, the Soldier Creek Management Area is located partly in Sections 29, 30, 31, and 32, Township 32 North, Range 53 West; Sections 5, and 6, 7, Township 31, Range 53 West. Access is via US Highway 20 to Fort Robinson State Park then west via James Road for 5 ½ miles.

The Soldier Creek Management Area lies within the Great Plains-Palouse Dry Steppe Province ecoregion of the Temperate Steppe Division as identified by Robert G. Bailey (71).

Its topography consists of rolling hills of mixed grasses, steeper slopes with sandstone buttes and ponderosa pine covered hills. Elevation ranges from between 4,200 to 4,600 feet above sea level.

The dominant grasses include big bluestem, little bluestem, green needle grass, sandberg bluegrass, western wheatgrass, and bluegrama. Forbs species include spiderwort, yarrow, prairie coneflower, scarlet globe mallow, and scarlet gaura.

This area contains the North Fork and portions of Middle Fork of Soldier Creek, which support a variety of hardwood tree species including cottonwood, green ash, hackberry, and boxelder. Understory shrub species include chokecherry, plum, snowberry, and willow.

Canada thistle and leafy spurge, state designated noxious weeds, can be found along the drainages. Canada thistle infestations are less then 3 total acres. Leafy spurge exists along the Middle Fork in less than a 0.2-acre area. Long-term control efforts include herbicide applications.

Representative wildlife includes white tail deer, mule deer, elk, bighorn sheep, wild turkey, raptors, such as the red-tailed and Swainson's hawks, coyotes, meadowlarks, and rattlesnakes.

Recreational opportunities include hunting, horseback riding, hiking, fishing, and primitive camping. The other primary use in the area is permitted livestock grazing management.

Current fire management requires immediate, initial-attack suppression due to the proximity of adjacent private land.

Soldier Creek (Public Proposed): Capability Analyses

Environment

Opportunity for Solitude and Serenity: Opportunities for solitude and serenity are available. The rugged terrain provides an opportunity for isolation. The diverse nature of the landscape offers some opportunities to experience the open parklands, steep slopes, and hardwood drainages in a semi-primitive condition.

Natural Appearance and Integrity: Overall, this area retains a natural appearance, representative of a healthy native ponderosa pine – grassland mix. Most of the ecological processes, including fires, and seasonal flash flooding, especially along Soldier Creek, remain intact. This entire management unit was burned during the July 8, 1989 Fort Robinson wild land Fire. Frequent wildfire starts still occur. Power lines and county roads, outside of the area's boundaries, are visible from some locations. Many developments used in recreation management and livestock management exist in the area. Nearby recreation management developments exist including a graveled parking area, hand water pump, fully accessible vault toilet, fire grates, and picnic tables at the Trailhead. Approximately four miles of the "Boots and Saddle Trail" and 1 ¾ miles of the "Trooper Trail." Livestock management structures include one windmill and associated stock tanks. Approximately four miles of fence exist along the north and eastern boundaries of this area and also include the fence that surrounds the trailhead complex. These developments to some degree detract from the natural setting.

Challenge: Challenge in this area centers around survival in a rugged environment. Summer temperatures can exceed 100° Fahrenheit. Winter temperatures can drop to in excess of -30° Fahrenheit, with wind-chill factors in excess of -85° Fahrenheit. The rugged landscape is deceptive, although there are enough human-made landmarks, including the nearby two-track road to the fish ponds and James Road to Fort Robinson State Park. Marked trails exist in the area. Prairie rattlesnakes may be encountered and can be dangerous. Seasonal flash flooding and seasonal thunderstorms with hail may test a visitor's outdoor skills.

Recreation Opportunities: Recreational opportunities include, hunting, horseback riding, hiking, nonmotorized sight-seeing, and primitive camping. Fishing is available in the Middle Fork of Soldier Creek as well as at the three ponds along the Middle Fork.

Special Features

Unique Characteristics and Scenic Features: The area is scenic, with a diverse view of sandstone buttes, grass covered uplands, and hardwood drainages. Numerous archeological sites have been identified in the area that recall the historical use of the area starting in 1874 when it was part of the Fort Robinson Military Reservation up through World War II. Use of the area by the military was terminated in June 1948. The Department of Agriculture Research Service (ARS) used the area in conjunction with the University of Nebraska as an experimental beef breeding station immediately following relinquishment by the military. The area was officially transferred from the ARS to the Forest Service for purpose of administration on October 25, 1966. However, the beef research being conducted by the ARS was not completely phased out at Fort Robinson until January 1972.

This entire management unit was burned during the July 8, 1989 Fort Robinson wild land Fire, which burned a total of 48,000 acres. The fire consumed most of the ponderosa pine forest while less damage was done to the hardwood species along the drainages. The grass and shrub vegetation responded very favorably to the fire.

Resting the area from livestock grazing for two years after the fire as well as implementing a 4-pasture rotation grazing system has significantly improved rangeland vegetation condition. Along the Middle Fork of Soldier Creek exists historical fish rearing ponds that were managed by the Nebraska Game and Parks prior to the Fort Robinson Fire. After the Fort Robinson Fire the area received considerable rainfall resulting in loss of topsoil and flooding. This silted in the ponds making them unsuitable for fish rearing and the management was changed to a "put and take" fisheries.

Opportunities for Outdoor Education: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Pine Ridge Ranger District.

Manageability

Size and Shape: This 1,8,30-acre Soldier Creek Management area is a contiguous block of National Forest System land with no inholdings of other ownership within it. The area is about 1 1/2 miles wide east to west and about two miles long north to south. It adjoins the Soldier Creek Wilderness Area on its west and south borders.

Potential to Manage Boundaries: The current boundaries consist of fence lines and would require annual maintenance. These fence lines do offer the opportunity for clear and visible signing. The numerous developments inside the area will require annual maintenance.

Because of the existing Soldier Creek Wilderness, and the current nonmotorized use designation of the non-wilderness area, preventing illegal motorized entry under an additional Wilderness designation may not be challenging.

Soldier Creek (Public Proposed): Availability Analyses

Resource Values and Potentials

Oil and Gas: The oil and gas potential for this area is rated as low

Coal: No coal resources exist in the area.

Livestock Grazing: Three members of the Soldier Creek Grazing Association manage livestock within this area under a Term Grazing Permit. The Soldier Creek Allotment is made up of four pastures, of which three exist within the Wilderness area and one exists within the adjoining non-wilderness area being considered. A total of 1,560 animal unit months (AUMs) are permitted.

Locatable Minerals: The potential for uranium deposits is low.

Common Minerals: No common minerals exist.

Timber: No merchantable sawlog timber or significant quantities of post and pole timber exist in the area.

Recreation: Under Wilderness designation, mechanized recreation, including off-highway vehicle use, would be prohibited. The area is currently managed as backcountry recreation, nonmotorized. Nonmotorized vehicles are allowed such as mountain bikes. Nonmotorized hunting would likely remain the same as well as existing use by the handicapped and elderly.

Plant and Animal Species: Depending on the federally listed threatened and endangered species present in the area, Wilderness designation would have a beneficial, neutral or adverse effect on the federally listed species as shown below:

- Peregrine falcon: Scientific literature does not imply any significant benefit or lack of benefit based on the management of designated Wilderness areas.
- Bald eagle: Effects from Wilderness designation would have a beneficial effect on the nesting success and wintering survival of bald eagles, largely due to the lack of human disturbances, including a reduction in motorized activities, which result from Wilderness designations.

Rare Plants: This area is currently closed to motorized vehicles. Wilderness designation would make noxious weed control more difficult by restricting motorized travel and could result in a small to rare plants.

Non-listed raptors: This area is currently closed to motorized vehicles, therefore there may not be a significant change in existing benefit to non-listed raptor species.

Management Indicator Species: This area is currently closed to motorized vehicles, therefore there may not be a significant change in existing benefit to management indicator species. Management indicator species on the Pine Ridge Unit include: the pygmy nuthatch and plains sharp-tailed grouse.

Other species not yet mentioned, including Candidate Species for the Threatened and Endangered Species List, Species at Risk and Species of Concern: In general, Wilderness designations would likely produce an overall mix of effects on these species, due to the vast number of species covered falling under this category.

For a complete list of key species associated with each administrative unit covered by this revision process, please see the table at the very end of this document.

This area is currently closed to motorized vehicles, therefore there may not be a significant change in existing benefit to plant and animal species based upon the effects discussion above.

Management Obligations, Constraints, or Encumbrances

Mineral Leases and Subsurface Rights: The mineral rights in the Soldier Creek Management Area and the existing Soldier Creek Wilderness were claimed in 1980. Two companies drilled 45 prospect holes in search of uranium.

Existing Contracts and Agreements: A 10-year grazing permit with the Soldier Creek Grazing Association is in effect in the area, with an effective expiration date of December 31, 2000. This permit is in good standing and will likely be reissued.

Biotic Control Measures and Fire Protection: Chemical, biological and mechanical control methods may be used to stem the expansion of undesirable plant species. Wildfire suppression would be addressed in Wilderness management plans that would be developed if any of the roadless areas are designated by Congress as Wilderness.

Effects on Adjacent Lands: Please, refer to "Criteria Common to All Roadless Areas on this Administrative Unit" at the end of the roadless report for the Pine Ridge Ranger District (Pine Ridge Unit).

Soldier Creek (Public Proposed): Evidence of Need for Wilderness

Contributions to Wilderness Distribution: The nearest designated Wilderness is the 7,794-acre Soldier Creek Wilderness that adjoins this area. The 9,824-acre Black Elk Wilderness in the Black Hills is about 60 miles to the north. Both of these Wilderness area's are representative of ponderosa pine ecosystems.

Representation of Landforms and Ecosystems: This is representative of mixed-grass uplands interspersed with steep slopes with isolated patches of ponderosa pine (those that did not get destroyed in the Fort Robinson Fire of 1989) covered hills dissected by hardwood drainages.

Biota: No species are dependent upon a Wilderness designation to remain viable in the area. Most key species may benefit, however, the current management does not allow motorized-vehicle use which is the key disturbance.

Public Interests and Concerns: This area is sparsely populated. The nearest towns of any size include Crawford and Chadron, Nebraska, with a combined population of about 7,000. Designating the area as Wilderness likely will not attract any more people than are currently visiting the existing Soldier Creek Wilderness, which currently receives a many visitors. People from Iowa, Eastern Nebraska, Colorado, and other states visit the area.

A considerable number of people and organizations have called on the Forest Service to designate a grassland Wilderness somewhere on the Northern Great Plains.

Soldier Creek Management Area: Environmental Consequences

Management Prescription Allocations by Alternative:

Alternative 2:	MA 6.1	1,830 acres
Alternative 3:	MA 1.31	1,830 acres
Alternative 4:	MA 1.31	1,830 acres
Alternative 5:	MA 1.31	1,830 acres

Designation: Wilderness

Prescription: MA 1.2A Suitable Wilderness

Alternatives: Wilderness designation is not considered in any alternative because of the area's existing level of development.

Designation: Non-wilderness

Prescription: MA 1.31 Backcountry Recreation Nonmotorized

Alternatives: 3, 4, and 5

Environmental Consequences: Vegetation composition and structure are controlled by natural processes, such as fire, insects, disease, and grazing. There is some evidence of past human use, such as fences, trails, water developments, and primitive roads, but these would diminish through time. Isolation and solitude would characterize the area. Recreation activities would be those not requiring motorized equipment in a primitive setting such as hiking, walking, horseback riding, and nonmotorized hunting. There would be an opportunity for discovery of ecological, biological, cultural, historic and paleontological resources. Disturbance to wildlife by human activity would be minimized.

Mitigation Measures: Motorized access would be restricted except for authorized administrative use, such as grazing administration, noxious weed and fire control. Motorized wheelchair access would be permitted in accordance with the Americans with Disabilities Act. New developments including livestock fences and water developments would not be allowed to detract from the primitive to semi-primitive character of the area. The area has a low oil and gas potential for development.

Economic and Social Effects: Opportunities for solitude, lower human encounters, and nonmotorized settings will be maintained or increased while at the same time opportunities for motorized recreation would be forgone. Those presently using the area for motorized activities, recreation and hunting would no longer be able to do so. Opportunities for those desiring walk in hunting would increase. Some interpretive opportunities would be forgone. Mineral potential in the area is low and mineral development is unlikely under any management scenario. Livestock grazing would likely remain the primary economic benefit from the area. The primitive to semi-primitive character of the area would be retained.

Designation: Non-wilderness

Prescription: MA 6.1 Rangeland with Broad Resource Emphasis

Alternative: 2

Environmental Consequences: The evidence of motorized roads and trails would continue to be present. Livestock and livestock facilities would be apparent. Open meadows, grasslands, shrub lands and areas of woody vegetation would dominate the area. Vegetation treatments would be apparent. The vegetation would consist of open, park-like stands and a variety of successional stages. Opportunities for isolation and solitude in a motorized setting would be available.

Mitigation Measures: A full spectrum of motorized opportunities would be allowed unless specific areas are designated as closed or travel restricted to designated roads and trails. Construction of livestock and recreation facilities, roads, power lines, fences, water developments, mineral developments, and other features would be allowed. The area would be managed for a diversity of plants, animals, and ecological functions and processes, while providing livestock forage and other amenity values. Although, mitigation measures would be applied to meet Grassland-wide Plan Standards and Guidelines, there is possibility the area would lose its roadless character due to increased development and human presence.

Economic and Social Effects: Opportunities for motorized activities would be increased gradually while at the same time opportunities for nonmotorized activities would be reduced and perhaps forgone. Opportunities for solitude, lower human encounters, and nonmotorized settings would gradually be reduced. All users would be permitted motorized access. Livestock grazing would remain the primary economic benefit. The area would continue to

provide the existing mix of economic benefits while roadless primitive to semi-primitive character could be altered through time and perhaps permanently altered making future wilderness designation unlikely.

Criteria Common to All Roadless Areas on this Administrative Unit

Capability Criteria

Opportunities for Outdoor Education: A visitor should find features to stimulate curiosity: geology and fossil resources, grassland ecosystems, grassland flora and fauna, colorful agate beds, shifting weather patterns and cloud types, clear night skies offering unimpeded views of the stars. Skills in maneuvering in an open grassland terrain, using a compass, taking precautions for snake and spider bites, heat stroke, frostbite and freezing, setting up a primitive campsite and outdoor cooking may all test and develop a visitor's understanding of the outdoors.

Availability Criteria

Effects on Adjacent Lands: Wilderness designation would increase the need for clear and extensive signing. Wilderness designation may increase the potential for trespass over adjacent lands into these areas.

Vehicles would not be used for transportation or fire suppression when the fire danger is low. Vehicles would be used when fire conditions are high enough that firefighters walking and using hand tools would not be able to prevent a large fire.

Defensible fuel-profile zones would be developed to permit options in managing restoration-designed prescribed fires.

Evidence of Need for Wilderness

Public Interests and Concerns: These areas are sparsely populated. The nearest towns of any size include Crawford and Chadron, Nebraska, with a combined population of about 7,000. Designating these areas as Wilderness might attract some people from urban areas in eastern Nebraska, Rapid City, South Dakota, and Cheyenne, Wyoming.

Roadless Area Ratings

This section rates each of the 45 roadless areas based on the roadless area narratives provided earlier in this report. The first three matrices shown below provide the evaluative criteria used to determine ratings for each roadless area. These criteria initially were taken from *Forest Service Handbook* 1909.12,7, then further defined in an interdisciplinary manner.

Table C-5: Capability Ratings Matrix

Ratings		
High	**Moderate**	**Low**
Opportunities for Solitude and Serenity		
Terrain vast and / or rugged Lack of unnatural sounds Limited chance to encounter others	Surrounding landscape moderately developed Infrequent unnatural sounds Some encounters with others likely	Surrounding landscape highly developed Frequent unnatural sounds Encounters with others likely
Natural Appearance and Integrity		
Ecological processes intact Natural characteristics retained Relatively low number of structures and water points when compared to adjacent lands	Ecological processes somewhat reduced Natural characteristics appear mostly high Relatively moderate number of structures and water points when compared to adjacent lands	Ecological processes significantly reduced Clear and frequent evidence of human modifications Relatively high number of structures and water points when compared to adjacent lands
Challenge		
Offers many opportunities for challenge and adventure	Offers some opportunities for challenge and adventure	Offers few opportunities for challenge and adventure
Recreational Opportunities		
Offers many opportunities for primitive, unconfined recreation	Offers some opportunities for primitive, unconfined recreation	Offers few opportunities for primitive, unconfined recreation
Unique Characteristics and Scenic Features		
Offers many special characteristics and features	Offers some special characteristics and features	Offers few special characteristics and features
Opportunities for Outdoor Education		
Offers many opportunities for outdoor education	Offers some opportunities for outdoor education	Offers few opportunities for outdoor education
Size and Shape		
No inholdings of other ownership present Size and shape lend themselves to limited external influences	Inholdings of other ownership less than 5 % of total acres Size and shape lend themselves to some external influences	Inholdings of other ownership greater than 5 % of total acres Size and shape lend themselves to significant external influences
Potential to Manage Boundaries		
Boundary identification easily accomplished	Boundary identification poses some considerable challenges	Boundary identification poses major challenges

Table C-6: Availability Matrix (Rating the Potential for Conflicting Values)

Wilderness Availability Rates As:			
	High	**Moderate**	**Low**
Oil, Gas and Coal	Potential for conflicting values is low	Potential for conflicting values is moderate	Potential for conflicting values is high
Livestock Grazing	Potential to intensify livestock management in the area is low	Potential to intensify livestock management in the area is moderate	Potential to intensify livestock management in the area is high
Locatable Minerals	Potential for conflicting values is low	Potential for conflicting values is moderate	Potential for conflicting values is high
Common Minerals	Potential for conflicting values is low	Potential for conflicting values is moderate	Potential for conflicting values is high
Timber	Potential for conflicting values is low	Potential for conflicting values is moderate	Potential for conflicting values is high
Recreation	Potential for conflicting values is low	Potential for conflicting values is moderate	Potential for conflicting values is high
Plant and Animal Species	Designation results in mainly positive benefits to key species	Designation results in a mix of effects on key species	Designation results in mainly negative effects on key species
Mineral Leases and Subsurface Rights (includes Federal leasing)	Potential for conflicting values is low. Less than 10 percent of private, subsurface minerals ownership. Less than 10 percent is leased for oil and gas development.	Potential for conflicting values is moderate. Between 10 to 20 percent of private, subsurface minerals ownership. Between 10 to 20 percent is leased for oil and gas development.	Potential for conflicting values is high. More than 20 percent of private, subsurface minerals ownership. Greater than 30 percent is leased for oil and gas development.
Existing Contracts and Agreements	Potential for conflicting values is low.	Potential for conflicting values is moderate	Potential for conflicting values is high
Biotic Control Measures and Fire Protection	Potential for conflicting values is low	Potential for conflicting values is moderate	Potential for conflicting values is high
Effects on Adjacent Lands	Potential for conflicting values is low	Potential for conflicting values is moderate	Potential for conflicting values is high

Table C-7: Evidence of Need for Wilderness Ratings Matrix

High	Moderate	Low
Contributions to Wilderness Distribution		
Area is contiguous to an existing Wilderness Nearest existing Wilderness is more than 100 miles away	Nearest existing Wilderness is between 50 to 100 miles away	Nearest existing Wilderness is less than 50 miles away
Representation of Landforms and Ecosystems		
Area is not represented as defined by *Bailey's ecosystem subsection list Landform not represented in the existing National Wilderness System	Area is represented at less than 10,000 acres as defined by *Bailey's subsection list Landform infrequently represented in the existing National Wilderness System	Area is represented at more than 10,000 acres as defined by *Bailey's subsection list Landform is commonly represented in the existing National Wilderness System
Biota		
The viability of key species is dependent upon Wilderness designation	The viability of key species is generally assisted by Wilderness designation	The viability of key species is may benefit from a Wilderness designation; however, a federally listed threatened or endangered species is negatively affected
Public Interests and Concerns		
Low potential to cause extreme, conflicting polarization that leads to legal action if an area is recommended for Wilderness.	Moderate potential to cause extreme, conflicting polarization that leads to legal action if an area is recommended for Wilderness.	High potential to cause extreme, conflicting polarization that leads to legal action if an area is recommended for Wilderness.

The matrix shown below provides the overall ratings for capability, availability and evidence of need for Wilderness for each of the 45 roadless areas. More specific ratings for each area is provided immediately after the matrix shown below.

Table C-8: Summary Ratings for Northern Great Plains Roadless Areas

Roadless Area	Capability	Availability	Need for Wilderness
DAKOTA PRAIRIE GRASSLANDS			
Little Missouri Grassland/Medora			
Grand River	Moderate	Low	Low
South Fork	Moderate	Low	Low
Twin Buttes Creek	Moderate	Low	Low
Bell Lake	Moderate	Low	Low
Blacktail	Moderate	Low	Low
Bullion Butte	Moderate	High	Moderate
Dawson's Waterhole	Moderate	Low	Low
Easy Hill	Moderate	Low	Low
Kinley Plateau	Moderate	High	Low
Magpie	Moderate	Low	Moderate
Ponderosa Pine	Moderate	High	Moderate
Scairt Woman	Moderate	Low	Low

Roadless Area	Capability	Availability	Need for Wilderness
Strom Hanson	Moderate	Moderate	Low
Tracy Mountain	Moderate	Low	Low
Twin Buttes	Moderate	High	Moderate
Wannagan	Moderate	High	Moderate
Little Missouri Grassland/McKenzie			
Collar / Bennett-Cottonwood	Moderate	Moderate	Moderate
Johns Town / Horse Creek	Moderate	Moderate	Low
Lone Butte	Moderate	Moderate	Low
Long X Divide	Moderate	High	Moderate
Sheyenne National Grassland			
Delamere	High	High	High
Durler	High	High	High
McLeod	High	High	High
Sheyenne	High	High	High
Venlo	Moderate	High	High
MEDICINE BOW-ROUTT NATIONAL FOREST UNIT			
Thunder Basin National Grassland			
Cow Creek	High	High	High
Downs	High	High	Moderate
Duck Creek	High	Moderate	High
H A Divide	Moderate	Moderate	Moderate
Miller Hills	Moderate	Moderate	Moderate
Red Hills	High	Moderate	High
NEBRASKA NATIONAL FOREST UNITS			
Samuel R. McKelvie National Forest			
Dismal River	High	High	Low
Steer Creek East	High	High	Moderate
Steer Creek West	High	High	Moderate
Buffalo Gap National Grassland/Fall River			
Cheyenne River	Moderate	Moderate	Moderate
First Black Canyon	Moderate	Moderate	Low
Jim Wilson Canyon	Moderate	Moderate	Low
Red Shirt	High	Moderate	Moderate
Buffalo Gap National Grassland/Wall			
Indian Creek (RARE II)	High	Moderate	Low
Indian Creek (Public Proposed)	High	Moderate	Low
Rake Creek	High	Moderate	Low
Ft. Pierre National Grassland			
Cedar Creek	Moderate	High	Moderate

Roadless Area	Capability	Availability	Need for Wilderness
Oglala National Grassland/Pine Ridge			
Soldier Creek	Moderate	High	Moderate
Sugarloaf	Moderate	High	Low
Toadstool	Moderate	Moderate	Low

Inventoried roadless areas that received a "low" availability rating were not considered for Wilderness (on the Little Missouri National Grassland) because of existing oil and gas leases within those areas' boundaries. Each roadless area was analyzed to determine whether or not oil and gas leases existed, whether or not those leases carry no-surface-occupancy (NSO) stipulations, and whether or not the non-NSO lease distribution would degrade the areas for Wilderness consideration. Those areas that carry a "low" availability rating either have the majority of their acreage leased without NSO stipulations or have non-NSO leases scattered across the roadless area. In some roadless areas, private mineral ownership exists under federal land surface. The Forest Service cannot deny the mineral owner reasonable access for mineral development.

Table C-9: Dakota Prairie Grasslands (Medora RD) by Roadless Area

DAKOTA PRAIRIE GRASSLANDS Little Missouri Grasslands/Medora	Grand River Badlands	South Fork	Twin Butte Creek	Bell Lake	Blacktail	Bullion Butte	Dawson's Waterhole	Easy Hill	Kinley Plateau	Magpie	Ponderosa Pine	Scairt Woman	Strom Hanson	Tracy Mountain	Twin Buttes	Wannagan
Capability Ratings																
Opportunities for Solitude and Serenity	Mod	Mod	Mod	Mod	Mod	Mod	Mod	Mod	High	Mod	High	Mod	Mod	Mod	Mod	Mod
Natural Appearance and Integrity	Mod	Mod	Mod	Mod	Mod	High	Mod	Mod	High	Mod	Mod	Mod	Mod	Mod	Mod	Mod
Challenge	Mod	Mod	Mod	Mod	Mod	Mod	Low	Mod	Mod	Mod	Mod	Mod	Mod	Mod	Mod	Mod
Recreational Opportunities	Low	Mod	Low	Mod	Mod	Mod	Low	Mod	Mod	Mod	Mod	Mod	Mod	Mod	Mod	Mod
Unique Characteristics and Scenic Features	Mod	Mod	Mod	Mod	Mod	Mod	Low	Low	Mod	Mod	Mod	Mod	Mod	Mod	Mod	Mod
Opportunities for Outdoor Education	Mod	Mod	Mod	Mod	Mod	Mod	Low	Low	Mod	Mod	Mod	Mod	Mod	Mod	Mod	Mod
Size and Shape	Low	Low	Mod	High	Mod	Mod	High	High	High	Mod	Mod	High	Low	High	Low	High
Potential to Manage Boundaries	Low	Low	Mod	High	Mod	Mod	High	High	High	High	High	High	Mod	High	High	High
Availability Ratings																
Oil, Gas and Coal	High	High	High	Low	Low	High	Low	Low	High	Low	High	Low	Mod	Low	High	Low
Livestock Grazing	Low	Low	Mod	Mod	High	High	High	High	High	High	High	High	High	High	High	High
Locatable Minerals	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High
Common Minerals	High	High	High	High	Mod	High	High	High	High	High	High	High	High	High	High	High

DAKOTA PRAIRIE GRASSLANDS Little Missouri Grasslands/Medora	**Grand River Badlands**	**South Fork**	**Twin Butte Creek**	**Bell Lake**	**Blacktail**	**Bullion Butte**	**Dawson's Waterhole**	**Easy Hill**	**Kinley Plateau**	**Magpie**	**Ponderosa Pine**	**Scairt Woman**	**Strom Hanson**	**Tracy Mountain**	**Twin Buttes**	**Wannagan**
Timber	High	High	High	High	High	High	High	High	High	High	Mod	High	High	High	High	High
Recreation	Low	Low	Low	Mod	Mod	Mod	Mod	Mod	Mod	Mod	Mod	Mod	Mod	Mod	Mod	Mod
Plant and Animal Species	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High
Mineral Leasing and Subsurface Rights	Mod	High	Mod	Low[1]	Low[1]	High	Low[1]	Low[1]	High	Low[1]	Low	Low[1]	Low[1]	Low[1]	High	High[2]
Existing Contracts and Agreements	Mod	High	High	Low	Low	High	Low	Low	High	High	High	Low	Low	Low	High	Low
Biotic Control Measures and Fire Protection	Mod	Mod	Mod	Mod	High	High	Mod	Mod	Mod	High	Mod	Mod	Mod	Mod	Mod	Mod
Effects on Adjacent Lands	Low	Low	Low	Mod	Mod	Mod	Mod	Mod	Mod	Mod	Mod	Mod	Mod	Mod	Mod	Mod
Need For Wilderness Ratings																
Contributions to Wilderness Distribution	High	High	High	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	High
Representation of Land-forms and Ecosystems	High	High	High	Low	Low	Mod	Mod	Low	Mod	Mod	Mod	Low	Low	Low	Mod	Mod
Biota	Mod	Mod	Mod	Mod	Mod	Mod	Mod	Mod	Mod	Mod	Mod	Mod	Mod	Mod	Mod	Mod
Public Interests and Concerns	Low	Low	Low	Mod	Mod	Mod	Mod	Mod	Low	Mod	Mod	Mod	Mod	Mod	Mod	Mod

[1] Most of this area is leased for oil and gas development, has a high oil and gas occurrence and, therefore, is considered unavailable for Wilderness.

[2] The portion of this roadless area this is leased as NSO is rated as "high"; the rest of the area is rated as "low" due to oil and gas leasing.

Table C-10: Dakota Prairie Grasslands (McKenzie RD and Sheyenne NF) Ratings by Roadless Area

DAKOTA PRAIRIE GRASSLANDS **Little Missouri Grasslands/McKenzie**	**Collar/Bennett -Cottonwood**	**Johns Town / Horse Creek**	**Lone Butte**	**Long X Divide**	**DAKOTA PRAIRIE GRASSLANDS** **Sheyenne National Grassland**	**Delamere**	**Durler**	**McLeod**	**Sheyenne**	**Venlo**
Capability Ratings										
Opportunities for Solitude and Serenity	Mod	Mod	Mod	Mod		High	High	High	High	Low
Natural Appearance and Integrity	High	Mod	High	Mod		High	High	High	High	Mod
Challenge	Mod	Low	Mod	Mod		High	High	High	High	High
Recreational Opportunities	Mod	Low	Mod	Mod		Mod	Mod	High	High	High
Unique Characteristics and Scenic Features	High	High	High	High		High	High	High	High	Mod
Opportunities for Outdoor Education	Mod	Mod	Mod	Mod		High	High	High	High	High
Size and Shape	Mod	Mod	Mod	High		High	Mod	High	Mod	Mod
Potential to Manage Boundaries	High	High	High	High		High	High	High	High	High
Availability Ratings										
Oil, Gas and Coal	Mod	Low	Low	High		High	High	High	High	High
Livestock Grazing	High	High	High	High		High	High	High	High	High
Locatable Minerals	High	High	High	High		High	High	High	High	High
Common Minerals	High	High	High	High		High	High	High	High	High
Timber	High	High	High	High		High	High	High	High	High

DAKOTA PRAIRIE GRASSLANDS **Little Missouri Grasslands/McKenzie**	**Collar/Bennett -Cottonwood**	**Johns Town / Horse Creek**	**Lone Butte**	**Long X Divide**	**DAKOTA PRAIRIE GRASSLANDS** **Sheyenne National Grassland**	**Delamere**	**Durler**	**McLeod**	**Sheyenne**	**Venlo**
Recreation	Mod	Mod	Mod	Mod		High	High	High	High	High
Plant and Animal Species	High	Mod	High	High		Mod	Mod	Mod	Mod	Mod
Mineral Leasing and Subsurface Rights	Mod[3]	Low[4]	Low[5]	High		High	High	High	High	High
Existing Contracts and Agreements	Mod	Low	Low	Mod		High	High	High	High	High
Biotic Control Measures and Fire Protection	High	High	High	High		High	High	High	High	High
Effects on Adjacent Lands	Mod	Mod	Mod	Mod		High	High	High	High	High
Need For Wilderness Ratings										
Contributions to Wilderness Distribution	High	Low	Low	High		High	High	High	High	High
Representation of Landforms and Ecosystems	Mod	Mod	Mod	Mod		High	High	High	High	High
Biota	High	Low	Mod	Mod		Mod	Mod	Mod	Mod	Mod
Public Interests and Concerns	Low	Low	Low	Low		Mod	Mod	Mod	Mod	Mod

[3] Greater than 30% of the area is leased for oil and gas development. The northern portion of the area (Bennett Creek valley) allows surface occupancy of oil and gas development facilities; however, the remainder of the area's existing leases does not allow surface occupancy.

[4] The northern two-thirds of the area is leased for oil and gas development. The southern one-third of the area is not leased.

[5] Over 30% of the area is leased for oil and gas development. The existing leases still allow oil and gas exploration / development to occur.

Table C-11: Medicine Bow - Routt Ratings by Roadless Area

MEDICINE BOW-ROUTT NATIONAL FOREST UNIT **Thunder Basin National Grassland**	**Cow Creek**	**Downs**	**Duck Creek**	**H A Divide**	**Miller Hills**	**Red Hills**
Capability Ratings						
Opportunities for Solitude and Serenity	High	Mod	High	Mod	High	Mod
Natural Appearance and Integrity	High	High	High	Mod	Mod	High
Challenge	High	High	Mod	Mod	High	High
Recreational Opportunities	High	Mod	Mod	Mod	High	High
Unique Characteristics and Scenic Features	High	High	High	Mod	Mod	High
Opportunities for Outdoor Education	High	High	High	Mod	Mod	High
Size and Shape	Mod	Mod	Mod	Mod	Mod	Mod
Potential to Manage Boundaries	High	Mod	Mod	Low	Mod	High
Availability Ratings						
Oil, Gas and Coal	Mod	Mod	Mod	Mod	Mod	Mod
Livestock Grazing	High	High	High	High	High	High
Locatable Minerals	High	High	High	High	High	Mod

MEDICINE BOW-ROUTT NATIONAL FOREST UNIT **Thunder Basin National Grassland**	**Cow Creek**	**Downs**	**Duck Creek**	**H A Divide**	**Miller Hills**	**Red Hills**
Common Minerals	High	High	High	High	High	Mod
Timber	High	High	Mod	Mod	High	Mod
Recreation	Mod	High	Mod	Mod	High	Mod
Plant and Animal Species	High	High	High	High	Mod	Mod
Mineral Leasing and Subsurface Rights	Mod	Mod	Low	Mod	Mod	Mod
Existing Contracts and Agreements	High	Mod	Mod	Mod	Mod	Mod
Biotic Control Measures and Fire Protection	Mod	Mod	Mod	Mod	Mod	Mod
Effects on Adjacent Lands	Mod	Mod	Mod	Mod	Mod	Mod
Need For Wilderness Ratings						
Contributions to Wilderness Distribution	High	High	High	Mod	High	High
Representation of Landforms and Ecosystems	High	Mod	High	High	Mod	High
Biota	Mod	Mod	Mod	Mod	Low	Low
Public Interests and Concerns	High	Mod	Mod	Mod	Mod	Mod

Table C-12: Nebraska National Forest Ratings by Roadless Area

NEBRASKA NATIONAL FOREST UNITS	Samuel R. McKelvie National Forest			Buffalo Gap National Grassland							Ft. Pierre NG	Oglala National Grassland/Pine Ridge		
				Fall River			Wall							
	Dismal River	Steer Creek East	Steer Creek West	Cheyenne River	First Black Canyon	Jim Wilson Canyon	Red Shirt	Indian Creek (RARE II)	Indian Creek	Rake Creek	Cedar Creek	Soldier Creek	Sugarloaf	Toadstool
Capability Ratings														
Opportunities for Solitude and Serenity	High	High	High	Mod	Mod	Mod	High	High	High	High	Mod	Mod	Mod	Mod
Natural Appearance and Integrity	Mod	Mod	Mod	High	High	High	High	High	High	High	Mod	Mod	Mod	Mod
Challenge	High	High	High	Mod	Low	Low	High	High	High	High	Mod	High	Low	Mod
Recreational Opportunities	Mod	High	High	High	Mod	Mod	High	High	High	High	Mod	High	Mod	High
Unique Characteristics and Scenic Features	High	High	High	High	Low	Low	High	High	High	High	Mod	Mod	Mod	High
Opportunities for Outdoor Education	High	High	High	High	High	High	High	High	High	High	Mod	Mod	Mod	High
Size and Shape	High	High	High	Mod	High	High	High	Low	Low	High	Low	Mod	High	High
Potential to Manage Boundaries	Mod	Mod	Mod	High	Mod	Mod	Mod	Mod	Mod	High	Mod	High	High	Mod
Availability Ratings														
Oil, Gas and Coal	High	High	High	High	High	High	High	High	High	High	High	High	High	Mod
Livestock Grazing	High	Mod	Mod	High	Mod	Mod	High	High	High	High	Mod	High	High	Mod
Locatable Minerals	High	High	High	High	High	High	High	High	High	High	High	High	High	Mod

NEBRASKA NATIONAL FOREST UNITS	Samuel R. McKelvie National Forest			Buffalo Gap National Grassland							Ft. Pierre NG	Oglala National Grassland/Pine Ridge		
				Fall River			Wall							
	Dismal River	Steer Creek East	Steer Creek West	Cheyenne River	First Black Canyon	Jim Wilson Canyon	Red Shirt	Indian Creek (RARE II)	Indian Creek	Rake Creek	Cedar Creek	Soldier Creek	Sugarloaf	Toadstool
Common Minerals	High	High	High	High	High	High	High	High	High	High	High	High	High	High
Timber	Mod	Mod	High	High	High	High	High	High	High	High	High	High	High	High
Recreation	Mod	Mod	Mod	High	Mod	Mod	Mod	High	High	High	Mod	Mod	Mod	Mod
Plant and Animal Species	High	High	High	High	Mod	Mod	High	High	High	High	High	Mod	High	High
Mineral Leasing and Subsurface Rights	High	High	High	Low	Low	Low	Low	Low	Low	Low	High	Low	High	High
Existing Contracts and Agreements	High	High	High	High	High	High	High	High	High	High	High	High	Mod	Mod
Biotic Control Measures and Fire Protection	High	High	High	High	High	High	High	High	High	High	Mod	Mod	Low	Low
Effects on Adjacent Lands	High	High	High	High	High	High	High	Mod	Mod	High	Mod	High	High	Mod
Need For Wilderness Ratings														
Contributions to Wilderness Distribution	Mod	Low	Low	Low	Low	Low	Low	Low	Low	Low	Mod	High	Low	Low
Representation of Landforms and Ecosystems	High	High	High	Mod	Mod	Mod	Mod	Low	Low	Low	Mod	Mod	Mod	Mod
Biota	Low	Mod	Mod	Mod	Low	Low	Mod	Mod	Mod	Mod	Mod	Mod	Mod	Mod
Public Interests and Concerns	Low	Mod	Mod	Mod	Low	Low	High	Mod	Mod	Mod	Low	Low	Low	Low

Work Cited

Bailey, Robert G. *Description of the Ecoregions of the United States*. USDA-Forest Service, Miscellaneous Publication 1391, 2nd ed. Washington, DC: 1995.

The table below cross-walks to the section "Plant and Animal Species" in the "availability" section of this report for each roadless area.

LMNG - Little Missouri National Grassland

FPNG - Fort Pierre National Grassland

GR/CR - Grand River / Cedar River National Grassland

ONG - Oglala National Grassland / Pine Ridge Ranger District

SNG - Sheyenne National Grassland

NNF - Nebraska National Forest

TBNG - Thunder Basin National Grassland

SRM - Samuel R. McKelvie National Grassland

BGNG - Buffalo Gap National Grassland

BRD - Bessey Ranger District

Table C-13. Species Protected Under the Endangered Species Act and at Risk of Range-wide Imperilment.

	National Grassland or Forest									
Species	**LMNG**	**GR/CR**	**SNG**	**TBNG**	**BGNG**	**FPNG**	**ONG**	**NNF PRRD**	**NNF BRD**	**SRM**
Blowout penstemon									K	PSH
Western prairie fringed orchid			K						PSH	PSH
Ute ladies-tresses				PSH	PSH					
American burying Beetle						PSH			K	P
Whooping crane	K	P			K	K	PSH	PSH	PSH / OS	PSH / OS
Bald eagle	K	K	K	K	K	K	K	K	K	K
Peregrine falcon	PSH	PSH		PSH	K	PSH	PSH		PSH	PSH
Black-footed ferret				K	PSH		PSH			
Mountain plover									PSH / OS	PSH / OS
Topeka shiner									K	PSH

K = Known occurrence in vicinity; date of last observation suggests that species still occurs in area,

P = Possible but unconfirmed occurrence,

PSH = Species occurrence is unlikely or questionable; within species range and potential or suitable habitat may occur,

OS = Possible off-site occurrence (downstream, etc.)

Table C-14. Species that are Globally Imperiled or Vulnerable and/or Candidates for Protection Under ESA.

Species	National Grassland or Forest									
	LMNG	GRCRNG	SNG	TBNG	BGNG	FPNG	ONG	NNFPRRD	NNFBRD	SRMNF
Dakota buckwheat	K	K			K		P			
Smooth goosefoot	K	K			P				P	K
Barr's milkvetch				K	K		P			
Dakota skipper	K	P	K							
Powesheik skipper			K							
Ottoe skipper	K	K		UQ	P	P	P	P	P	P
Regal fritillary	K	K	K	UQ	P	K	P	P	K	P
Sturgeon chub	UQ	UQ		UQ	K/OS					
Swift fox	UQ	UQ		K	K	UQ	K	UQ		
Black-tailed prairie dog	K	K		K	K	K	K		K	UQ

K = Known occurrence in vicinity; date of last observation indicates that species still occurs in area,

P = Possible but unconfirmed occurrence,

UQ = Species occurrence is unlikely or questionable; within species range and potential or suitable habitat may occur,

OS = Possible off-site occurrence (downstream, etc.).

Table C-15. Species at Risk Regionally or at State Levels.

Species	National Grassland or Forest										
	Classification	LMNG	GRCRNG	SNG	TBNG	BGNG	FPNG	ONG	NNF PRRD	NNF BRD	SRMNF
Labrador bedstraw	FS – Sensitive (R1)			K							
Marsh bellflower	FS – Sensitive (R1)			K						P	K
Buckbean	FS – Sensitive (R1) IA - Threatened			K							
Nodding buckwheat	FS – Sensitive (R1)	K			P	P		P			
Slender cottongrass	FS – Sensitive (R1)			K						P	P
Lanceleaf cottonwood	FS – Sensitive (R1)	K			P	P					
Torrey's cryptantha	FS – Sensitive (R1)	K			P						
Dogberry	FS – Sensitive (R1)			K							
Crested shield fern	FS – Sensitive (R1)			K						P	P
Marsh fern	FS – Sensitive (R1)			K						P	K
Oak fern	FS –Sensitive (R1) IA - Threatened			K	UQ						
Sensitive fern	FS – Sensitive (R1)			K						P	K
Leathery grape-fern	FS – Sensitive (R1)			K							
Little grape-fern	FS – Sensitive (R1)			K							
Spinulose woodfern	FS – Sensitive (R1)			K						P	K
Northern lady-fern	FS – Sensitive (R1)			K							
Shining flatsedge	FS – Sensitive (R1)			K	UQ					P	P
Umbrella flatsedge	FS – Sensitive (R1)			K						P	P
Frostweed	FS – Sensitive (R1)			K	UQ					P	P
Broad-leaved goldenrod	FS – Sensitive (R1)			K							
Beach heather	FS – Sensitive (R1)			K							
Marsh horsetail	FS – Sensitive (R1)			K							
Meadow horsetail	FS – Sensitive (R1)			K							
Sand lily	FS – Sensitive (R1)	K	P		P	P		P	P	P	P
Blue lips	FS – Sensitive (R1)	K			P	P		P			
Alyssum-leaf phlox	FS – Sensitive (R1)	K	P		P	P		P	P		
Limber pine	FS – Sensitive (R1)	K									
Upright pinweed	FS – Sensitive (R1)	P		K						P	P
Alkali sacaton	FS – Sensitive (R1)	K	P		P	P		P			

Species	National Grassland or Forest										
	Classification	**LMNG**	**GRCRNG**	**SNG**	**TBNG**	**BGNG**	**FPNG**	**ONG**	**NNF PRRD**	**NNF BRD**	**SRMNF**
Purple sandgrass	FS – Sensitive (R1) MN - Spp Concern			K						P	P
Delicate sedge	FS – Sensitive (R1) IA - Spp Concern			K							
Foxtail sedge	FS – Sensitive (R1)			K							
Handsome sedge	FS – Sensitive (R1)			K							
Showy lady's slipper	FS – Sensitive (R1) IA - Threatened			K							
Small white lady's slipper	FS – Sensitive (R1) IA, MN - Spp Concern COSEWIC - E			K						P	P
Wahoo spindle-tree	FS – Sensitive (R1)			K							
Golden stickleaf	FS – Sensitive (R1)	K									
Adder's tongue	FS – Sensitive (R1) IA - Spp Concern			K						P	K
Hooker's townsendia	FS – Sensitive (R1)	K			P	K		P			
Loesel's twayblade	FS – Sensitive (R1)			K						P	K
Bog willow	FS – Sensitive (R1) IA - Threatened			K							
Belfragii's bug	FS – Sensitive (R1)	K	P	K							
Tawny crescent butterfly	FS – Sensitive (R1 & 2)	K	P		P			P	K		
Arogos skipper	FS – Sensitive (R1)		P	P	P	P	P	P			
Flathead chub	FS – Sensitive (R2)	K/OS	K/OS		K/OS	K/OS		K/OS		K/OS	K/OS
Longnose sucker	SD - Threatened	K/OS									
Plains topminnow	FS – Sensitive (R2)				K/OS	K/OS				K/OS	K/OS
Northern leopard frog	FS – Sensitive (R1 & 2) MT - Spp Concern COSEWIC - V	K	K	K	K	K	K	K	K	K	K
Tiger salamander	FS – Sensitive (R2)	K	K	K	K	K	K	K	K	K	K
Pale milk snake	FS – Sensitive (R2) MT - Spp Concern	P	P		P	P	P	P	K	K	P
Blanding's turtle	IUCN - Lower Risk SD - Endangered									P	K

Species	National Grassland or Forest									
	Classification	**LMNG**	**GRCRNG**	**SNG**	**TBNG**	**BGNG**	**FPNG**	**ONG**	**NNF PRRD**	**NNF BRD**	**SRMNF**
American bittern	FS – Sensitive (R2) PIF - Moderate Priority WY - Spp Concern Priority	K	K	K		K	K	K		P	K
Greater prairie chicken	FS – Sensitive (R1 & 2) MN - Spp Concern COSEWIC - XT			K			K			K	K
Yellow-billed cuckoo	FS – Sensitive (R2) PIF - Moderate Priority MT, WY - Spp Concern	UQ	K	K	K	K	UQ	K	K	K	K
Long-billed curlew	FS – Sensitive (R2) BLM - Sensitive COSEWIC - V WY - Spp Concern PIF - High Priority WY-PIF - Level 1	K	P		K	K	K	K		K	K
American peregrine falcon	FS – Sensitive (R1 & 2) TNC / NHP – G4T4, N3 MT,NE,SD–Endangered WY – Spp Concern	K	P	P	K	K	K	K	K	P	P
Northern goshawk	FS – Sensitive (R1 & 2) BLM - Sensitive MT, WY - Spp Concern	P	P	P	K	P	P	P	P	P	P
Sage grouse	FS – Sensitive (R1) WY-PIF - Level 1 COSEWIC - E	K			K	K					
Ferruginous hawk	FS – Sensitive (R2) BLM - Sensitive COSEWIC - V MT, WY - Spp Concern WY-PIF - Level 1	K	K		K	K	K	K	K	K	K
White-faced ibis	FS – Sensitive (R2) BLM - Sensitive MT, WY - Spp Concern			P	P	UQ	UQ	UQ			UQ

Species	National Grassland or Forest									
	Classification	**LMNG**	**GRCRNG**	**SNG**	**TBNG**	**BGNG**	**FPNG**	**ONG**	**NNF PRRD**	**NNF BRD**	**SRMNF**
Common loon	FS – Sensitive (R2) BLM - Sensitive				UQ	UQ	UQ	UQ		UQ	UQ
Merlin	FS – Sensitive (R2) WY - Spp Concern	K	P	P	K	K	K	K	K	K	K
Pygmy nuthatch	FS – Sensitive (R2)				P			P	K		
Western burrowing owl	FS – Sensitive (R1 & 2) BLM - Sensitive COSEWIC - E MT - Spp Concern MN - Endangered WY-PIF - Level 1	K	K	P	K	K	K	K	K	K	K
Sprague's pipit	FS – Sensitive (R1)	K	K	P	K	K	P			P	P
Upland sandpiper	FS – Sensitive (R2)	K	K	K	K	K	K	K	K	K	K
Loggerhead shrike	FS – Sensitive (R1 & 2) BLM - Sensitive COSEWIC - T MT - Spp Concern PIF - Moderate Priority MN - Threatened WY-PIF - Level 1	K	K	K	K	K	K	K	K	K	K
Baird's sparrow	FS – Sensitive (R1 & 2) BLM - Sensitive MT - Spp Concern PIF - High Priority MN - Endangered WY-PIF - Level 1	K	K	P	K	UQ	P	UQ			
Fox sparrow	FS – Sensitive (R2)	P	P	P	K	P	K	P	P	K	K
Trumpeter swan	IUCN - Lower Risk FS – Sensitive (R2) BLM - Sensitive MT,WY - Spp Concern WY-PIF - Level 1					K					UQ

Species	National Grassland or Forest									
	Classification	**LMNG**	**GRCRNG**	**SNG**	**TBNG**	**BGNG**	**FPNG**	**ONG**	**NNF PRRD**	**NNF BRD**	**SRMNF**
Black tern	FS – Sensitive (R2) BLM - Sensitive PIF - Moderate Priority IA - Spp Concern WY-PIF - Level 1	K	K	K	K	K	K	P		P	P
Black-backed woodpecker	FS – Sensitive (R1 & 2) BLM – Sensitive WY – Spp Concern				P						
Lewis' woodpecker	FS – Sensitive (R2)				K	P		K	K		
Townsend's big-eared bat	IUCN - Vulnerable FS – Sensitive (R1 & 2) BLM - Sensitive MT,WY - Spp Concern	P			K	K		P	P		
Mountain lion	SD - Threatened	P			K	P		P	K		
Fringe-tailed myotis	WY - Spp Concern FS – Sensitive (R2)				K	K		K	K		
River otter	NE - Endangered SD - Threatened	K		K						P	P
California bighorn sheep	FS – Sensitive (R1)	K									
Dwarf shrew	FS – Sensitive (R2) MT, WY - Spp Concern				UQ	UQ					

K = Known occurrence in vicinity; date of last observation indicates that species still occurs in area,

P = Possible but unconfirmed occurrence,

UQ = Species occurrence is unlikely or questionable; within species range and potential habitat may occur,

OS = Possible off-site occurrence (downstream, etc.).